

JNHA

The Journal of Nutrition, Health & Aging

**The 20th IAGG Congress of
Gerontology and Geriatrics
June 23-27, 2013, Seoul, Korea
ABSTRACT BOOK**

- Nutrition
- Clinical Neurosciences
- Clinical trials & aging
- Geriatric Science



Global Aging Research Network



 Springer

Volume 17, Supplement 1, 2013

The JNHA is indexed in MEDLINE/Index Medicus, in Current Contents/Clinical Medicine, in Journal Citation Reports/Science Edition, in Science Citation Index Expanded (Sci Search), in EXCERPTA MEDICA (EMBASE and BIOBASE), in Mental Health Abstracts, Chemical Abstracts (CA), Abstracts in Social Gerontology: Current Literature on Aging, Sociological Abstracts and Social Services Abstracts.

Editor-in-Chief: B. Vellas (Toulouse, France)

Editor Geriatric Section: A.J. Sinclair (Luton, UK)

Editor Nutrition Section: P.J. Garry (Albuquerque, USA)

Editor Clinical Neurosciences Section:

J. Touchon (Montpellier, France)

L. Volicer (Tampa, USA)

Editor Clinical Trials and Aging Section: A. Cherubini (Perugia, Italy)

Editor Biology of Aging Section: A. Parini (Toulouse, France)

Editor Obesity and Aging Section:

J. Touchon (Montpellier, France)

D.T. Villareal (Albuquerque, USA)

Associate Editors

L.-K. Chen (Taiwan) - S. Gillette-Guyonnet (France) -

D. Langin (France) - M. Olde-Rikkert (The Netherlands) -

M. Petrovic (Belgium) - P. Valet (France) - J. Woo Wong (Hong Kong)

Editorial Board

S. Abu-Shakra (Irvine)

E.J. Amella (Charleston)

B. Bartali (New Haven)

J. Bauer (Nürnberg)

H. Bergman (Montreal)

G. Berrut (Nantes)

H. Bischoff-Ferrari (Zurich)

Y. Boirie (Clermont-Ferrand)

M. Borrie (Singapore)

J. Breitner (Seattle)

T. Cederholm (Uppsala)

M. Cesari (Toulouse)

W.C. Chumlea (Kettering)

C. Cotman (Irwin)

A. Dangour (London)

L. De Groot (Wageningen)

L. Donini (Roma)

W. Evans (Little Rock)

R.A. Fielding (Boston)

L.J. Fitten (Los Angeles)

L.M.F. Gutiérrez Robledo (Mexico)

T. Harris (Bethesda)

S. Hercberg (Paris)

F. Landi (Rome)

E. Larson (Seattle)

M. Lechleitner (Zirl)

R. Maia Guimaraes (Brasilia)

J.E. Morley (Saint-Louis)

M.C. Morris (Chicago)

M. Nydhal (Uppsala)

H. Orimo (Tokyo)

M. Pahor (Gainesville)

H. Payette (Sherbrooke)

A. Raynaud-Simon (Paris)

J.M. Ribera-Casado (Madrid)

L. Riby (Newcastle Upon Tyne)

P. Ritz (Angers)

L. Rodriguez Manas (Getafe)

I.H. Rosenberg (Boston)

R.M. Russel (Boston)

A. Salva (Barcelona)

D. Seow (Montreal)

C. Sieber (Nürnberg)

S. Simmons (Nashville)

H. Staehelin (Basel)

S. Studenski (Pittsburgh)

D.H. Sullivan (Little rock)

D. Waters (Dunedin)

J. Woodside (Belfast)

J. Yesavage (Stanford)

JNHA The Journal of Nutrition, Health & Aging[®] is published *ten times per year* by Serdi Edition

- *Address for manuscript submission, subscription, information:* Carine Giry, Assistant Publisher
www.editorialmanager.com/jnha/

- *Advertising inquiries* should be sent to Carine Giry, Assistant Publisher, • e-mail: carine.giry@serdi-publisher.com

Serdi cannot be held responsible for errors or for any consequences arising from the use of the information contained in this journal. The appearance of advertising in this journal does not constitute an endorsement or approval by Serdi or Sacal of the quality or value of the product advertised or of the claims made for it by its manufacturer.

Permission to photocopy articles: This publication is protected by copyright. Permission to photocopy must be secured in writing from Sacal.

Copyright © 1998 (and following years) by Sacal. All rights reserved. Printed in France.

subscriptions@springer.com

2013 ORDER FORM (10 issues/year)

All countries (VAT excluded)

	<i>Individual</i>	<i>Institutional</i>
By mail + on line	286 euros	471 euros

Check, money order, purchase order enclosed.

Master card Visa Exp. Date :

Security code (last 3 numbers over side the card)

Name :

Name on credit card :

Title :

Compagny/Institution

Street address :

City : State/Prov.

Zip : Country :

Phone : Fax :

Signature


To order faster contact us : Springer Customer Service Center GmbH,
Haberstr. 7, D-69126 Heidelberg, Germany
Tel: +49 6221 345 0, Fax: +49 6221 345 4229, subscriptions@springer.com

• INSTRUCTIONS FOR AUTHORS:

www.springer.com

ISSN 1279-7707.

Printed in France. Imprimerie Delort 31320 Castanet-Tolosan.

 Springer

GENERAL INFORMATION

springer.com

ELECTRONIC CONTENT

springerlink.com



ICFSR 2014

International Conference on Frailty & Sarcopenia Research

Implementing frailty and sarcopenia into clinical practice

Thursday 13th & Friday 14th March, 2014 Barcelona, Spain

Frailty:

- Biology of frailty and aging
- Physical frailty and age-related body composition modifications
- Cognitive frailty
- Frailty in clinical practice and public health
- Clinical trials and therapeutics

Sarcopenia:

- Biology
- Animal models
- Preclinical studies
- Clinical trials
- Functional assessment
- Biomarkers and imaging
- New drug developments
- Physical exercise
- Nutrition intervention
- Epidemiology

Meeting Place:
Hospital de la Santa Creu i Sant Pau



under the auspices of



GARN

Global Aging
Research Network

Call for abstracts: Symposium • Oral communication • Poster

Abstract deadline: october 30, 2013

All abstracts and proceedings will be published in the JFA (Journal of Frailty Aging)

www.jfrailtyaging.com



www.frailty-sarcopenia.com

Contact :
f.soula@celsius-net.com
seynes@cict.fr



The 21st IAGG World Congress of Gerontology and Geriatrics

Global Aging and Health: Bridging Science, Policy, and Practice

The International Association of Gerontology and Geriatrics holds its World Congress every four years in different countries all over the world. As one of the most highly acclaimed meetings in the field of aging, The 21st IAGG World Congress of Gerontology and Geriatrics, IAGG 2017, will be held in the place known as “Everybody’s Favorite City” — San Francisco. Famous for scenic beauty, cultural attractions, diverse communities, and world-class cuisine, San Francisco’s landmarks include the Golden Gate Bridge, cable cars, Fisherman’s Wharf, Alcatraz, Union Square, North Beach, the Castro district, Mission Dolores, and the largest Chinatown in the United States.

Visit iagg2017.org and sign up to receive future IAGG 2017 news.



JULY 23-27, 2017
MOSCONE WEST
SAN FRANCISCO, CALIFORNIA



Scan this QR code for instant access

iagg2017.org



Editorials

The 20th IAGG World Congress of gerontology and geriatrics <i>H.B. Cha (Korea)</i>	S3
North America is pleased to welcome all to the 2013 IAGG World Congress <i>T.C. Antonucci (USA)</i>	S5
Preparing for the 20th IAGG World Congress <i>H.J. Yoo (Korea)</i>	S7
Asia/Oceania welcome all to the 2013 IAGG World Congress <i>P. Du (China)</i>	S9
Bridging the gap between research and policy making <i>V. Khavinson (Russia)</i>	S11
African gerontology and geriatrics: strides and crucial next steps <i>I. Aboderin (United Kingdom)</i>	S13
Latin America and Caribbean region welcomes the world to the IAGG World Congress in Seoul <i>J.R. Jauregui (Argentina)</i>	S15

20th World Congress of Gerontology and Geriatrics

Scientific Program	S17
Oral Communications	S21
Special Sessions	S514
Posters	S534
Authors Index	S954

EDITORIAL

THE 20TH IAGG WORLD CONGRESS OF GERONTOLOGY AND GERIATRICS

H.B. CHA

President of the 20th IAGG World Congress of Gerontology and Geriatrics, President-elect of International Association of Gerontology and Geriatrics

I take great pleasure in welcoming you to the 20th IAGG World Congress of Gerontology and Geriatrics to be held from June 23 to 27, 2013 at COEX in Seoul. Many people like to refer to this event as the Seoul Gerontology Olympiad because it has been held every four years on the five Continents with the view of providing an opportunity for researchers, educators, practitioners and students in the area of gerontology and geriatrics with the results of the research they have worked on with hard effort for the last four years. Just as the best players from across the world compete with each other in the Olympic Games under the watchful eye of the people of all nations, a great number of professionals and specialists of gerontology and geriatrics will produce and supply precious knowledge and wisdom regarding the matter of ageing to the world through this academic festival.

The International Association of Gerontology and Geriatrics (IAGG), the official host of the Congress, was established in 1950 in Belgium. IAGG's mission is to promote the highest levels of achievement of gerontological research and training worldwide in order to promote the highest quality of life and well-being of all people as they experience ageing at individual and societal levels. Since the 1st World Congress in Belgium in 1950, the event has been held mostly in Europe or America. We have high expectations for the Seoul Congress, for it is an event of great significance which will happen for the second time in the Asian region since the 11th World Congress which was held in Tokyo in 1978.

We anticipate a total of 5,000 researchers, educators, practitioners and policy makers in the field of gerontology and geriatrics from more than 90 countries all over the world to participate in the Congress and release some 4,000 papers covering almost all the disciplines and topics involving older persons and ageing such as how we can age well, how we can manage age-related diseases and how we see the global population ageing.

On top of these academic issues, the Congress will also provide space for the exhibitions concerning the way of life in old age and a program for participants to make personal visits to institutes, hospitals, nursing homes and welfare facilities for the aged.

We expect the Seoul Congress to contribute immensely to the academic research, policy-making and industrial development in the field of gerontology and geriatrics thanks to its magnitude and diversity.

Firstly, the Seoul Congress will greatly enrich and enhance the quality of life of older persons by providing a wide spectrum of knowledge on health care, economic life, social participation and family life, etc across the world by releasing the results of numerous studies on ageing and older persons.

Secondly, the Seoul Congress will offer an effective guideline for all nations in the world to address global population ageing, which has now become one of the most urgent issues mankind of the 21st century has to cope with together with the problem of climate change and global poverty. It will highlight the necessity of a new paradigm for population ageing by presenting a positive image of older persons.

Thirdly, the Seoul Congress will play its role fully as the consultative body to the UN by opening a forum for the discussion of global issues such as elder abuse and age-friendly city environments among the experts and specialist concerned.

Fourthly, the Seoul Congress will contribute to the development of the age-friendly industry around the world. The production of knowledge and information in the field of health care, economic life and social services for the aged will lead to the development of related industry. The increase in the aged population, combined with the increase in the demand for a variety of social services for the aged, will eventually contribute greatly to the continued growth of the economy as well.

Deadline for Abstract Submission: January 20, 2014

IANA 2014

International Academy on Nutrition and Aging


Nutrition and Aging:
From Cells to Body Systems and Populations

July 10 & 11, 2014

Hotel Albuquerque at Old Town, Albuquerque, New Mexico, USA

som.unm.edu/2014/IANA.html

Presented by:

Instituts
thématiques  **Inserm**

Institut national
de la santé et de la recherche médicale

Topics:

Nutrition and Age Related Disease
Nutrition Function and Aging



For More Information Contact: Kathy Breckenridge, Program Coordinator • 001-505-272-3942 • kbreckenridge@salud.unm.edu

CTAD 2013

Clinical Trials on Alzheimer's Disease

Montpellier '08 | Las Vegas '09 | Toulouse '10 | San Diego '11 | Monte Carlo '12

Clinical Trials on Alzheimer's Disease

Clinical Trials

November 14-16, 2013 San Diego



www.ctad-alzheimer.com



Montpellier and Toulouse EADC Centers
European Alzheimer's Disease Consortium



EDITORIAL

NORTH AMERICA IS PLEASED TO WELCOME ALL TO THE 2013 IAGG WORLD CONGRESS

T.C. ANTONUCCI

Chair North American Regional Committee of IAGG, University of Michigan, Ann Arbor, MI, USA

It is a pleasure to be a part of this XXth IAGG World Congress and to welcome you to the Seoul Meeting. The IAGG and the World Congress is committed to enhancing the highest quality of life and well-being of all people as they experience ageing at individual and societal levels. We are grateful to our hosts Professor Cha and his committee for their hard work and the wonderful Congress they have put together. The theme Digital @ging is an exciting one. The breadth and diversity of topics and the quality of the speakers will provide a dynamic and informative Congress for all. We wish you a pleasant, educational and productive experience at the World Congress and in South Korea.

As the world becomes increasingly aware of the challenges presented by the changing shape of the human population, we will mutually benefit from the internationally recognized scholarship of IAGG members. At the same time, the occasion of our South Korean meeting permits us to look to the future, appreciate the multiple faces of aging, and recognize the importance of both the needs and abilities of our aging society. North Americans will willingly share their knowledge of aging and are anxious to learn from our colleagues in other parts of the world, especially South Korea.

The North American Regional Committee (NARC) includes three interdisciplinary societies: The Gerontological Society of America (founded in 1945); The Canadian Association on Gerontology (founded ~ 1970) and The Canadian Geriatric Society (founded in 1981). Each of these societies is well represented at these meetings. NARC and our member societies are strongly committed to the advancement of students. Through various programs and sponsorships we were able to offer special travel awards for students to attend the meeting. We expect a strong presence of students from North America at the Seoul World Congress and are committed to

providing significant mentorship experiences for all students attending the conference.

There are a number of pressing concerns noted by members of NARC. These include unique issues related to immigration in North America. Many other regions of the world are experiencing out migration, whereas the US and Canada face in-migration and the consequent issues of cultural and economic assimilation. These are especially critical if and when there are generational differences in cultural experiences and expectations. Another area of concern is the challenges we face as an aging society, not only in terms of individual differences in aging and longevity but also in terms of what it means to have a society with a different age structure, e.g., a work place that includes three to five generations of workers; or a built environment that must include universal design specifications so as to meet the needs of the young and old, the healthy, frail and disabled; as well as the needs of a society facing climate change, energy conservation, and pollution. And finally, we are strongly committed to assuring that there will be a well-trained next generation of gerontologists and geriatricians to meet the challenges we are facing.

The North American Regional Committee is pleased to note that several outstanding North American scholars are represented among the Keynote Addresses and Presidential Symposia. We also bring to your attention the special interest group meeting of the Global Social Initiative on Aging, a unique, recently formed group and core activity of IAGG focusing on social aspects of aging.

On behalf of all members of the North American Region of IAGG, I would like to add my welcome to this XXth World Congress on Gerontology and Geriatrics. I look forward to seeing you here in Seoul and in San Francisco in 2017.

JAMDA

Journal of the American Medical Directors Association

Long-Term Care: Management Applied
Research and Clinical Issues

**Increased for the fourth
year in a row!**



Journal of the American Medical Directors Association (JAMDA) is one of the top peer-reviewed journals with practical information and research immediately applicable to the long-term care setting.

Ranked 4th in the Geriatrics & Gerontology category*, *JAMDA* emphasizes original, evidence-based articles that enable medical directors and other long-term care practitioners to proactively improve patient care, address emerging clinical issues, devise evidence-based policies and achieve regulatory compliance.

The Journal provides comprehensive coverage of issues with the greatest relevance to the long-term care setting, including disease processes, medications, infection control, syndromes, assessment techniques, and interventions. Features include Editorials, Original Studies, Controversies, Case Reports, Quality Improvement, Reviews, and Clinical Experience.

In addition to medical directors, *JAMDA* is an indispensable resource for attending physicians, consultant pharmacists, directors of nursing, nurse practitioners and geriatric psychiatrists.

Articles available ahead of print on jamda.com accelerate the exchange of intellectual information by publishing content before it appears in the print journal.

Find out how you can receive *JAMDA* as a free member benefit of the American Medical Directors Association (AMDA). Visit the Association at amda.com.



ISSN: 1525-8610

Frequency: 12 issues per year

Editor-in-Chief

John E. Morley, MB, BCh
e-mail: morley@slu.edu

Associate Editors

David R. Thomas, MD, CMD
e-mail: thomasdr@slu.edu

Julie K. Gammack, MD
e-mail: gammackj@slu.edu

Saint Louis University
Medical Center
Division of Geriatric Medicine
1402 S. Grand Boulevard,
Room M238
St. Louis, MO 63104
Telephone: 314-977-8462
FAX: 314-771-8575

To order or for more information, please contact:

Elsevier Periodicals Services
6277 Sea Harbor Drive
Orlando, FL 32877 USA

Phone:

1-800-654-2452
(U.S. and Canada)
1-407-563-6020
(Other Countries)

Visit Us Online At:

www.jamda.com



EDITORIAL

PREPARING FOR THE 20TH IAGG WORLD CONGRESS

H.J. YOO

The Scientific Committee Chairman of the 20th World Congress of Gerontology and Geriatrics. Professor, Department of Internal Medicine (Endocrinology & Geriatrics), Kangnam Sacred Heart Hospital, Hallym University College of Medicine, Korea

Dear Colleagues,

First of all, I welcome all of you to participate in the 20th IAGG World Congress of Gerontology and Geriatrics in Seoul. As Chair of the Scientific Committee of the Congress, I would like to express my sincere gratitude for your cordial concerns and contributions for the success of the Congress.

The world has been experiencing population aging at a much faster rate than ever in recent days, resulting in such serious problems in every aspects of society, such as medical, economic, cultural, etc., which have never even existed before.

Under these circumstances, the Congress, where about 5,000 professionals all over the world gather and about 4,000 papers are presented, is the very right place to share the latest academic findings, and further suggested directions and visions to enhance quality of life and values of older persons. Especially because the quality of human life in this century is strongly influenced by information technology, the Organizing Committee of the Congress decided the main theme as 'Digital Aging: A New Horizon for Health Care and Active Aging', and the ideal will be embodied through a variety of ways including scientific programs.

We, the Scientific Committee, have prepared not only the classical and usual programs like keynote lectures, presidential

symposia, oral & poster presentations, workshops embracing every fields of Gerontology and Geriatrics, but also some distinguished programs, handling the newest issues related to an ageing society. They include a roundtable discussion on 'Population Ageing and the Economic Growth', and a workshop on 'The Human Rights of Older Persons', one of the United Nations' main concerns at the moment. Simultaneously, some programs are prepared to explore and strengthen network and companionship between IAGG members, and give our devoted colleagues honor and respect. The Gary Andrews Memorial Symposium and the Busse Award Ceremony & the Awardees' Lectures are part of those.

I am very confident that we would make meaningful scientific progress through sharing a variety of studies & views on all the fields of Gerontology and Geriatrics during the Congress. Again, all your strong participations in the scientific programs are definitely appreciated.

Finally, I express my heartfelt thanks for the active supports of the IAGG Headquarters, the Federation of Korean Gerontological Societies, and the Congress Sponsors. Also, I cannot thank all my colleagues of the Scientific Committee enough for their great deal of precious contributions and efforts to prepare for the Congress.

The Journal of Frailty & Aging

Please consult : <http://www.jfrailtyaging.com>

The Journal of Frailty & Aging is a peer-reviewed international journal aimed at presenting articles that are related to research in the area of aging and age-related (sub)clinical conditions. In particular, the journal publishes high-quality papers describing and discussing social, biological, and clinical features underlying the onset and development of frailty in older persons. The Journal of Frailty & Aging is composed by five different sections :

- **Biology of frailty and aging:** In this section, the journal presents reports from preclinical studies and experiences focused at identifying, describing, and understanding the subclinical pathophysiological mechanisms at the basis of frailty and aging.
- **Physical frailty and age-related body composition modifications:** Studies exploring the physical and functional components of frailty are contained in this section. Moreover, since body composition plays a major role in determining physical frailty and, at the same time, represents the most evident feature of the aging process, special attention is given to studies focused on sarcopenia and obesity at older age.
- **Neurosciences of frailty and aging:** The section presents results from studies exploring the cognitive and neurological aspects of frailty and age-related conditions. In particular, papers on neurodegenerative conditions of advanced age are welcomed.
- **Frailty and aging in clinics and public health:** This journal's section is devoted at presenting studies on clinical issues of frailty and age-related conditions. This multidisciplinary section particularly welcomes reports from clinicians coming from different backgrounds and specialties dealing with the heterogeneous clinical manifestations of advanced age. Moreover, this part of the journal also contains reports on frailty- and age-related social and public health issues.
- **Clinical trials and therapeutics:** This final section contains all the manuscripts presenting data on (pharmacological and non-pharmacological) interventions aimed at preventing, delaying, or treating frailty and age-related conditions.

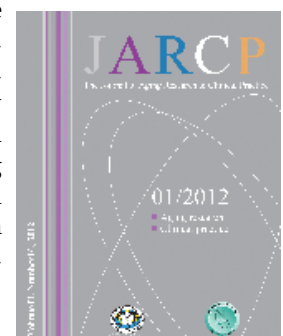
The Journal of Frailty & Aging is a quarterly publication of original papers, review articles, case reports, controversies, letters to the Editor, and book reviews. Manuscripts will be evaluated by the editorial staff and, if suitable, by expert reviewers assigned by the editors. The journal particularly welcomes papers by researchers from different backgrounds and specialties who may want to share their views and experiences on the common themes of frailty and aging.



The Journal of Aging Research and Clinical Practice

Please consult : <http://www.jarcp.com>

The aims of the new journal is to connect more closely research on aging and clinical practice in several fields including Alzheimer's disease, memory and physical decline, sarcopenia, nutrition, and other age-related diseases or syndromes. Our aging population is growing fast, mostly in new emerging countries from Asia, South America and Africa. In the next few decades, these regions will need to benefit from all that has already been accomplished during the last century in Northern America and Western Europe. The Journal of Aging Research and Clinical Practice (J.A.R.C.P) is a new initiative of the IAGG (International Association of Gerontology and Geriatrics), and of the GARN (IAGG's Global Aging Research Network), dedicated to latest findings and clinical experiences in the fields of aging, gerontology and geriatrics.



EDITORIAL

ASIA/OCEANIA WELCOME ALL TO THE 2013 IAGG WORLD CONGRESS

P. DU

Chair, Asia/Oceania Regional Committee of IAGG; Institute of Gerontology, Renmin University of China

On behalf of the Asia/Oceania Regional Committee of IAGG, we are pleased to welcome all to participate in the 2013 IAGG Congress in Seoul. It is a great opportunity for the participants to exchange the latest research findings of gerontology and geriatrics and good practice experiences on services to the older persons. I believe the congress will play a very important role to promote the development of gerontology and geriatrics as well as the international collaborations both in the region and the world. The 2013 IAGG congress is the third one hosted in the region (after Japan and Australia) and the first one in the new century, we are pleased that our member association has the honor to host it and the large number of participants from the region will benefit the most from the regional perspective. We would like to thank Professor Cha and his committee for their various efforts to encourage and enable more participants from the region as well as the other regions to attend the congress, share their thoughts and to make the congress a great success.

The Asia/Oceania region is the home of more than half (56 per cent) of the world's older persons and most of the countries in the region have been experiencing rapid population ageing. By the year 2050, 62 per cent of the world's older persons will be living in the region, therefore ageing issues and ageing studies have gained unprecedented importance and attention. The Asia/Oceania region is also very diverse on a developmental level and culture. Some ageing issues are common challenges faced by both developed and developing countries in the region, such as dementia, long-term care, productive ageing, declining fertility, social security system

reform etc., and some are the key challenges for developing countries in the process of economic development and social transformation from the traditional family support system to the modern society, such as the international and domestic migration, family role in the care of older persons, changing intergenerational relationships, training of the service professionals, rapid urbanization and inequality amongst the older persons. The 2013 IAGG congress have many symposiums and presentations relevant to these research and practice, and will provide a wonderful chance to exchange ideas and experience, to promote more creative policies to enhance the quality of life of the older persons.

Comparing to the huge number of older persons and their increasing needs in the region, Asia/Oceania still needs to make greater efforts to promote the education and research on gerontology and geriatrics as well as the practice of services and care of older persons. We appreciate the strong support of IAGG in the past two years to run 3 Master Classes in Taipei, Hong Kong and Beijing, to enhance the capacity of junior researchers in gerontology and geriatrics. The Asia/Oceania region has also paid lots of attentions to the new generation of researchers and practitioners; we have run several training programs and plan to launch the Gary Andrews Academy for the promotion of training and education of gerontology and geriatrics in the region.

May you enjoy the academic activities in the 2013 IAGG congress as well as the rich Korean culture and find some time to visit the neighboring countries in the region. We look forward to seeing you in Seoul.



1st independent French pharmaceutical company

1st independent French pharmaceutical company. Over 20 000 employees. Nearly 3 000 researchers preparing the drugs of the future. 25 % of turnover invested in Research and Development. 44 new chemical entities currently under development in the following therapeutic fields: cardiovascular diseases, central nervous system and psychiatry, cancer research, diabetes and metabolism, and rheumatology. Present in 140 countries over 5 continents. 92 % of SERVIER'S medicines are prescribed internationally. A turnover of 3.9 billion euros for 2012. SERVIER contributes up to 57% of the French Pharma trade surplus.



Servier
50 rue Carnot
92284 Suresnes Cedex France
Phone : +33(1) 55 72 60 00
www.servier.com

EDITORIAL

BRIDGING THE GAP BETWEEN RESEARCH AND POLICY MAKING

V. KHAVINSON

IAGG-ER President; Russia

Integration and participation of older persons in society are important elements in realizing a society for all ages. How to reach it? Through digital ageing, in particular. It may improve everyday life of seniors, who constitute the most vulnerable group of population. Availability of related information is crucial for them and could support their independence, confidence and dignity. In this context the theme of the 20th World Congress on Gerontology and Geriatrics in Seoul is very timely.

Population ageing and disequilibrium between the younger and older generations are the most important consequences of the demographic transition, and most inevitably influence the strategy and implementation of national health and social programs.

Europe is getting older and Europeans are living longer than ever before, nearly 10 years more than in 1960. Increased longevity is a great achievement and a great challenge. It is our task (those finest gerontological minds from all over the world who meet in Seoul) to turn challenges into opportunities and to make the most of the chances offered by the scientific community.

Thirty seven National Gerontological Societies in IAGG's European region work together to raise the awareness about the enhancing the potential of older persons for the benefit of our societies and to increasing their quality of life by enabling their participation in social and economic development. The 2012 European Year for Active Ageing and Solidarity between Generations has been very instrumental for exchange of knowledge, practice and policy experience.

The Vienna Research Forum participants who came together to contribute to the UNECE Ministerial Conference on Ageing in September 2012 unequivocally supported the implementation of the Madrid International Plan of Action on

Ageing in the region and recognized that researchers and research institutions "...have a special responsibility to share the scientific analysis of ageing and its implications with the rest of the world".

To this end, the Executive Board of IAGG's European region called all European National Gerontological Societies to present their chapters on the background, history and achievements on the national levels to be a part of the historic book on the development of gerontology in Europe which is going to see the light by the forthcoming IAGG European Congress in 2015 that will take place in Dublin (Ireland). As a first step, a special issue of the *Journal of Biogerontology* was issued on the occasion of the 7th European Congress of IAGG in Bologna in 2011. It contains articles presented by the National European Gerontological Societies and provides an overview of the state of research in biogerontology in various countries in Europe.

Research and knowledge dissemination may help in designing appropriate policy responses.

Involvement of all key stakeholders and experts including policy makers, research institutions, civil society, business sector, older people themselves in analyzing and implementing research findings can contribute to the sustainable national and cross-national programs. It will help to bridge the gap between policies and research. Such an exchange of knowledge, practice and policy experience among major stakeholders on ageing is most valuable.

On behalf of the IAGG-ER Executive Board, I would like to welcome all participants, hosts and guests at the 20th World Congress on Gerontology and Geriatrics and wish fruitful and stimulating deliberations in the beautiful and powerful city of Seoul.



International Research Conference Nursing Home

Friday 22nd & Saturday 23rd November, 2013
St. Louis, Mo, USA

www.nursing-home-research.com

SPONSORED BY INTERNATIONAL ASSOCIATION OF GERONTOLOGY & GERIATRICS • GLOBAL AGING RESEARCH NETWORK • SAINT LOUIS UNIVERSITY – USA

**The conference will be held at Saint Louis University, Tegeler Hall,
3550 Lindell Blvd. St. Louis, MO 63103**

Despite the increase of both the aging population and the number of institutionalized older people, clinical research in nursing homes is still scarce. Research is, however, essential to improve the quality of care in the nursing homes. The improvement of the quality of care in the nursing home will rely on future evidence from researches performed in these settings, their feasibility in real life conditions and the successful dissemination of these new clinical evidences. The International Research Conference Nursing Home offer an opportunity to learn and share ideas, and promote current knowledge among researchers in the field of nursing home care.

The international Research Conference Nursing Home will focus on :

- Research in the nursing home
- Hospitalizations in the long-term care population
- Pressure ulcers in the nursing home
- A multicentric individually-tailored controlled trial of education and professional support to nursing home staff.
- What should be the optimal staff organization in nursing home?
- Depression in the nursing home
- Transitions between nursing and hospital
- Clinical update on nursing home medicine
- Neuropsychiatric symptoms and Psychotropic drug prescription in nursing home patients
- Cognition-based psychological interventions
- End-of-life care in the nursing home
- Delirium in nursing home



Call for abstracts:

Symposium • Oral communication • Poster



Abstract deadline: abstracts must be received by the secretary no later than July 30, 2013. This deadline will be strictly respected

EDITORIAL

AFRICAN GERONTOLOGY AND GERIATRICS: STRIDES AND CRUCIAL NEXT STEPS

I. ABODERIN

Senior Research Scientist, African Population and Health Research Center, Nairobi, Kenya; Senior Research Fellow, Oxford Institute of Population Ageing, University of Oxford, UK;
Regional Chair for Africa, International Association of Gerontology and Geriatrics

Africa features more prominently in the affairs of the International Association of Gerontology and Geriatrics (IAGG) than it has ever before. The formal establishment of an IAGG Africa region at the last IAGG World Congress in Paris in 2009, spurred the formation of new National Societies of Gerontology and Geriatrics in three African countries - Kenya, Senegal and Nigeria, and the forging of research and capacity building initiatives in the continent as part of the IAGG Global Social Initiative on Ageing (GSIA).

The perhaps most prominent development was a landmark 1st IAGG Africa Region Conference of Gerontology and Geriatrics, held 17-20 October 2012 in Cape Town, which brought together close to 400 researchers, policy makers, practitioners, and civil society and private sector role players from 21 countries across Africa and a further 20 beyond.

The remarkable spectrum and quality of evidence presented and the discussions generated in the conference, signaled clearly that research and policy debate on ageing in Africa have finally reached a point of inflection -- more than 30 years after they first emerged. We now have a considerable understanding of many key dimensions of ageing in the continent and of necessary responses to them, including:

- The crucial ways in which older people care for younger generation kin, and act as agents of stability and positive change in contexts of poverty, HIV and migration.
- The living circumstances, family relations of- and support for older persons, as well as the patterns and causes of ill-health, social exclusion, abuse and poverty in old age in both rural and urban settings.
- Types of models that work in providing institutional and community-based long-term care, as well as medical treatment for older people, including those with dementia.

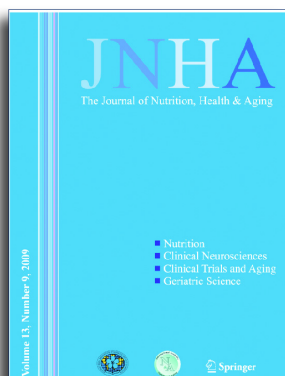
- Systematic adaptations needed to African health and social protection systems to ensure income security and access to services in old age.
- Frameworks and approaches needed to safeguard older persons' human rights.
- Mechanisms for robust, policy relevant national data generation

Building on the tremendous strides made, the time is now ripe for a next, crucial step for African Gerontology and Geriatrics. This is to connect much more explicitly than hitherto, with the international debate and scientific community in the field – and in so doing to deepen our understanding of ageing, globally.

In terms of science, this means above all a more direct use, critical interrogation and even refinement of existing (mostly western) theories and conceptual perspectives in the quest to fully grasp the realities of old age in Africa.

Enhanced engagement with the wider academic community requires more substantive debate and a forging of comparative perspectives between African scholars and those from other parts of the globe.

The Cape Town conference stimulated the beginnings of such exchange. The forthcoming 20th IAGG World Congress of Gerontology and Geriatrics in Seoul promises to provide an effective platform and catalyst for expanding it. The greatest ever presence of African speakers and delegates at an IAGG congress – made possible by the generous and active support of the Organizers – augurs well. If harnessed it should yield many opportunities for forging connections that will advance both the African– and the Global endeavour on ageing in coming decades.



JNHA-Journal of Nutrition, Health and Aging

There is increasing scientific and clinical interest in the interactions of nutrition and health as part of the aging process. This interest is due to the important role that nutrition plays throughout the life span. This role affects the growth and development of the body during childhood, affects the risk of acute and chronic diseases, the maintenance of physiological processes and the biological process of aging. A major aim of «The Journal of Nutrition, Health & Aging» is to contribute to the improvement of knowledge regarding the relationships between nutrition and the aging process from birth to old age.

Impact Factor: 2.686 (2011)

AVAILABLE ONLINE

GENERAL INFORMATION

> springer.com

ELECTRONIC CONTENT

>>> link.springer.com

Yes, I would like to subscribe to *JNHA-Journal of Nutrition, Health and Aging* for 2013, 10 issues:

JNHA-Journal of Nutrition, Health and Aging

ISSN print: 1279-7707
ISSN electronic: 1760-4788

Institutional rate: €471.00 Net*

Personal rate: €286.00 Net**

*Local VAT to be added and carriage charges to be added - **Local VAT to be added, carriage charges included.

Subscription for 1 calendar year (print and electronic version included)

Last Name / First name:

Institution: Department:

Function:

Address:

City/State: Zip Code: Country:

E-mail: Phone number:

Please bill my institution:

Please charge my credit card: Visa Mastercard AmericanExpress

N°:

Security code:

Valid Until: /

Date and Signature:



Please return your completed order to:

Customer Service Journals, Springer Customer Service Center, Haberstr. 7, D-69126 Heidelberg, Germany,
Tel: +49 6221 345 0, Fax: +49 6221 345 4229, E-mail: subscriptions@springer.com

EDITORIAL

LATIN AMERICA AND CARIBBEAN REGION WELCOMES THE WORLD TO THE IAGG WORLD CONGRESS IN SEOUL

J.R. JAUREGUI

Chair, Latin America & Caribbean Region, International Association of Gerontology and Geriatrics, Internal Medicine Department, Geriatric Branch Consultant, Hospital Italiano de Buenos Aires, Argentina

Longevity and Digital development may be regarded as one of the successes of the contemporary world. Yet despite advances in our knowledge of geriatrics and gerontology, demographic transitions and a new digital world have led to new challenges. In both developing and developed countries many older people rank among the most vulnerable in society.

IAGG's 20th World Congress, with its slogan "DIGITAL AGING", provides the opportunity to discuss these challenges and reach creative solutions. This approach and strategies of regions and different disciplines put us into a position to solve complex problems of this age group. The debate must be based on research results obtained from all sectors and fields of gerontology and geriatrics.

This congress will bring together researchers and clinicians from a large variety of countries, and from all research disciplines and areas related to population aging and older adults.

We have the opportunity to share research findings, policies, strategies and programs of emerging countries from sub-Saharan Africa or South America, that have not previously had much information on the characteristics of their seniors. This wide participation of researchers from many of these countries that have not previously exhibited many papers or communications, are very welcome indeed. Furthermore, the

opportunity to hear updated information from established research groups and countries with longstanding research traditions in aging is part of the richness of this World Congress.

Every four years, there is the opportunity to exchange knowledge, experience, success and failures on research of older people. It is only with an enthusiastic view and an obdurate soul that gerontology and geriatrics will advance. This special issue is the sample of collective proposals and solutions to the challenge of aging.

On this occasion, it is also a pleasure, to tell you all that our region gives support to both the Argentinean Gerontology & Geriatrics Society (SAGG) and the Argentinean Gerontology Association (AGA), to present its candidacy to host the XXIst IAGG World Congress in 2021, featuring the city of Buenos Aires, Argentina, as the organizer of it, and of course, we are looking forward to your support to being elected.

Finally, on behalf of all members of the IAGG's Latin America and Caribbean Region, I would like to welcome you to this 20th World Congress on Gerontology and Geriatrics in Seoul, Korea. May our deliberations be productive and stimulating and provide steps toward improving quality of life for older adults in all regions of the world.

NURSING HOME CARE

The definitive text
on the principles
and clinical
practice of nursing
home care.

Mc
Graw
Hill
Education

Medical



New Edition of Pathy's Principles and Practice of Geriatric Medicine

Edited by Alan J. Sinclair, John E. Morley, and Bruno Vellas

Now in its fifth edition, this comprehensive two-volume text of geriatric medicine provides up-to-date, practical information on all medical problems of aging citizens. It includes 41 new chapters on new infections, treatments, and approaches to care; and it features expanded sections on acute stroke, dementia, cardiovascular disease, respiratory disease, and global healthcare systems. Written from an international perspective, this landmark resource is edited by renowned geriatricians from the US, UK, and France.

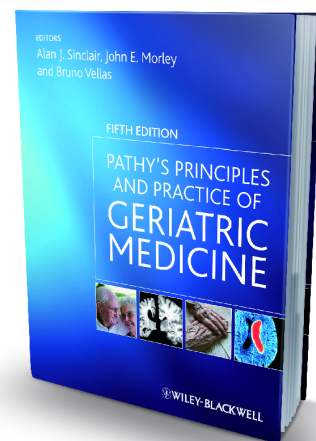
Key Features:

- Fully updated, including additions to literature and changes in treatment options
- 41 new chapters on new infections, treatments, and approaches to care
- New editorial team ensures a global perspective
- Now available in e-book format

Praise for the 4th edition:

"... an excellent reference for learners at all clinical and preclinical levels and a useful contribution to the geriatric medical literature."

Journal of the American Medical Association, November 2006



978-0-470-68393-4 • Hardcover
2-volume set • 1944 pages • May 2012

Go to www.wiley.com to order while
introductory pricing still applies!
~~US \$700.00 / £450 / €520 / AU \$740~~
US \$559.95 / £350 / €450 / AU \$595

*Introductory pricing expires August 31, 2012.

 **WILEY-BLACKWELL**

SCIENTIFIC PROGRAM

ORAL COMMUNICATIONS

KEYNOTES LECTURES

Monday June 24
Tuesday June 25
Wednesday June 26
Thursday June 27

PRESIDENTIAL SYMPOSIA

Monday June 24
Tuesday June 25
Wednesday June 26
Thursday June 27

SUBMITTED SYMPOSIA

Monday June 24
Tuesday June 25
Wednesday June 26
Thursday June 27

SPECIAL SESSIONS

Monday June 24
Tuesday June 25
Wednesday June 26

ORAL PRESENTATIONS

Sunday June 23
Monday June 24
Tuesday June 25
Wednesday June 26
Thursday June 27

POSTERS

Tuesday June 25
Track B - Biological Science
Track C - Clinical Medicine
Track R - Research Policy and Practice
Track S - Social and Behavioral Sciences

Wednesday June 26
Track B - Biological Science
Track C - Clinical Medicine
Track R - Research Policy and Practice
Track S - Social and Behavioral Sciences



GARN
Global Aging
Research Network

IAGG GARN Symposium

on Implementing Frailty into Clinical Practice and Clinical Research:
**Prevention of Frailty in Robust Older Adults / Prevention of Further
Disabilities in Frail Older Adults**

**MONDAY JUNE 24TH, 2013 AT THE SEOUL CONVENTION CENTER
DURING IAGG'S 20TH WORLD CONGRESS OF GERONTOLOGY AND GERIATRICS**

PROGRAM:

01:30pm: **Introduction:** Pr B. VELLAS, IAGG President (France), Pr HB. CHA, IAGG President Elect (South Korea), Pr R. GUIMARAES, IAGG Past President (Brazil)

02:00pm to 03:30pm:

04:00pm to 05:30pm:

Session 1: Prevention of Frailty in Robust Older Adults

Session 2: How to Implement Frailty into Clinical Practice and Clinical Research?

Is a Continuum between Robust, Frailty and Disabilities with Aging?

The Gérontopôle Experience, to implement frailty into clinical practice.

Pr J. ROWE (New York, USA), IAGG Future President Elect

Pr B. VELLAS (Toulouse, France)

The Risk Factors for Frailty in Robust Older Adults.

Pr A. SINCLAIR (Luton, UK)

How to implement Sarcopenia into clinical practice.

Pr LK. CHEN (Taipei, Taiwan)

How to Empower the Primary Care Physician in the Identification of the

Vulnerable Older Person with a View to Preventing Frailty and all its Consequences.

Pr I. PHILP (Warwick, UK)

An international consensus definition and assessment for frailty.

Pr J. MORLEY (St Louis, USA)

05:30PM TO 06:30PM: IAGG GARN RECEPTION

Supported by an unrestricted educational grant from Pfizer



Symposium strictly reserved for people registered for the IAGG 20th World Congress

www.garn-network.org

Guidelines to read the abstracts code

Session formats:

KL: Keynote Lectures
PS: Presidential Symposia
SS: Submitted Symposia
SP: Special Programs
OP: Oral Presentations
PP: Posters Presentation

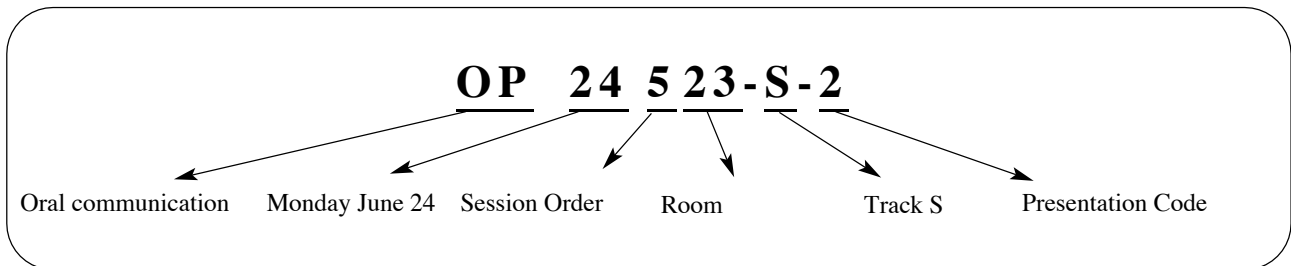
Session tracks

B - Biological Science
C - Clinical Medicine
R - Research Policy and Practice
S - Social and Behavioral Sciences

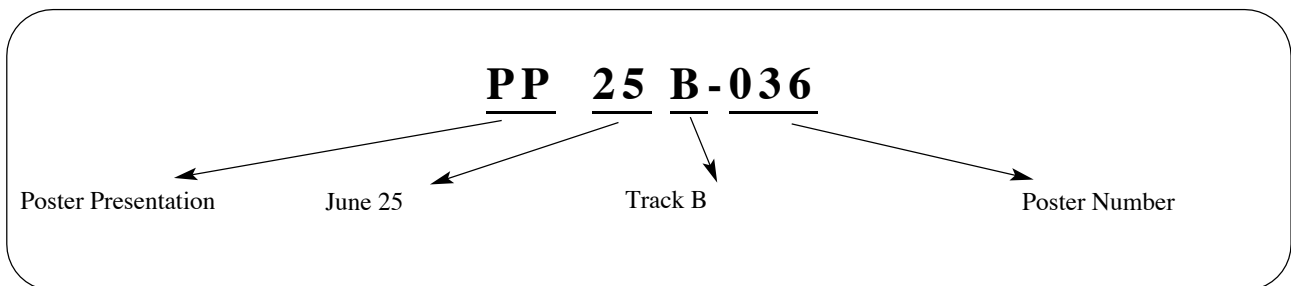
Session days

23: Sunday June 23
24: Monday June 24
25: Tuesday June 25
26: Wednesday June 26
27: Thursday June 27

Oral Example: OP24 523-S-2



Poster Example: PP25 B-036



Nutrition Screening

As **e**asy as **m**na[®]

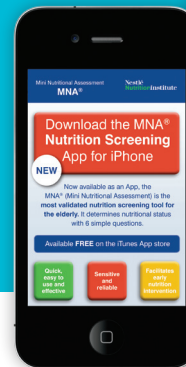
Malnutrition is associated with a 3 times higher infection rate and higher mortality rate^{1,2}

MNA[®]: The **GOLD** standard in nutrition screening for the older adult

- Most validated tool for the elderly
- Quick, convenient and easy to use
- Identifies patients who need nutrition intervention
- Most commonly used nutrition screening tool by geriatricians³



Screen and intervene.
Nutrition can make a difference.



Mini Nutritional Assessment MNA[®]		Nestlé Nutrition Institute
Last name:	First name:	
Sex:	Age:	Weight, kg: Height, cm: Date:
Complete the screen by filling in the boxes with the appropriate numbers. Total the numbers for the final screening score.		
Screening		
A How food intake declined over the past 3 months due to loss of appetite, digestive problems, chewing or swallowing difficulties? 0 = severe decrease in food intake 1 = moderate decrease in food intake 2 = no decrease in food intake		<input type="checkbox"/>
B Weight loss during the last 3 months 0 = weight loss greater than 3 kg (6.6 lbs) 1 = does not know 2 = weight loss between 1 and 3 kg (2.2 and 6.6 lbs) 3 = no weight loss		<input type="checkbox"/>
C Mobility 0 = unable to get out of bed / chair but does not go out 1 = goes out 2 = goes out		<input type="checkbox"/>
D Has suffered psychological stress or acute disease in the past 3 months? 0 = yes 1 = no		<input type="checkbox"/>
E Neuropsychological problems 0 = severe dementia or depression 1 = mild dementia 2 = no neuropsychological problems		<input type="checkbox"/>
F1 Body Mass Index (BMI) (weight in kg) / (height in m) ² 0 = BMI less than 19 1 = BMI 19 to less than 21 2 = BMI 21 to less than 23 3 = BMI 23 or greater		<input type="checkbox"/>
IF BMI IS NOT AVAILABLE, REPLACE QUESTION F1 WITH QUESTION F2. DO NOT ANSWER QUESTION F1 IF QUESTION F2 IS ANSWERED COMPLETELY.		
F2 Cell circumference (CC) in cm 0 = less than 33 1 = CC 33 or greater		<input type="checkbox"/>
Screening score (max. 14 points)		
13-14 points: Normal nutritional status		
8-11 points: At risk of malnutrition		
0-7 points: Malnourished		
Notes:		
1. Sorensen J et al. Clin Nutr 2008; 27(3):340-349.		
2. Schneider SM et al. Br J Nutr 2004; 92(1):105-111.		
3. Vandewoude M et al. European Geriatric Medicine 2011; vol 2, issue 2:67-70.		
© Nestlé Nutrition Institute, Vevey, Switzerland. Nestlé Nutrition Institute is a trademark of Nestlé Nutrition Institute. All rights reserved. Nestlé Nutrition Institute is not responsible for the use of the MNA® tool. For more information, please visit www.mna-elderly.com		

1. Sorensen J et al. Clin Nutr 2008; 27(3):340-349.
2. Schneider SM et al. Br J Nutr 2004; 92(1):105-111.
3. Vandewoude M et al. European Geriatric Medicine 2011; vol 2, issue 2:67-70.

ORAL COMMUNICATIONS

KEYNOTE LECTURES

Monday June 24th

KL-24-001

DIGITAL AGING: WHY, WHAT AND HOW?

Sang Chul PARK (*Well Aging Research Center, Samsung Advanced Institute of Technology, Korea*)

Digital Aging is the new concept of aging in the technologically innovated world for the dynamic integrative interaction and adaptation of older individuals with new environment of the innovative artificial technology. Digital Aging can be analyzed in three domains of individual aging, life style changes and social influence. The individual aging is in the domain of Digital Genomics. Since biological nature is holistically analyzed in terms of genomics, as digital terms of genes, it is naturally assumed that nature of biological aging can be fully explained and modulated. The life style changes in the technologically innovated world are in domain of Digital Ubiquitous. With advance of IT, NT and BT, totally new patterns of life styles have been generated, leading to better quality of life with faster speed with higher efficiency. The social influence is in the domain of Digital Divide. Advance of technology results in social divide for haves and have-nots of the digital technology, directly linked to generation gaps between young and old groups, resulting in the neo-ageism. Since Digital Genomics and Digital Ubiquitous can be resulted from technological innovation, it can be readily expected that the quality of life and human dignity in the late stage of life might be improved. But in reality, Digital Divide is ensued, leading to dampening the quality of life and human dignity of the older people. Therefore, it is urgently required to develop the balancing strategy of Digital Genomics, Digital Ubiquitous and Digital Divide in order to overcome the global issue of new aging problem.

KL24 004

PATHWAYS MODULATING AGING? APPROACHES TO EXTEND HEALTHSPAN

Brian KENNEDY (*Buck Institute for Research on Aging, USA*)

Aging research has entered a new era. In the past three decades, the field has defined hundreds of genes that influence aging in model organisms. These studies have demonstrated that (1) aging can be manipulated relatively easily, (2) that many genetic interventions enhancing longevity also extend healthspan (the highly functional disease free period of life) and (3) there are many protein targets for small molecule interventions that extend lifespan. This latter observation has spawned a new breakthrough area in aging research – the identification of small molecules that promote longevity. Two forerunners are rapamycin and resveratrol, but there are a plethora of other compounds that are emerging in their wake. In this lecture, rapamycin and resveratrol will be explored and the likelihood that the small molecules that emerge from aging research can precede to clinical development will be discussed. Will aging research catalyze a new arena for drug development? Can small molecules be developed that are given to healthy people to maintain them in a disease-free

state? Can drug development and preventative medicine more closely align? These questions will be explored.

Tuesday June 25th

KL-25-001

ACTIVE AGEING: A POLICY FOR ALL AGES?

Alan WALKER (*Social Policy & Social Gerontology, University of Sheffield, UK*)

This keynote lecture focuses on active ageing and, specifically, the ubiquitous stereotypes of activity and age it evokes. Rather than a policy prescription and set of behaviours uniquely associated with the third age it is argued that active ageing should be ageless: concerned with function rather than age. The lecture starts with a brief overview of the origins of active ageing, its evolution from successful to active ageing, through productive, positive, healthy ageing. The key component of each approach is identified. Then attention is switched to the common stereotype of active ageing and its base reduction to working longer, it is argued that the neo-liberal policy context is the main driver of this reduction rather than science or the interests of older people. The severe limitations of this approach are discussed and include the exclusion of the oldest old and the failure to acknowledge the inherent gender bias in active ageing policies. Finally, an alternative policy approach is outlined, one which emphasizes the core element of all previous constructs: activity. The scientific foundations of the relationship between activity and well-being are summarized. Then the essential principles of a life course approach to active ageing are advanced, including inclusivity (all ages, all functional abilities) and empowerment. Among other sources the lecture draws on research under the UK New Dynamics of Ageing Programme. <http://www.newdynamics.group.shef.ac.uk/>

KL-25-004

POPULATION AGEING ISSUES IN DEVELOPING COUNTRIES

Peng DU (*Institute of Gerontology, Renmin University of China, China*)

Population ageing in developing countries has been accelerating and accounts for an increasing proportion of the world older persons, among the 810 million people aged 60 years or over in the world in 2012, 65.5% are living in the developing countries and it is projected to further increase to 79.4% by 2050. Meanwhile, the proportion of the older persons in developing countries will increase from 9% in 2012 to 20% by 2050, a similar level as that of the developed countries at the beginning of this century. Therefore, with less economic resources and shorter time to adapt to the more rapid population ageing process, how to meet the challenges of the ageing issues in developing countries will play a crucial role of achieving the global goal of “a society of all ages”. Population ageing has extensive socioeconomic implications in developing countries, many latent ageing issues in the traditional societies have emerged as the urgent social issues and fundamentally changed the socioeconomic systems and national strategies to adapt for. The erosion of family support function due to fewer children and emigration of the family members requires more adequate social

pension, Medicare and daily care support from the society and communities; the changing living arrangements and increasing number of older persons with ADL difficulties and dementia need better long term care system and services; the new generations of healthier and better educated older persons need a more enabling social environment to actively participate the development, to promote new intergenerational relationships, to narrow and eliminate gender inequality, to develop more comprehensive protection system of the rights of older persons. Although some ageing issues are common in both developed and developing countries, a variety of ageing issues are more severe and become policy priorities in the developing countries, such as poverty, rural ageing, HIV/Aids, older persons in emergency situations, the lack of universal social pension, health program and services, gender discrimination, poorer housing condition, worsening affected by the financial crises and very limited protection by the laws and public policies. Most developing countries have already realized the urging needs to tackle the ageing issues and many countries have been trying to make efforts to adapt to the trend of population ageing and the changing needs of older persons and their families especially since the first UN World Assembly on Ageing in 1982, more active and concrete actions have been taken after the adoption of MIPPA in 2002 to meet the challenges of population ageing. The key progresses in the diverse developing countries include the development of social security system, community elderly services and institutional care, the efforts to have specific national strategy on ageing and the laws and policies to improve the life of older persons, more systematic collection of data through the census and surveys, increasing number of the professional geriatricians, gerontologists and social workers, etc. However, comparing to the developed countries, huge gaps in various aspects of systems, policies, research and practices on ageing issues still widely exist in developing countries, and far more efforts should be made before the age boom to come.

Wednesday June 26th

KL-26-001

DRUG TRIALS FOR ALZHEIMER'S DISEASE: WHAT HAVE WE LEARNED, AND WHERE ARE WE ARE GOING?

Bruno VELLAS (*Gerontopole, University of Toulouse, France*)

After modest success in bringing symptomatic therapy to the clinic, there is still high drug discovery need for effective disease-modifying treatment for the worldwide exploding epidemic of Alzheimer's disease (AD). From the development of the first transgenic mouse model of brain amyloidosis, and the report on the effect of active immunization against aggregated amyloid peptide on this model, anti-amyloid immunotherapy has been the leading strategy for disease-modifying drug development. However progress has been slow. While efforts turned to the development of safer active vaccines, using short sequence antigens to minimize toxicity mediated by cellular immunity, many investigators sought development of passive immunotherapy. At least 6 monoclonal anti-amyloid antibodies have advanced into mid- and late-phase trials. Results of the two largest AD drug development programs to date were announced recently, indicating little clinical benefit to immunologic attack on amyloid at the dementia stage of sporadic disease. In an international Phase III trial program involving four thousand individuals with mild to moderate AD, bapineuzumab did not demonstrate a favorable impact on the primary cognitive and functional measures. Two phase III studies of solanezumab failed on their primary cognitive and functional measures; however, planned, post-hoc pooled analyses of individuals with mild AD dementia did show cognitive benefit with treatment, so the development of this agent for the treatment of AD

dementia will continue with a confirmatory clinical trial planned for launch later this year. In contrast to bapineuzumab, solanezumab is a humanized monoclonal antibody that targets a mid-sequence amyloid peptide epitope. This antibody binds tightly to monomeric amyloid peptides, but not to aggregated or fibrillar forms. Crenezumab another monoclonal antibody binds to a mid-sequence epitope, but differs from solanezumab in that it possesses an IgG4 (rather than IgG1), so that it triggers less cytokine production from microglia while maintaining phagocytosis towards amyloid. Gantenerumab is a fully human monoclonal antibody that binds to both N-terminus and mid-sequence epitopes, and shows high affinity for fibrils. Like bapineuzumab, early studies demonstrated that treatment reduced brain amyloid as indicated by PET imaging, supporting target engagement. Trials in mild to moderate AD and prodromal AD are under way. SAR228810 is a humanized antibody that recognizes a particular conformational epitope that allows it to bind specifically protofibrils and fibrils. A phase I single and multiple dose administration clinical study in patients with Alzheimer's Disease is ongoing. To optimize the development of disease-modifiers, careful attention must be directed to lessons from these studies. What characteristics of antibodies (eg, epitope specificity, tightness of binding, inflammatory potential) relate to biomarker, cognitive and adverse effects? How robust is reduction in amyloid PET signal? What is the impact on biomarkers of AD neurodegeneration such as cerebrospinal fluid tau and p-tau? How does immunotherapy alter regional atrophy rates as indicated by volumetric magnetic resonance imaging? Is there evidence relating biomarker effects to impact on cognition? Which cognitive assessments are most sensitive to immunotherapy effects? How do subject characteristics such as disease severity and genotype influence immunotherapy effects? Secondary prevention trials, at very early stage of the disease, seem much more likely than the recent dementia-stage trials to demonstrate beneficial effects of anti-amyloid therapy on clinical progression. Drugs trials have to be now hosted in such well defined cohort studies. Several beta inhibitor are also in progress as well that new drugs targeting tau. Other approaches include multidomain preventive trials, eg nutrition intervention plus physical and cognitive exercise several projects have been funded worldwide. In this key note lecture an update will be presented on current drug trials in Alzheimer's disease focusing on disease modifying drugs.

KL-26-004

CHANGES IN FAMILY STRUCTURE AND CARE OF OLDER PERSONS

Karen A. ROBERTO (*Virginia Polytechnic Institute and State University, USA*)

The structure of families is changing worldwide. While an increase in life expectancy is resulting in the greater likelihood of more multigenerational families, population trends show future generations of families with fewer members. As a result, individuals in the middle generations will feel the emotional and financial pressures of supporting both their children and older parents, and possibly grandparents simultaneously and for a longer duration than in the past. Additionally, family structures and relationships are becoming more complex, requiring a new understanding of kinship beyond the nuclear family as the conceptual and ideological standard. Older adults acquire or develop relationships as new individuals enter their lives (e.g., in-laws; grandchildren; friends). Other relationships evolve as they expand or renegotiate existing roles (e.g., caregiver; sibling). Ties with partners, biological kin, step kin, chosen kin, and friends have implications for the care of old people. The goal of this presentation is to highlight changes in family structures by expanding upon normative models of kinship to develop perspectives more relevant for examining

the roles and responsibilities of contemporary families in light of a rapidly expanding aging population. Scholars and practitioners around the world must attend to transformations of family structures and interpretations of family relationships and roles, both within families of origin and within families created through marriage, choice, adoption, or necessity, as they provide new opportunities and challenges for elder care.

Thursday June 27th

KL-27-001

HEALTH CARE THROUGH GERONTECHNOLOGY

Alain FRANCO (*Gerontology and Gerontechnology, Nice University Hospital, France*)

Population aging and increase of longevity deeply modify socio-economic basis of developed nations and their founding health and social paradigms. The most illustrative changes are the current shifting for the Health paradigms. As a person grows in age he/she might face multiple problems related with multiple acute or chronic diseases (poly pathology, comorbidity) instead of a unique disease (monopathology) which is the usual case for younger persons. In that situation the objectives for health professionals are different. Monopathology leads to a disease management strategy needing a right diagnosis related to the 10th WHO International Classification of Diseases and an adapted if possible curative treatment. In case of multiple and chronic diseases it might not be possible to cure simultaneously all the patient's diseases and the focus is to maintain the activity at the personal and social level that means quality of life, prevention of avoidable disabilities, rehabilitation, pain's relief, care and indeed cure if possible. This new health paradigm is legitimated by the 2001 WHO International Classification of Functioning, ICF. Aging population is not uniform. It is better described with three different situations, morbidity, frailty and successful aging. A/ Morbidity corresponds to the last part of the life leading to diseases, disability, dependency, long-term care and end of life situations. The good news for all of us is that there is a compression in morbidity in the aging countries, as described by demographers. That means that the rate of population in a morbid status decreases regularly, or in other words that the life time for morbidity is reduced more and more as the healthy part of life is increasing. B/ Frailty has to be better scientifically defined but this state corresponds to a reduction of functional reserves of persons and an increase of risk for a morbid situation shifting. This frailty status is a step to morbidity and all geriatric teams in the world are actively looking for finding of some reverse solutions. C/ Successful aging relates to an increasing proportion of aging persons, mainly in developed countries. It describes the fact that more and more aging persons are fully active in social and even professional life and remain in good health condition. Successful aging is probably the result of modernization, social and health progresses and wealthy global conditions. Active and healthy aging becomes a political goal as it makes longevity growing happy for the persons and affordable by the families, the society and national economies. European Innovation Partnership for Active and Healthy Ageing and its plus two years active and healthy aging for European Citizens in 2020 is a current example. Other paradigms are changing as re-emphasis of primary care and home care, healthy aging as a human right, social solidarity and political concern of aging and healthy issues, and sustainable health systems and practices with the hope that the coming world economic crisis do not threaten the current progresses. But, the main goal is prevention of disability for all citizens including ageing persons, anticipation and preservation of

functional independency. It needs a pro-active policy and a societal consensus. Technologies and services have a major role to play, in helping to maintain functional independency for the citizens upstream to the health issues, system and financing, and in increasing care productivity (1). Gerontechnology is defined by the ISG (2) as designing technology and environment for independent living and social participation of older persons in good health, comfort and safety. Actually all economic sectors may be involved, nutrition, transports, education, sports, cosmetics, finance, communication. All these sectors adapted to the digital revolution are able to contribute to the reduction of avoidable disabilities of aging population. It is probably in the mass economy that soft solutions may be efficient, adapted and respecting the aging consumer as an active economical actor, and avoiding to increase the financial burden of the health and social budgets. (1) Colombo, F. et al. (2011), Help Wanted? Providing and Paying for Long-Term Care, OECD Health Policy; Studies, OECD Publishing. <http://dx.doi.org/10.1787/9789264097759-en>; (2) International Society for Gerontechnology. <http://www.gerontechnology.info>.

KL-27-004

ALPHA-KLOTTHO IN HEALTH AND DISEASES

Yo-Ichi NABESHIMA¹, Ryota MAEDA², Hiroaki IMURA³
(1. Graduate School of Medicine, Kyoto University, Japan; 2. Tokyo Metropolitan Institute of Gerontology, Japan; 3. Faculty of wellbeing science, Fukuyama Heisei University, Japan)

α -klotho was first identified as an aging-related gene and later shown to regulate mineral homeostasis by binding to Na⁺,K⁺-ATPase complex and FGF23. However, the precise molecular mechanisms and functional roles of α -Klotho are still unclear. In this lecture, I will focus on two topics. (1) The first is "how does α -Klotho specifically and stably bind to its partners". Regarding this, we isolated terminal glucuronidated O- and N-glycans from FGF23, and the other α -Klotho binding proteins such as NaK b-subunit, respectively. N-glycans play significant roles for preferential interactions of α -Klotho and its partners. If O-glycan of FGF23 is docked to α -Klotho, the homo α -Klotho becomes more thermodynamically stable, shifting α -Klotho toward a high-affinity state for FGF23. These support our conclusions that α -Klotho acts as a novel glucuronide-binding lectin and that the glycan initiates conformational/allosteric-changes by docking to target proteins, leading to stabilized interaction. (2) The second is "how can we ameliorate the premature aging related phenotypes seen in α -klotho^{-/-} mice". We found that daily administration of calpain-1 inhibitor strikingly ameliorates phenotypes such as cardiovascular/soft tissue calcifications, bone mineral density reduction, pulmonary emphysema, atrophies of skin/ovary/testis/thymus/spleen, and so on. We also found that FGF23, Osteopontin, Runx2, and RANKL are ectopically induced in the aorta and arteries of α -klotho^{-/-} mice in accompany with the progression of cardiovascular calcification. These support the clinical evidence that FGF23 levels are highly associated with the cardiovascular mortality and allow us to propose that calpain-1 inhibition may prove useful in the alleviation of aging related syndromes.

PRESIDENTIAL SYMPOSIA

Monday June 24th

PS24 201-R

GERIATRIC SYNDROMES RELATED WITH FRAILTY,

DEMENTIA, AND DIABETES MELLITUS

PS24 201-R-1

MANAGEMENT OF GERIATRIC SYNDROME IN ELDERLY DIABETES MELLITUS

Hyung Joon YOO (*Division of Endocrinology & Geriatrics, Department of Internal Medicine School of Medicine Hallym University, Korea*)

Introduction : There is a plenty of evidence that geriatric syndromes are prevalent in diabetics. There has been some progress in the management of diabetes. But it is often impractical to extrapolate from the young adult to the elderly, especially the frail or dependent ones. The management of them cannot be restricted to the management of hyperglycemia and specific diabetic complications. The improving the care of the older diabetics includes geriatric syndromes. An integrated approach including education must assess and manage the presence of geriatric syndromes. Education is another fundamental element of the care for older adults with DM, because there are many older adults, whose functional and cognitive status may change over short periods of time. To evaluate the effect of education in the management of geriatric syndromes in elderly patients with diabetes mellitus. **Method :** We checked the current status of geriatric syndromes (disability, depression, fall, incontinence, constipation, sleeping disorder, hearing loss, syncope, dizziness, pain, dementia, osteoporosis, and malnutrition) of elderly diabetics and confirmed the two most frequent geriatric syndromes. We divided the patients with the two most frequent ones into two groups (ordinary DM education and reinforced-education). **Results :** After 12 months, HbA1c was decreased from 9.2 % to 7.7 % in ordinary-education group, from 9.3 % to 8.0 % in reinforced-education group respectively. In reinforced-education group than in ordinary-education one, the status of geriatric syndromes got better. **Conclusion :** The glycemic control combined with reinforced-education about geriatric syndromes was more effective in the management of diabetes mellitus in older diabetics. **Keywords :** elderly diabetes, geriatric syndrome, reinforced-education

PS24 201-R-2

GERIATRIC SYNDROME IN FRAIL ELDERLY

Kenji TOBA, Sayaka KIMURA², Yukiko YAMADA², Ryuhei NAKAI³, Koichi KOZAKI³ (*1. Center for comprehensive care and research on memory disorders, National Center for Geriatrics and Gerontology, Japan; 2. Center for comprehensive care on memory disorders, Kyorin University, Japan; 3. Geriatric Medicine, Kyorin University, Japan*)

Introduction : Frailty is a concept born in the mid 1980s, toward which a disease-oriented approach has turned to functional assessment. The domain of frailty contains the weakness of muscle strength, mental problems and social solitude. However, multiple geriatric conditions related with the mechanisms in the progression of frailty remain unclear. **Method :** 1) We elucidate the sex difference of hip fracture in relation with the sex difference of fall risks in fall -prevention clinic 2) We will focus on the relationship between multiple geriatric conditions and brain white matter lesion in MRI in memory clinic. **Results :** 1) The postural changes with osteoporosis is one of the risks for falls. 2) PVH in MRI correlate with tripping, urinary frequency, urinary incontinence, body weight loss and swallowing disturbance, which are frequently observed in frail elderly persons. **Conclusion :** Postural changes related with locomotor system and brain white matter lesion are potential candidates to explain multiple geriatric syndromes in frail elderly persons. **Keywords :** Geriatric syndrome, Postural changes, Brain white matter lesion

PS24 201-R-3

FRAILTY AND GERIATRIC SYNDROMES: SEARCHING FOR THE RELEVANT AND EVIDENCE BASED CLINICAL FRAMEWORK

Howard BERGMAN (*Family Medicine, McGill University, Canada*)

Introduction : The concept of frailty has received increasing attention among clinicians and researchers. Clinicians often say, "I know frailty when I see it, but I can't define it". This is not surprising given that in spite of a growing body of knowledge, there is no widely accepted definition of frailty. The literature abounds with different models, criteria and definitions. While consensus has yet to be attained, work accomplished to date while revealing exciting new horizons, has also raised important issues and questions. The presentation will discuss existing models of frailty, the complex relationship between the concepts of healthy aging, chronic disease frailty, geriatric syndromes, and disability, and implications of applying these concepts in the clinical and research setting. **Conclusion :** Ultimately, work on frailty will be relevant to clinicians, older individuals, and society if it can identify effective health promotion, prevention, treatment, rehabilitation, and care interventions. **Keywords :** Geriatric syndromes, chronic disease, frailty

PS24 204-R

IMMUNE FRAILTY AND DEFENSE AGAINST INFECTIONS

PS24 204-R-1

PSYCHOLOGICAL AND PHYSICAL STRESS COMPOUNDING AGEING OF THE IMMUNE SYSTEM

Janet Mary LORD¹, Niharika Arora DUGGAL¹, Jane UPTON, Anna C PHILLIPS² (*1. Immunity and Infection, University of Birmingham, United Kingdom; 2. Sport and Exercise Sciences, University of Birmingham, United Kingdom*)

Introduction : Ageing has profound effects upon immunity, reducing the efficiency of both the innate and adaptive immune systems and remodelling the response to pathogens and self antigens. Taken together these effects increase susceptibility to viral and bacterial infections, increase autoimmunity and also contribute to post-infection frailty. The immune system does not operate in isolation and is affected by a range of environmental factors, including both physical and psychological (emotional) stress. Our work looks at immunity in hip-fracture patients, comparing patients who develop depression after hip fracture with those who do not. **Method :** We assessed a range of immune functions and measured stress hormone levels in 101 patients with hip fracture. Immune function was assessed 1 month and 6 months after hip fracture and physical and cognitive function was also measured. **Results :** 38 of the patients developed depression after their hip fracture. Hip fracture patients who developed depression had significantly lower superoxide generation by neutrophils and monocytes ($p < 0.05$), lower NK cell cytotoxicity ($p < 0.05$) and lower regulatory B cell function ($p < 0.02$). The patients with depression also had poorer physical functioning scores: Activities of Daily Living ($p < .001$), walking speed ($p = .04$) and poorer balance at ($p = .005$). The reduced innate immunity and association with slower walking speed appeared to be mediated by a higher cortisol:DHEAS ratio in depressed patients. **Conclusion :** Both physical and psychological stress in combination impact upon immunity in older adults and the effects on immunity and physical frailty are mediated at least in part by an altered HPA axis. **Keywords :** stress, immunity, frailty

PS24 204-R-2

PHYSICAL FRAILTY AND IMMUNE FRAILTY: A CRUCIAL

RELATIONSHIP

Tamas FULOP (*Medicine, Universite de Sherbrooke, Canada*)

Introduction : The concept of frailty as a medically distinct syndrome has evolved based on the clinical experience of geriatricians and is clinically well recognizable. Frailty is a nonspecific state of vulnerability, which reflects multisystem physiological change. Together, the signs and symptoms of frailty, operationalized by the Fried and Rockwood models, seem to reflect a reduced functional reserve and consequent decrease in adaptation (resilience) to any sort of stressor. The overall consequence is that frail elderly are at higher risk for accelerated physical and cognitive decline, disability and death. All these characteristics associated with frailty can easily be applied to the definition and characterization of the aging process per se and there is little consensus concerning the physiological/biological pathways associated with or determining frailty. Method : However, a consensus view would implicate heightened chronic systemic inflammation as a major contributor to frailty with some degree of innate immune cell activation including monocytes/macrophages at the same time as decreased adaptive immune response efficiency (Inflamm-frailty). Results : Thus, significant inflammatory and immune dysregulation is present in frail older adults which seems to mirror age-associated changes loosely termed immunosenescence. But how these inflammatory and immune changes are intertwined with physical frailty is still largely unknown. Conclusion : Possible interventions at the immune level should aim to reduce the occurrence and effects of frailty in elderly people. Keywords : Physical frailty, immunosenescence, Inflamm-aging

PS24 204-R-3

INFLAMMAGING DECREASES THE HUMAN B CELL RESPONSE TO THE INFLUENZA VACCINE

Bonnie BLOMBERG (*Microbiology and Immunology, University of Miami Miller School of Medicine, USA*)

Introduction : In order to develop predictive markers for a beneficial humoral immune response, we evaluated the in vivo and in vitro response to the seasonal influenza vaccine in young and elderly individuals. Method : We measured serum antibody response and associated this with the in vitro B cell response to the vaccine, measured by AID (activation-induced cytidine deaminase). AID is a measure of immunoglobulin class switch recombination, the process that generates protective antibodies, and is a good measure of B cell function. Results : Both responses decrease with age and are significantly correlated. We hypothesize that the increased pro-inflammatory status of the elderly, called inflammaging, impacts directly on B cell function, thus impairing the capacity of the individual to make protective antibodies and to respond to vaccination. Our data indicate that aged B lymphocytes themselves make TNF- α before vaccine challenge and this correlates with their impaired function, including reduced AID expression after B cell stimulation. These data are currently being correlated with subject CMV status and will also be presented. Conclusion : Our results reveal new molecular mechanisms which contribute to reduced antibody responses in aging and suggest that these will have an impact for crucial development of effective vaccines to protect the elderly from infectious and other debilitating diseases. Keywords : Aging, B cells, Vaccine responses, inflammation

PS24 204-R-4

MECHANISMS FOR END STAGE DIFFERENTIATION IN HUMAN T LYMPHOCYTES

Arne AKBAR (*Infection and Immunity, UCL, United Kingdom*)

Introduction : Immune enhancement is desirable in situations where decreased immunity results in increased morbidity. Method : We investigated whether blocking PD-1 surface inhibitory receptor that is involved in immune exhaustion and/or the p38 MAP kinase pathway, that is involved with immune senescence could enhance the function of human memory CD8+ T cells. Results : We focussed on the effector memory CD8+ T cell subset that re-expresses CD45RA (EMRA) which exhibit end-stage characteristics such as decreased proliferation and telomerase activity but increased expression of the DNA damage response-related protein γ H2AX after activation. Blocking of both PD-1 and p38 signalling in these cells enhanced proliferation but by distinct pathways, as the increase was additive. A striking observation was that telomerase activity in EMRA CD8+ T cells could be enhanced considerably by blocking the p38 pathway indicating that the activity of this enzyme is controlled by active cell signalling. Conclusion : Collectively our data indicates that the end-stage characteristics of EMRA CD8+ T are stringently controlled by reversible cell signalling pathways. This raises the possibility for selective manipulation of these pathways in tandem in human T cells to enhance immune competence in subjects with defective immunity that occurs during ageing. Keywords : senescence, p38

PS24 205-S

CHANGING TIMES AND FILIAL PIETY

PS24 205-S-1

FILIAL PIETY AND DIGITAL DIVIDE IN EAST ASIAN CHINESE SOCIETIES

Nelson W.S. CHOW (*Social Work and Social Administration, The University of Hong Kong, Hong Kong*)

Introduction : While it is generally acknowledged that filial piety is the most dominant value governing the behavior of the young towards the old in East Asian Chinese societies, the value is now receiving serious doubts as these societies are rapidly entering into the global trend of digital innovation. The digital divide that now exists between the young and the old has not only varied the ways in which they obtain knowledge and information but has also made the values upheld by each of them as completely different, if not antagonistic. Is filial piety no longer a relevant value in East Asian Chinese societies? Method : The presentation is based on research conducted on digital divide between the young and the old in East Asian Chinese societies, including Hong Kong, Taiwan and major cities in China. Results : Results will try to answer the following questions: What is the conflict between digital innovation and the value of filial piety? Is filial piety a dying value in East Asian Chinese societies? Could we have a modified version of the value of filial piety that fits in harmoniously with digital advancement? What other values could take place of filial piety so that the tradition of respecting the old could continue to be treasured in East Asian Chinese societies? Conclusion : Filial piety is too important a value in East Asian Chinese societies. While some traditional practices of filial piety could be modified or even forfeited, the spirit of respecting the old must continue to create love and support between generations. Keywords : Filial piety, digital divide, Chinese societies

PS24 205-S-2

CHANGING ATTITUDES TOWARD SUPPORTING OLDER PARENTS IN JAPAN

Yoshiko SOMEYA (*Sociology, Tokyo Woman's Christian University, Japan*)

Japanese population ageing is 23.3 percent in September 2012 and

highest in the world. Male longevity is 79.44 years old and female longevity is 85.90 in 2011. Particularly, female longevity had been the highest in the world for 26 years until 2011. Both longevities have prolonged about 30 years since the end of the World War II. According to the Japanese old civil law, only one child, usually the eldest son, succeeded in family assets, lived with parents and took responsibilities for the later life of their parents. Providing all supports to parents showed "the filial piety" as "a good son". However, under the new civil law enacted in 1947, all children came to be equally entitled to succeed in family assets and to be obligated to take care of their older parents. In the 1980s, more than 100,000 working women quit their jobs a year for caregiving. Hence, "the Gold Plan" was implemented in 1989 and the Long-term Care Insurance started in 2000. It covers over 65 years old Japanese residences, regardless of their incomes. Public pensions consist of fully 70 percent of elderly household incomes and more than 80 percent of them own a house. The majority of elderly are financially independent with decent incomes substantial savings and high rates of home ownership. Therefore, the living with children becomes unfavorable obviously among the post war baby-boomer generation. In fact, the filial piety in Japan has shifted from meeting financial and caregiving needs to psychological needs over last several decades together with industrialization. Keywords : family support, care, living arrangement

PS24 205-S-3

FILIAL CARE AND RECIPROCITY: PHILOSOPHICAL REFLECTIONS FROM AN EAST ASIAN PERSPECTIVE

Alan K. L. CHAN (*College of Humanities, Arts, and Social Sciences, Nanyang Technological University, Singapore*)

Introduction : In this discussion, I address two main issues: 1) the universality and contextual delineation of "filial piety" (xiao 孝 in Chinese, kō in Japanese, and hyo in Korean), a fundamental virtue in the Confucian tradition; and 2) the contemporary relevance and adaptation of xiao in an ageing East Asia. At one level, filial piety can be said to be a universal virtue; yet, cultural specificities render the unfolding of xiao more complex. In the Confucian tradition, I argue, it is filial care and reciprocity that underlies the sense of piety and reverence in the concept of xiao. In the 21st century, xiao remains central to the ideal of harmony in the East Asian imagination, although it requires new interpretation in the face of an ageing population, declining birth rate, and globalization. Method : Philosophical reflections. Results : Discussion on filial piety: meaning and contemporary adaptations. Conclusion : continuing relevance of filial care and reciprocity. Keywords : Filial Piety, Confucianism

PS24 205-S-4

FILIAL PIETY IN THE NEW CENTURY IN CHINA

Peng DU (*Institute of Gerontology, Renmin University of China, China*)

Introduction : Filial piety is the tradition in China and has been getting more emphasis in the beginning of the new century. With the rapid socioeconomic development in the past three decades, China has been making efforts to promote filial piety in the society by the following four major means: education, law, social protection system and social services system. Method : The presentation uses the data of National Survey of Older Persons in China conducted in 2010 and 2000, to provide an evidence based analysis. Results : Have these comprehensive measures worked? What are the current reality of filial piety in China and the changes of filial piety through the eyes of older persons themselves in the beginning of the new century? In the 2010 national survey, 79.4% older persons aged 60 and over regard their

children as very filial or filial, 1.6% regard as not filial, and 19% are neutral. Comparing with the result of year 2000, the filial proportion increased from 74.2% to 79.4%, while the not filial proportion decreased slightly from 1.9% to 1.6%. Further in-depth analysis shows that older persons give more positive comments on their children and have less worry about their children would not be filial. The research findings indicate various differences still exist, the older persons who are urban, healthy, with higher educational attainment, married and co-residing with their children have more positive comments on their children's filial piety. Conclusion : The filial piety has been well kept and promoted, but socioeconomic policies are still needed to support the younger generation. Keywords : Filial piety, China, new century

PS24 205-S-5

FILIAL PIETY IN AGEING SOCIETY

Kyu-Taik SUNG (*Center for Filial Piety Culture Studies, Korea*)

This presentation reviews 'gerontologists' varied perspectives on elder respect upheld by peoples of Korea, China, and Japan, and explores the continuity and change among these East Asians in terms of the practice of the value, which integrates elderly persons with the family and society. The three perspectives are reviewed, i.e., that elders are automatically respected, that elder respect is residual in the social structure, and that the young are socialized to respect elders. These perspectives are contrasted with the data from empirical studies of elder respect in the three respective countries. Data from the above approaches reveal clear similarity among the three countries. In all of them, the value of elder respect is automatically expressed; the value is residual deep in the social structure of their societies, and the young are socialized from early ages to respect the elderly. These findings coincide with the findings from other studies on attitudes toward elderly persons conducted in other countries in East Asia. Among the three countries, the practice of elder respect in one country strongly resembles those found in two other countries, as all the three East Asian countries have been much influenced by Confucian ethical conception of filial piety-the primary component of which being elder respect. To portray the overall state of elder respect in these countries, all of the perspectives would have to be considered. This review also reveals that East Asians are modifying their way of elder respect in response to immense challenges from changing times while retaining the traditional cultural value that enhances the dignity and worth of elderly people. Keywords : filial piety, perspectives on elder respect, East Asian culture

PS24 211-B

INTEGRATION OF SIGNAL PATHWAYS ON ENERGY METABOLISM AND LONGEVITY

PS24 211-B-1

A NOVEL ROLE OF NEUROPEPTIDE Y IN MAMMALIAN AGING: LINKING CALORIE RESTRICTION TO LONGEVITY

Isao SHIMOKAWA (*Investigative Pathology, Nagasaki University Graduate School of Biomedical Sciences, Japan*)

Introduction : Modest restriction of dietary calorie intake with essential nutrients, referred to as calorie restriction (CR), inhibits aging-related disorders and extends lifespan in a range of organisms. Key molecules that modulate the effect of CR remain elusive particularly in mammals. We evaluated neuropeptide Y (Npy), which is involved in the physiological adaptation to energy deficits, for its role in the effects of CR. Method : To test potential roles for Npy in the effect of life-long 30% CR, we compared lifespan, pathology,

stress resistance, neuroendocrine systems, and energy metabolism between Npy-null (-/-) and wild-type (WT) mice. Results : In Npy-/- mice, the effects of CR on lifespan, the occurrence of spontaneous tumors, and oxidative stress responses were minimized, in contrast to the wild-type (WT) mice. However, the physiological processes to adapt to CR, including circulating hormones and energy metabolism, were similarly modulated in the Npy-/- and WT mice. Conclusion : The present study indicates that Npy is indispensable in the link between CR and longevity in mammals, and defines a novel role of Npy in mammalian aging beyond the known physiological functions of Npy including regulation of energy expenditure and neuroendocrine system. Keywords : Calorie restriction, Neuropeptide Y

**PS24 211-B-2
USING GENETIC VARIATION TO PROBE THE MECHANISMS AND LIMITS OF DIETARY RESTRICTION AS AN ANTI-AGING INTERVENTION**

James F. NELSON¹, Chen-yu LIAO², Thomas E. JOHNSON³
(1. Barshop Institute for Longevity and Aging Studies, University of Texas Health Science Center at San Antonio, USA; 2. Buck Institute for Research on Aging, Buck Institute for Research on Aging, USA; 3. Institute of Behavioral Genetics, University of Colorado at Boulder, USA)

Introduction : Dietary restriction (DR) extends lifespan in many species. A major challenge is how to distinguish from the many biochemical and physiological changes that are induced by DR those that underlie its anti-aging effect. Method : Our study of DR across many genetically different recombinant inbred (RI) strains of mice has revealed striking variation in the lifespan response to DR—ranging from marked lifespan extension to marked shortening. Whether the unexpected life-shortening effect of DR extends to other genetically variable populations, the highly variable response of the RI strains to DR reveals a strong genetic influence on the response to DR. Moreover, this genetically variable response to DR provides a novel tool for testing hypotheses concerning the biological cause of lifespan modulation by DR. Results : We measured several responses to DR that have been hypothesized to underlie its anti-aging action: reduction in adiposity, hypoinsulinemia, and hyperadrenocorticism. All varied markedly across RI strains. Maintenance of adiposity was predictive of lifespan extension and loss of adiposity predicted lifespan shortening by DR. Hypoinsulinemia did not correlate with the lifespan response to DR. Although all strains were hyperadrenocortical, the lowest hyperadrenocortical responses predicted lifespan extension and the greatest responses were associated with lifespan shortening. Conclusion : These results are consistent with a role for metabolic efficiency and enhanced stress responsiveness in the lifespan extending effects of DR. Conversely, metabolic inefficiency and an overly exaggerated stress responsiveness may negate and even reverse the effect of DR on longevity. Supported by the National Institute of Aging and the Ellison Medical Foundation. Keywords : Dietary Restriction Metabolism

**PS24 211-B-3
EVOLUTIONARILY CONSERVED ALTERATIONS BY AGE AND CALORIE RESTRICTION OF THE ORGANIZATION AND PERFORMANCE OF THE RESPIRATORY CHAIN**

Norbert A. DENCHER¹, Monika FRENZEL², Manuela KRATOCHWIL², Michael MUSCHOL², Eva R. SCHAEFER², Sandra THILMANY², Sataro GOTO³, Heinz D. OSIEWACZ⁴, Isao SHIMOKAWA⁵, Michiru D. SUGAWA⁶ (1. Physical Biochemistry/Chemistry, Technische Universitaet Darmstadt, Department of Chemistry, Physical Biochemistry, Germany; 2. Physical

Biochemistry/Chemistry, Technische Universitaet Darmstadt, Germany; 3. Health and Sports Science & Medicine, Juntendo University, Japan; 4. Institute of Molecular Biosciences, Goethe-University, Germany; 5. Investigative Pathology, Nagasaki University, Japan; 6. Clinical Neurobiology, Department of Psychiatry, Charite-Universitaetsmedizin Berlin / Technische Universitaet Darmstadt, Germany)

Introduction : With knowledge of the common biology for ageing and diseases like cancer or Alzheimer's, efforts towards prolonging healthy lifespan got triggered. Dietary/calorie restriction came forward as the most promising approach to retard ageing as well as the inception of age-related diseases. We have analyzed changes in protein profiles and enzyme activities of mitochondria in evolutionarily far distant ageing model systems with a defined mitochondrial etiology of ageing, ranging from fungus to rat and human cells, as response to ageing and to calorie restriction. Method : The mitochondrial proteome and performance at different age and/or nutritional status were analyzed by 2D native/SDS-PAGE, mass spectrometry and enzyme activity measurements. In addition, age/CR-associated changes in the composition, amount and oxidative status of mitochondrial lipids in fungus and rat brain were compared. Age/CR-associated posttranslational modifications of the ATP synthase and of other mitochondrial proteins were examined. Results : Pronounced age- and CR-related changes in abundance of MFoF1-ATPsynthase as well as of OxPhos-complexes and supercomplexes (natural assemblies of the complexes I, III, and IV into stoichiometric entities, such as I1III2IV0-2) were observed. Conclusion : We could capture some of the specific initial targets of age reversing mechanism of calorie restriction. Since enzyme activities of OxPhos-complexes assembled as supercomplexes are 2 to >15 times higher than those of the individual complexes, the amount, the proportion of the individual vs. specific supercomplexes and the activities of OxPhos (super)complexes will determine the performance of the respiratory chain and have to be considered to describe the interplay of age- and CR-controlled mechanisms. Keywords : calorie restriction, ageing, evolution, mitochondria

**PS24 211-B-4
IMPACT OF SHORT-TERM CALORIC RESTRICTION ON GLOBAL GENE EXPRESSION IN MOUSE ADIPOSE TISSUE**

Seung-soo KIM, Cheol-Koo LEE (College of Life Sciences & Biotechnology, Korea University, Korea)

Introduction : Caloric restriction (CR) has been used for understanding mechanisms how the aging process could be slowed down. Also, CR could significantly improve the organism's health. Method : To find directly regulated genes by CR, we performed DNA microarray experiments at three serial CR groups adjusted total calories to 15%, 30% and 45% reduction from control mice group (each fed 17.1 calories per day). Results : Total 549 genes were significantly regulated (ANOVA FDR 5%) at 10 weeks of CR conditions. Expression levels of these genes were correlated with the strengths of serial CR, so we defined the genes as 'Directly Regulated Genes' (DRGs). From analysis of functional categories for the DRGs, we observed constant down-regulation of genes for signaling including canonical Wnt, epidermal growth factor (EGF), transforming growth factor β (TGF- β) and cell death signaling pathways. In addition, the DRGs categorized in extracellular matrix (ECM), cell adhesion and cytoskeleton showed a consistent down-regulation. Interestingly, the DRGs reflected a strong suppression of immune response in the non-immunogenic adipose tissue by CR. In contrast, the DRGs categorized in energy and xenobiotic metabolism exhibited a consistent up-regulation. The DRGs for lipid metabolism showed a complicated

mixture of up- and down-regulation. To identify potential master transcriptional regulator, we analyzed 1 kb upstream sequences of the DRGs and found two transcription factors including Paired box gene 6 (PAX6) and Paired-like homeodomain 2 (PITX2). Conclusion : Our results provide clues how CR sets a transcriptional program for assurance of longevity. Keywords : Caloric restriction; mice; adipose tissue

PS24 212-C

ARTERIAL COMPONENT OF AGE-RELATED DISEASES

PS24 212-C-1

ARTERIAL AGING AND COGNITIVE IMPAIRMENT

Olivier HANON (*Department of Geriatric Medicine, Broca hospital, France*)

Introduction : Recent studies have shown that a higher pulse pressure is associated with increased risk of Alzheimer's disease (AD) suggesting that arterial aging could be involved in the pathogenesis of dementia. Pulse pressure or arterial stiffness are related to atherosclerosis and/or arteriosclerosis in large and small vessels. Vascular mechanisms of cognitive impairment involve small-vessel diseases which are associated with small infarcts (lacunae), white matter lesions and cortical brain atrophy. Summation of cerebrovascular lesions, white matter changes and pre-existent asymptomatic Alzheimer's brain lesions may lead to dementia. Presence of arteriosclerosis and/or lipohyalinosis of small vessels might be the origin of vascular cerebral lesions and/or chronic hypoperfusion of the white matter and thus contribute to the early expression of a subclinical AD. Method : These vessel changes may compromise the function of the blood-brain barrier leading to an increased vascular permeability and protein extravasation in brain parenchyma resulting in the A beta-amyloid accumulation. Results : Likewise, hypertension and beta-amyloid may act on endothelial cells to produce an excess of free radicals suggesting that oxidative stress may be involved in the mechanisms of both arterial aging and AD. Randomized, placebo-controlled trials have demonstrated that blood pressure-reducing agents may decrease the incidence of dementia in stroke patients (PROGRESS, HOPE) and in elderly patients with isolated systolic hypertension (SYST-EUR) but these results were not found in 2 other trials (SCOPE and SHEP). Conclusion : In this context, the incidence of dementia should be a major outcome measure of future trials evaluating the effect of antihypertensive drugs on arterial aging. Keywords : arterial aging, cognitive impairment, Alzheimer disease, vascular dementia

PS24 212-C-2

ARTERIAL AGING AND SARCOPENIA

Katsuhiko KOHARA (*Department of Geriatric Medicine, Ehime University Graduate School of Medicine, Japan*)

Introduction : Arterial stiffness has been shown to be associated with a number of disorders related to the dependence-related conditions including stroke and dementia, suggesting that arterial stiffness directly reflects general aging in addition to cardiovascular aging and may be a risk factor among the elderly for developing frailty. Body composition changes dramatically with age, with increases in fat content, particularly visceral fat, and decreases in muscle volume and bone mineral density. Sarcopenia, the aging-related loss of muscle volume and strength, may affect not only metabolic profiles such as insulin resistance but also activity in daily life via a reduction in muscle strength, thereby resulting in dependence and frailty. Method : In the present study we used computed tomography to quantify thigh

muscle cross-sectional area (CSA) and visceral fat areas as indices for sarcopenia and visceral obesity, respectively, in participants in Ehime University Anti-aging Doc. Abdominal Brachial-ankle pulse wave velocity (baPWV) was measured as an index for arterial stiffness. Results : Thigh muscle cross-sectional area (CSA) was significantly and negatively associated with baPWV in men, independently of age and blood pressure, while visceral fat area was significantly and positively associated with arterial stiffness. Subjects with both sarcopenia and visceral obesity had higher baPWV than those with only one abnormality. Conclusion : These findings suggest that arterial stiffness is related to changes in body composition and may underlay the process of general frailty in the elderly population. Keywords : Arterial stiffness, sarcopenia, visceral obesity

PS24 212-C-3

INCREASE IN ARTERIAL STIFFNESS WITH AGING IN INDUSTRIALIZED AND DEVELOPING COUNTRIES

Athanase BENETOS (*Dpt of Geriatrics, University of Nancy, France*)

Introduction : Several studies performed in industrial countries have shown lower PWV levels in women as compared to men, and this difference could at least partially explain increased longevity in women. However, no data are available in emerging populations. Method : In the present study, we evaluated arterial stiffness (AS), measured by carotid-femoral pulse wave velocity (cfPWV), in elderly Algerian and European men and women. 782 subjects were studied: 391 Algerians including 183 men (81.2±5.3 years) and 138 women (81.1±4.4 years); an age- and gender-matched cohort of 391 European subjects. Results : Algerian women compared with men had higher BMI and heart rate, higher prevalence of hypertension and were more frequently treated for hypertension. PWV was not different between Algerian men (14.8±3.3 m/sec) and women (14.9±3.4 m/sec). By contrast, in Europeans, women had lower cfPWV (12.7±2.7 m/sec) than men (14.0±3.3 m/sec) ($p < 0.001$). As compared to European women, Algerian women had higher PWV ($p < 0.01$). In both ethnic groups, multivariate analyses showed that age, MBP, HR and diabetes were positively associated with cfPWV, whereas female gender was associated with lower cfPWV only in Europeans. Conclusion : Elderly Algerian women have as high as men PWV values, whereas in Europeans, women have lower than men, arterial stiffness. This lack of "gender arterial advantage in Algerians may be explained by higher BP, HR and a worse metabolic profile in Algerian women. Interventions in emerging populations, especially in women, should be a priority in order to address these risk factors by acting on current lifestyle. Keywords : Aging, gender, arterial stiffness, pulse wave velocity, Algerian

PS24 212-C-4

NEW APPROACHES FOR THE EVALUATION OF ARTERIAL AGING

Jeong Bae PARK (*Medicine/Cardiology, Cheil General Hospital, Kwandong University College of Medicine, Korea*)

Introduction : The aorta and systemic arteries in youth receive spurts of blood from the heart's left ventricle and transforms this to steady flow into peripheral arterioles and capillaries. This "tuning" of the heart to artery ascending aorta minimizes aortic pressure fluctuations and confines flow pulsations to the larger arteries. Method : However, with aging, repetitive pulsations cause fatigue and fracture of elastin lamellae of the central arteries. This causes stiffening and distension; it speeds up and amplifies the return of wave reflections from the periphery to the central aorta. In consequence, aortic systolic pressure rises, with increase of left ventricular (LV) load and decrease of

myocardial perfusion in the heart. Another consequence of aortic stiffening is pressure in diastole predisposes to myocardial ischaemia and development of microvascular disease in highly perfused organs such as the brain and kidneys. Results : Clinical manifestations of these changes are LV hypertrophy in the heart with heart failure, ischemic heart disease and arrhythmia, and small vessel degeneration in the brain and kidneys with intellectual deterioration and renal failure. How can a physician recognize aging changes in old arteries before the development of clinical vascular events? Advances are likely to involve more attention to the analysis of waveforms of pressure, flow and diameter in arteries, how they change with aging and disease, and how ill effects can be monitored and ill effects prevented with appropriate therapy. Conclusion : The 'Vascular Aging Continuum' helps understanding of these concepts, and will be introduced and discussed. Keywords : Vascular aging, artery, clinical consequence

PS24 305-S

FACING THE CHALLENGES OF LATER LIFE: LESSONS FROM SCIENCE OF PSYCHOLOGY OF AGING

PS24 305-S-1

RESILIENCE WHEN CONFRONTING COGNITIVE AGING: PREVENTION, COMPENSATION, AND ADAPTATION

Christopher HERTZOG (*School of Psychology, Georgia Institute of Technology, USA*)

Introduction : Aging is normatively associated with declines in many but not all aspects of cognitive functioning past age 60. Old age brings increasing risks of diseases with negative impact on perception and cognition, including macular degeneration, Type 2 diabetes, and atherosclerosis. Recent evidence indicates that older adults can engage in lifestyle choices and behaviors that help prevent or forestall major cognitive loss. Furthermore, preservation of functional capacity in old age may depend on self-regulatory strategies that can compensate for perceptual and cognitive changes -- maintaining level of function -- or that lead to effective adaptation to loss so as to preserve quality of life.

Method : This paper presents a selective review of the emerging empirical evidence in psychological studies of older adults' cognitive functioning in the lab and in everyday life. Results : I review studies demonstrating that older adults strive to stay active as a means of preventing cognitive decline, report using memory compensation strategies in everyday life, adapt their strategic behavior in cognitive task contexts depending on demand, and actively seek to achieve real-world goals that are cognitively demanding in an effective manner, in ways that would not necessarily be predicted from age-comparative studies of cognitive task performance. Conclusion : Older adults' resilience in the face of aging indicates that they should be seen as active influences on their cognitive and functional capacities rather than as passive targets of age-related biological changes. Keywords : cognition, adaptation, compensation

PS24 305-S-2

EMOTIONAL CHANGES ACROSS ADULTHOOD: GAINS OR LOSSES?

Helene Hoi-lam FUNG (*Psychology, Chinese University of Hong Kong, Hong Kong*)

Introduction : The literature on emotion and aging has gone through two extremes: A phase of studying older adults as depressed and lonely to a phase of recognizing that older adults are the same or better than younger adults on any index of emotion well-being. Method : This presentation will critically review the literature on age differences

in emotion experience, processing and regulation, to identify areas where older adults fare better or worse than their younger counterparts. Results : Outcomes of these age differences in emotion will also be reviewed, focusing on whether some forms of emotion or emotion regulation are more adaptive for particular age groups in specific sociocultural contexts. Conclusion : Implications of these findings for emotion aging and cross-cultural gerontology will be discussed. Keywords : affect, emotion regulation, culture

PS24 305-S-3

COPING WITH CHRONIC STRESS IN LATE LIFE: CAREGIVING AS EXEMPLAR

Bob KNIGHT (*Davis School of Gerontology, University of Southern California, USA*)

Introduction : This paper discusses the revised the sociocultural stress and coping model for culturally diverse family caregivers proposed by Knight and Sayegh (2010). Method : The paper is a theory oriented review of existing research with a focus on research from the author's lab group. Results : Research concerning the influence of cultural values on the stress and coping process among family caregivers supports a common core model that is consistent across ethnic groups and that links behavior problems, burden appraisals, and caregiver health outcomes. Familism as a cultural value appears to be multi-dimensional in its effects, with obligation values often more influential than family solidarity. The effects of cultural values and other ethnic differences in stress and coping appear to involve social support and coping styles rather than burden appraisals. Conclusion : Implications of the revised model for research and practice are discussed. Keywords: chronic stress, caregiving, cultural values

PS24 305-S-4

A DRIVING AMBITION: HOW TO KEEP DRIVING WELL INTO LATER LIFE

Nancy A PACHANA (*Psychology, University of Queensland, Australia*)

Introduction : Older adults worldwide are driving for more years, and over more miles, than ever before. Yet common speedbumps and detours encountered with aging may derail older drivers; these include sensory changes, physical declines, challenges to confidence, and changes in cognition. Method : These potential barriers to continued driving are addressed through psychological and technological research aimed at keeping older drivers in the community driving safely for longer. Results : Psychosocial research has resulted in better evaluations for older drivers, as well as programs aimed at improving driving skills, particularly those facing barriers of a psychological or self-efficacy nature. For those with progressive neurological or other disorders that make driving cessation inevitable, empirically-based intervention programs can improve social engagement and quality of life. Conclusion : Driving is an issue which health care professionals, family members and older drivers themselves find emotive and challenging to address. Psychosocial assessment and intervention strategies can ease the transitions involved in contemplating mobility and driving safety in later life. Keywords : driving, assessment, intervention

PS24 311-B

EPIGENETIC REGULATION OF AGING

PS24 311-B-1

GENOMES OF SENESCENT CELLS UNDERGO FUNDAMENTAL ARCHITECTURAL CHANGES AND DERE-

PRESSION OF TRANSPOSABLE ELEMENTS

John M. SEDIVY (*Department of Molecular Biology, Cell Biology and Biochemistry, Brown University, USA*)

Replicative cellular senescence is an important tumor suppression mechanism and also contributes to aging. Progression of both cancer and aging include significant epigenetic components, but the chromatin changes that take place during cellular senescence are not known. We used formaldehyde assisted isolation of regulatory elements (FAIRE) to map genome-wide chromatin conformations. In contrast to growing cells, whose genomes are rich with features of both open and closed chromatin, FAIRE profiles of senescent cells are significantly smoothed. This is due to FAIRE signal loss in promoters and enhancers of active genes, and FAIRE signal gain in heterochromatic gene poor regions. Chromatin of major retrotransposon classes, Alu, SVA and L1, becomes more open in senescent cells, affecting most strongly the evolutionarily recent elements, and leads to an increase in their transcription and ultimately transposition. Constitutive heterochromatin in centromeric and pericentromeric regions also becomes more open, and the transcription of satellite sequences increases. The peripheral heterochromatic compartment (PHC) becomes less prominent, and centromere structure becomes notably enlarged. Some of these large scale genomic changes are also found in cancer cells, and our study shows that these processes are already activated in normal senescent cells.

Keywords : Aging, Epigenetics, Chromatin

PS24 311-B-2

STRATEGY FOR IDENTIFYING GENETIC AND EPIGENETIC CONTRIBUTES TO EXCEPTIONAL LONGEVITY IN HUMANS

Nir BARZILAI, Gil ATZMON (*Medicine & Genetics, Albert Einstein College of Medicine, USA*)

Introduction : Aging is the major risk for diseases such as cancer, AD, type 2 Diabetes mellitus and cardiovascular disease. We hypothesize that healthy centenarians have protective genomic factors that prevent these diseases. Method : We established a unique cohort of individuals with exceptional longevity (~550 Ashkenazi Jews ages 95-112) and their offspring (approximate age 70 years) and age- and sex-matched controls without a family history of unusual longevity. Our analysis is based on a very large selection that occurs between ages 60 and 112. This selection is an opportunity to follow which genotypes have been under represented with aging ('killing' genotypes) and which have been overrepresented (longevity genotypes). Results : Using a candidate gene approach we identified a common homozygosity in favorable genotypes such as CETP VV, APOC-3 CC, a deletion at +2019 in the adiponectin (ADIPOQ) gene, FOXO3A genotype, and TSH-receptor genotype, that were associated with exceptional longevity in our cohort. Using an un-biased approach we performed GWAS we have identified aging genotypes and explored how these are buffered by longevity genes. These analyses will allow us to discover what are the target for longevity genes and develop drugs that will delay aging and will prevent several age related diseases. In addition we have discovered whole genome methylation patterns and miRNA that are typical to centenarians. Conclusion : We conclude that exceptional longevity is characterized by genetic and epigenetic changes, and that initial discovery has led to drug discovery.

Keywords : Longevity, genes, epigenetics

PS24 311-B-3

ALTERATIONS IN HISTONE MODIFICATION CONTRIBUTE TO ACCELERATED AGING

Zhongjun ZHOU (*Biochemistry, University of Hong Kong, Hong Kong*)

Introduction : A de novo G608G mutation in LMNA gene activates a cryptic splicing signal, giving rise to a truncated prelamin A termed progerin, which leads to Hutchinson-Gilford progeria syndrome (HGPS). Mice lacking prelamin A-processing metalloprotease, Zmpste24, recapitulate many of the progeroid features of HGPS. HGPS and Zmpste24 null cells are characterized by abnormal nuclear shape, disorganized heterochromatin and defective DNA damage repair. Method : We used genetically modified mouse to generate double KO mice to investigate the contribution of epigenetic changes to premature aging in Zmpste24 KO mice. Results : Here we show that A-type lamins interact with SUV39H1 and prelamin A/progerin exhibits enhanced binding capacity to SUV39H1, protecting it from proteasomal degradation and consequently increasing the level of H3K9me3. Depleting or knocking down Suv39h1 significantly reduces the level of H3K9me3, restores DNA repair and early senescence in progeroid cells. Remarkably, loss of Suv39h1 in Zmpste24 null mice reduces body-weight loss, increases bone mineral density and extends lifespan significantly. Conclusion : Thus, increased H3K9me3 mediated by enhanced Suv39h1 stability in the presence of prelamin A/progerin compromises genome maintenance, which in turn contributes to accelerated senescence in laminopathy-based premature aging. Our study provides a potential therapeutic strategy for HGPS by targeting SUV39H1-mediated heterochromatin remodeling.

Keywords: SUV39, Lamin A, H3K9me3.

PS24 312-C

FRAILITY AND SARCOPENIA

PS24 312-C-1

SARCOPENIA IN ASIA: CHALLENGES IN DIAGNOSIS AND TREATMENT

Liang-Kung CHEN¹, Li-Kuo LIU¹, Wei-Ju LEE², Li-Ning PENG¹ (*1. Center for Geriatrics and Gerontology, Taipei Veterans General Hospital, Taiwan; 2. Department of Family Medicine, Taipei Veterans General Hospital Yuanshan Branch, Taiwan*)

Sarcopenia is a prevalent condition in older people and deserves extensive attention internationally. However, in Asia, the diagnosis of sarcopenia has not been standardized yet. Current epidemiological studies showed a very low prevalence of sarcopenia in Asia compared to western countries. The highest prevalence was approximately 20% but most reports showed <10% of prevalence in Asian countries, in particular in older women. Two possible possibilities of a low prevalence in Asia may include the potential cohort effect because current older people eventually did more physical activities than current younger generation. Another possibility is the limitation of DEXA. In sarcopenia diagnosis, low muscle mass were defined by 2 standard deviations below the mean of younger people by using DEXA. However, the higher adiposity of older Asian women may overestimate the appendicular muscle mass by DEXA. Therefore, we should either modify the approach of the cutoff of skeletal muscle mass measurements by DEXA or to adjust the skeletal muscle mass by weight instead of height. Nevertheless, an Asian study showed that appendicular muscle mass adjusted by height square was better related to muscle strength and physical performance than muscle mass adjusted by weight. Sarcopenia diagnosed by height-adjusted skeletal muscle index was more on lean people but is more on overweight and obese people by using weight-adjusted skeletal muscle index. In 2013, Asian Working Group for Sarcopenia proposed the Asian consensus of sarcopenia diagnosis which summarized various

challenges of sarcopenia diagnosis and treatment in Asia. Keywords : frailty, sarcopenia, skeletal muscle, DEXA

PS24 312-C-2

TOWARDS A WORLD CONSENSUS DEFINITION OF SARCOPENIA

John E. MORLEY (*Geriatric Medicine, Saint Louis University, USA*)

Introduction : A number of consensus groups have defined the criteria for sarcopenia and more recently an international group has provided a framework for screening for frailty by primary care physicians. Method : All definitions for sarcopenia require limited mobility (either gait speed or distance on the 6 minute walk) in addition to 2 standard deviations of muscle mass below the normal using DEXA or CT scan. There is movement in the United States to include grip strength in the definition. Validation data for limited mobility and low muscle mass will be presented. Results : Recently for osteoporosis the simple FRAX questions have been shown to work as well as a bone mineral density. This has led to attempts to find questions to define sarcopenia. One such questionnaire is the SARC-F: Strength, Assistance walking, Rise from a chair, Climb stairs, and Falls. Conclusion : Validation data for this approach will be presented. An update on the IAGG consensus definition for Frailty and the use of the FRAIL questionnaire for screening will be presented.

PS24 312-C-3

IS SARCOPENIA EQUIVALENT TO PHYSICAL FRAILTY?

Jean-Pierre MICHEL (*Geriatric Medicine, Geneva Medical University, Switzerland*)

This today question has a long history starting in the eighties and not yet finished. The word "frailty" started to be used by geriatricians in 1983 with the following definition: "Frailty occurs when there is diminished ability to carry out the important practical and social activities of daily living". A decade later, endocrinologists and nutritionists focused their interest on "sarcopenia", which was defined as the "involuntary decrease of skeletal muscle mass during ageing" and proposed to call this phenomenon Between 1993 and today, 3'215 scientific papers were devoted to frailty, while 1'721 were focused on sarcopenia. The publication rate of papers has been depending greatly of key papers* proposing more precise definitions of both terms. But, the absence of consensual working definition slowed scientific research. A precise analysis of risk factors, symptoms and signs as well as consequences of these two clinical conditions testifies the close relationships between frailty and sarcopenia. Their pathogenesis links them in a vicious cycle starting by ageing and malnutrition, sarcopenia before reaching the frailty and disability thresholds leading to similar poor outcomes (repeated falls, mobility impairment, disability, institutionalization and death). Moreover, it appears more and more precisely that these two clinical conditions are both reversible. Resistance and aerobic physical exercises are key therapeutic approaches recently completed and enhanced by amino acid supplements. These new and important discoveries allow preventing or delaying the onset of both sarcopenia and frailty. Sarcopenia leads to physical frailty and can be considered as the equivalent of physical frailty. *L FRIED et al in 1998 for frailty and A CRUZ JENTOFT et al in 2010 for sarcopenia; Keywords : Frailty, Sarcopenia, Functional decline

PS24 312-C-4

REVERSIBILITY IS THE MAIN AND COMMON CHARACTERISTICS OF FRAILTY AND SARCOPENIA

Hidenori ARAI (*Department of Human Health Sciences, Kyoto*

University Graduate School of Medicine, Japan)

Introduction : Frailty and sarcopenia are now in the front line of geriatric research. One feature that distinguishes them from aging per se is the potential reversibility. Resistance training is feasible for frail elderly and can increase muscle mass and strength along with amelioration of physical functions, while inadequate intake of dietary energy and protein are important causes of frailty and sarcopenia. A major challenge in preventing sarcopenia-induced frailty is developing public health interventions that deliver an anabolic stimulus to the muscle of older adults. Only resistance training with or without nutritional supplementation has shown its efficacy in increasing skeletal muscle mass. We also studied the effects of the combination of resistance training and multinutrients supplementation (including vitamin D and protein) on muscle mass and physical performance in frail older adults. Method : This trial was conducted in Japanese frail older adults (n=77), which underwent a standardized protocol of a 3-month resistance training intervention. They were divided into two groups; exercise only and exercise plus multinutrient supplementation. Results : The older adults assigned to exercise and nutritional supplementation had significant improvements for skeletal muscle mass index and maximum walking time, compared to those assigned to exercise only. The prevalence of sarcopenia was also significantly decreased. Conclusion : Thus our study indicates that the combination of resistance training and multinutritional supplementation may be more effective at improving muscle mass and walking speed than an intervention only based on resistance training. More evidence is needed to establish the public interventions to prevent sarcopenia and frailty in the elderly. Keywords : nutrition, physical exercise.

PS24 411-B

MITOCHONDRIA QUALITY CONTROL AND AGING

PS24 411-B-1

THE ROLE FOR MTDNA MUTATIONS IN AGING

Nils-goran LARSSON (*Max Planck Institute for Biology of Ageing, Germany*)

Introduction : The mtDNA genome only encodes 13 of the ~103 proteins present in mammalian mitochondria, but mtDNA expression is nevertheless critical for oxidative phosphorylation. Pathogenic mtDNA mutations often coexist with wild-type molecules and undergo segregation. The transmission of mtDNA is asexual, i.e. mtDNA is only transmitted from the mother to the offspring and recombination does not occur in the germ line. Germ-line transmission of mtDNA is subject to a bottleneck phenomenon whereby only a subpopulation of the mtDNA molecules in female germ cells is transmitted to the embryo. In addition, there is a mechanism for purifying selection in the female germ line, which selects against amino acid substitutions. Point mutations and deletions of mtDNA accumulate in a variety of tissues during ageing in humans, monkeys and rodents. To study the link between mtDNA mutations and ageing, we have previously generated homozygous knockin mice expressing an error-prone form of the catalytic subunit of the mtDNA polymerase, PolgA. These mice have an mtDNA mutator phenotype with a substantial increase in the levels of point mutations, as well as increased amounts of linear deleted mtDNA molecules and develop a premature onset of ageing-related phenotypes. Remarkably, reactive oxygen species seem to have no role in inducing the ageing phenotypes. The challenges for the future are to understand the molecular mechanisms governing basic principles in mitochondrial genetics (mitotic segregation, the bottleneck phenomenon and purifying selection). Conclusion : In addition we do not know how somatic mutations of mtDNA are generated and

when in life they start to appear.

PS24 411-B-2

MITOCHONDRIAL ROS AND AGING

Takamasa ISHII¹, Phil S HARTMAN², Naoaki ISHII^{1*} (1. Department of Molecular Life Science, Tokai University School of Medicine, Japan; 2. Department of Biology, Texas Christian University, USA)

Introduction : We have previously demonstrated that the excessive mitochondrial superoxide production caused by mitochondrial complex II SDHC mutations results in premature death in *C. elegans* (G71E) and *Drosophila* (I71E) and cancer in mouse embryonic fibroblast cells (V69E) (M. Tsuda, et al. BBRC 2007, T. Ishii, et al. Cancer Res. 2005, N. Ishii, et al. Nature 1998). In humans, it has been reported that mutations in SDHB, SDHC or SDHD often result in inherited head and neck paragangliomas (PGLs). **Method :** The Tet-mev-1 conditional transgenic mice were established using our uniquely developed Tet-On/Off system, which can induce the mutated SDHC V69E gene to be equally and competitively expressed compared to the endogenous wild-type SDHC gene. Tet-mev-1 mice experienced mitochondrial respiratory chain dysfunction that resulted in superoxide overproduction. **Results :** The mitochondrial oxidative stress caused excessive apoptosis leading to low birth weight and growth retardation in the neonatal developmental phase in Tet-mev-1 mice (T. Ishii, et al. Mitochondrion 2011). Tet-mev-1 mice also display precocious age-dependent corneal physiological and pathological changes, such as dry eye, keratitis, Fuchs's corneal dystrophy (FCD) and probably keratoconus (H. Onouchi, et al. Invest. Ophthalmol. Vis. Sci. 2012 and Y. Uchino, et al. PLoS ONE 2012). **Conclusion :** These results indicate that the Tet-mev-1 mice will be useful in clarifying the effects of excessive mitochondrial oxidative stress on age-dependent various diseases. **Keywords :** Mitochondria, Oxidative stress, Aging

PS24 411-B-3

MITOCHONDRIAL DYSFUNCTION AND METABOLIC ALTERATION IN CELL SENESCENCE

Hae-ok BYUN, Hyun-jung JUNG, You-mie KIM, Gyesoon YOON (Dept. of Biochemistry, Ajou University School of Medicine, Korea)

Introduction : Metabolic alterations including mitochondrial dysfunction has often been reported as characteristic phenotypes of senescent cells. However, it is not clear what is overall consequence of senescent metabolic features and how they are developed and linked to the other senescent phenotypes, such as enlarged cell volume, increased granularity, or oxidative stress. Recently, we investigated multiple roles of glycogen synthase kinase 3 (GSK3) in development of the metabolic alteration in cell senescence. **Method :** Glycogenesis, lipogenesis, and mitochondrial respiration were monitored by employing diverse cellular senescence systems. **Results :** First, GSK3 inactivation increases glycogenesis through activating glycogen synthase, GSK3 inactivation increases glycogenesis through activating glycogen synthase, associated with cellular granularity increase, one of the typical senescence phenotypes. Second, GSK3 inactivation (phosphorylation) enhances lipogenesis through activating SREBP1. This event is linked to organellar and cellular mass increase. Third, GSK3 inactivation augments cellular protein synthesis. Finally, mitochondrial GSK3 inactivation inhibits respiratory complex IV activity through decreasing phosphorylation of complex IV subunit 6b, progressively producing mitochondrial ROS and placing the cell under continuous oxidative stress. **Conclusion :** Taken together, our results suggest that GSK3 may be a master player controlling metabolic shift toward anabolism and maintaining oxidative stress, thereby contributing to senescence development. **Keywords :** Cellular

senescence, Metabolic alteration, Mitochondrial dysfunction

PS24 411-B-4

MODULATION OF MITOCHONDRIA PHYSIOLOGY BY NICOTINAMIDE-INDUCED MITOPHAGY AND POSSIBLE INTERVENTION OF IMMUNESENESCENCE

Eun Seong HWANG (Life Science, University of Seoul, Korea)

Introduction : Nicotinamide (NAM), when administered at high doses, exerts positive effects on survival of various cell types in vitro and in vivo. In addition, NAM treatment increases replicative lifespan of normal human cells. In NAM-treated fibroblasts, mitochondria content decreased while their membrane potential increased. Along with these changes, both cellular levels of ROS and oxidative damage on the mitochondrial proteins decreased and autophagy activity was increased. Thereby, the improvement of mitochondria quality through activation of mitophagy has been proposed as a part of the underlying mechanism for the cell-beneficial effects of NAM. **Method :** In this study, we further examined the effect of NAM on T cell activation, which is accompanied by a rapid increase in the content of mitochondria and ROS. Primary CD8+ T cells were isolated and activated by CD3/CD28 antibody stimulation. **Results :** When naive T cells were activated in the presence of NAM, the increase of the mitochondria content and ROS was substantially attenuated. Moreover, the population grew at higher rates and to higher extent. This could be attributed to a decrease in the ROS-triggered activation-induced cell death (AICD) which is physiologically responsible for the population contraction after activation. Importantly, this occurred without a delay in the onset of contraction or a decrease in T cell effector function. NAM treatment also attenuated the increase in the level of cytosolic Ca⁺⁺, another factor for AICD. **Conclusion :** These, if occurred in aging human body, which suffers from declining T cell activation, would exert a significant beneficial effect against immunosenescence. **Keywords :** nicotinamide, T cell activation, mitophagy, ROS, immune senescence

PS24 501-R

INTERNATIONAL PERSPECTIVES ON POVERTY AND LIVEABILITY OF OLDER PERSONS

PS24 501-R-1

POVERTY AND LIVEABILITY: DEFINITIONS, CONCEPTS AND PERSPECTIVES

Judith PHILLIPS (Centre for Innovative Ageing, Swansea University, United Kingdom)

Introduction : The concept of 'liveability' is multi-dimensional, comprising the material, social, institutional, built and natural environments- contexts in which older people live to enable a good quality of life and self-determination. It includes both objective and subjective factors: how people feel about and make sense of their situation is as important as the situation itself in determining how they experience quality of life. Poverty is also multi-dimensional and presents threats to the survival of older people and their ability to take action as well as participate in the circumstances of their lives. Structural provision throughout the life course that enables adequate resources/income and an adequate standard of living is crucial for liveability in later life. Similarly supportive living environments are necessary for a good quality of life. **Method :** The presentation will draw on an international literature review of liveability. **Results :** Survival in the face of extreme environmental conditions is the foremost challenge to assessing the supportiveness (or lack) of living environments and older people's contribution to shaping the different

contexts of liveability even in environments of poverty. Definitions, concepts and different perspectives on poverty and liveability need to be discussed to assist in a way forward to empower older people and provide a platform for policy reform. Conclusion : Consequently, we need to understand the social forces influencing liveability and which of these create risk and poverty at an individual level as well as community and societal levels. Keywords : Liveability, Poverty, Environment

PS24 501-R-2

CONCEPTUALIZING LIVEABILITY IN THE CONTEXT OF WELL-BEING OF OLDER SOUTH AFRICANS

Suzan VAN DER PAS¹, Norah KEATING², Serela RAMCLASS³, Brian O'LEARY⁴, Bilkish CASSIM³ (1. *Dept Epidemiology & Biostatistics, VU University Medical Center, Netherlands*; 2. *Human Ecology, University of Alberta, Canada*; 3. *Medicine, University of KwaZulu-Natal, South Africa*; 4. *eThekweni Municipality, eThekweni Municipality, South Africa*)

Introduction : Liveability concerns the influence of the social, economic, and environmental contexts of older people on their quality of life. It includes both objective and subjective factors: how people feel about and make sense of their situation is as important as the situation itself. Living conditions of older people warrant further exploration since so much of their time is spent in the near environment of home and neighbourhood. Method : In this study we investigate indicators of liveability and their impact on wellbeing among older persons in KwaZulu-Natal, South Africa. Data were collected in 2010 in a random sample of 1,008 subjects, aged 60 years and over. Liveability was measured through physical and social aspects of housing (access to electricity, water, toilet; feeling safe in the home) and neighborhood (walking outside, shopping for groceries, feeling safe from crime in neighborhood). Wellbeing was based on a question on general life satisfaction. Results : Regression analyses revealed that those who have housing (electrical appliances, water and toilet inside) and neighbourhood (feeling safe, walking and shopping) resources have a higher wellbeing compared to those who do not have housing or neighbourhood resources. A positive association was also found between perceived housing and neighborhood safety and satisfaction with the dwelling. Conclusion : Both the physical and social aspects of housing and the neighbourhood impact the wellbeing of older South Africans though characteristics of home especially feelings of safety are particularly important. Keywords : liveability, quality of life, neighbourhood

PS24 501-R-3

POVERTY-IMPACTS ON SUBJECTIVE WELL-BEING IN OLD AGE IN SUB-SAHARAN AFRICA: INTER-GENERATIONAL AND PSYCHOSOCIAL DIMENSIONS

Isabella ABODERIN¹, Jaco Retief HOFFMAN² (1. *APHRC / OIPA, APHRC / Oxford University, Kenya*; 2. *OIPA / AUTHeR, Oxford University / NWU, South Africa*)

Introduction : Sub-Saharan Africa is the world's poorest and 'least developed' region where ageing largely occurs against a backdrop of considerable economic, infrastructural and personal strain. Within this context, there is a growing recognition and policy concern about older people's particular vulnerability to income insecurity and a lack of access to essential services. Yet, the impacts of such contexts of deprivation on older people's experiential well-being and quality of life (QOL) remain poorly understood. This study presents an interpretive investigation, based on older people's own perspectives, of the extent to, and ways in which poverty 'gets under the skin' to affect

their/ quality of their lives and wellbeing. Method : Empirical data is drawn from in-depth qualitative investigations undertaken among samples of community-dwelling older people in South West Nigeria (N=22) and South Africa (N=21) spanning a spectrum of rural-urban and gender groups. Analysis draws on sociological and gerontological theoretical perspectives on older people's subjective evaluations of their material conditions; Results : Severe poverty and exclusion, especially where they affect older people and their offspring, have a profound, experienced impact on the former's subjective- and, consequently, physical well-being. The impact is mediated, above all, through psychosocial pathways that are shaped by culturally defined age norms and role identities. Conclusion : Contexts of poverty have major effects on older people's well-being in SSA beyond their material impacts, with intergenerational and psychosocial dimensions playing a key role. Policies to provide social protection across generations are needed to mitigate these effects. Keywords : sub-Saharan Africa; poverty; subjective well-being

PS24 512-C

DISEASE OR DISABILITY; IMPACT OF GERIATRIC DISEASES ON FUNCTIONAL OUTCOME

PS24 512-C-1

INTERVENTIONAL OUTCOMES ON CHRONIC KNEE PAIN

Hunkyung KIM (*Epidemiology, Tokyo Metropolitan Institute of Gerontology, Japan*)

Introduction : Knee pain is a common health problem, and is a major cause of long-term care and mobility limitations in the elderly population, and non-invasive treatments for knee pain have been recommended as first line treatments in the management of knee pain. This study was conducted to investigate the effects of exercise with or without thermal therapy on community-dwelling elderly women with chronic knee pain. Method : Women over 75 years of age with chronic knee pain (n=150; mean age=80.5±2.41) were randomly assigned into four groups; exercise and heat-and-steam generating sheet (HSGS), exercise, HSGS, or health education. The exercise group attended a 60-minute comprehensive training program twice a week for 3-months. The HSGS group placed two sheets on the knee for five hours per day. Visual analogue scale (VAS), Japanese knee osteoarthritis measure (JKOM), and functional fitness were assessed at baseline and post-intervention. Results : Muscle strength, and mobility significantly improved in the exercise+HSGS group compared with the health education group. VAS improved in the exercise+HSGS and HSGS groups. Total JKOM, pain and stiffness, and condition in daily life scores only improved significantly in the exercise+HSGS group. The odds ratio for VAS and walking speed improvement was more than eight times as great in the exercise+HSGS group (odds ratio=8.63, 95%CI=2.80-29.83) compared with the education group. Conclusion : Exercise alone was insufficient in improving pain and quality of life. The combined effects of both exercise and heat therapy seems to have an added benefit of decreasing pain, improving quality of life and increasing physical function. Keywords : Chronic knee pain, exercise, heat and steam generating sheet

PS24 512-C-2

FAMILY STRUCTURE ON THE RELATIONSHIP BETWEEN MULTIPLE CHRONIC DISEASES AND DEPRESSIVE SYMPTOMS IN KOREAN ELDERLY

Dong Hoon OH¹, Shin Ah KIM², Hye Young LEE², Bo-young CHOI², Jung Hyun NAM^{1*} (1. *Psychiatry, Hanyang University, Korea*; 2. *Preventive medicine, Hanyang University, Korea*)

Introduction : The aim of this study was to investigate the potential effect of family structure on the relationship between multiple chronic diseases and depressive symptom. **Method :** We analyzed cross-sectional data collected from 67,998 Korean elderly aged 60 yr and above who participated in a Korean Community Health Survey conducted in 2009. **Results :** The prevalence of MCC in men was much higher than in women and the prevalence increased as the age of subjects was increased. The prevalence of depressive symptom in men and women were 9.0% and 16.1%, respectively. The prevalence of depression in various groups was increased as the number of chronic diseases was increased. The prevalence of depressive symptom was lowest in elderly who lived in 3 generations family and was highest in elderly who lived in 1 generation family, when the number of MCC was stratified. The prevalence of depressive symptom in elderly who were live with spouse were lower than in elderly who were live alone when the number of generations and MCC were stratified. **Conclusion:** We confirmed the potential effect of family structure on the relationship between multiple chronic diseases and depressive symptom. We need to more sophisticated analysis and should make a search for developing the methods and strategies to assess and to manage the depressive symptoms in persons with multiple chronic diseases, especially vulnerable risk people such as elderly who live without spouse and in small family. **Keywords :** Family structure, Depression, Chronic disease, Elderly

PS24 512-C-3

DEFINITION OF POLYPHARMACY TO PREVENT DRUG-RELATED GERIATRIC SYNDROME

Masahiro AKISHITA (*Department of Geriatric Medicine, The University of Tokyo, Japan*)

Introduction : Polypharmacy is a well-known risk for adverse drug reactions (ADR), but is frequently seen in elderly patients because of multiple geriatric conditions. We aimed to determine the cut-off number of drugs in relation to drug-related geriatric syndrome. **Method :** Study I: Hospital records of 2412 patients (mean age = 79 years) who were admitted to our department were analyzed. Study II: A total of 172 patients (mean age = 76 years) of a geriatric outpatient clinic in Tokyo were followed up for 2 years. **Results :** Study I: The number of prescribed drugs per patient was 6.6 ± 3.6 , and ADR were observed in 252 patients (10.5%). ADR was significantly associated with the number of drugs in multiple logistic regression analysis. The odds ratio of ADR was significantly higher in the groups taking six or more drugs. Furthermore, ROC analysis showed that the optimal cut-off number of drugs was six. Study II: Thirty-two patients (18.6%) experienced falls within 2 years. On multiple logistic regression analysis, the number of drugs was associated with falls, independent of age, sex, number of geriatric conditions and other factors. ROC analysis showed that the optimal cut-off number of drugs was five. **Conclusion :** These findings suggest that polypharmacy may be defined as 5 or 6 drugs to prevent drug-related geriatric syndrome. Intervention studies examining the effect of drug review and reduction on geriatric syndrome are required to confirm this. **Keywords :** Falls, Adverse drug events

PS24 512-C-4

STUDIES ON GERIATRIC SYNDROME, CO-MORBIDITY AND FUNCTIONAL OUTCOME

Ching-yu CHEN (*Department of Family Medicine, College of Medicine, National Taiwan University, Taiwan*)

Introduction : Clinical manifestations of geriatric diseases are closely related to co-morbidity and declining physical functions. Definition of

frailty can further intensify the core component in geriatric care. **Method :** During 2006 to 2010, a three year cohort study of physical frailty has conducted in older ambulatory outpatients at National Taiwan University Hospital. All of the eligible elderly subjects were invited to accomplish clinical assessment, structuralized questionnaire evaluation, anthropometric measurements, frailty evaluation by Fried Frailty Index, and physical functions performance including muscle strength in upper and lower extremities, timed up&go test, and 5m walking time regularly. Additionally, their active chronic diseases and adverse outcome evaluations were recorded every 3 months follow-up. **Results :** Total 312 participants (geriatrician care 189 and usual care 123), aged 65 to 90, were recruited for comprehensive geriatric assessment and regularly followed up. The results showed as follows: (1) No single frailty index transition predicts all outcomes. Transition of accumulation deficits better predict outcomes than phenotypic frailty in elderly. (2) Grip strength and walking speed were important indicators to reduce risk of functional decline and adverse outcomes including frailty transition, disability transition, and transition from frailty to disability. (3) frailty could predict both social and environmental quality of life (QOL) 2 years after by path analysis. Depressive emotion (GDS) served as a mediator for frailty to all 4 aspects of QOL. **Conclusion :** For clinical applications, timely recognition of frailty in older patients with chronic diseases can predict and provide opportunities to prevent poor functional outcomes and to improve the quality of life. **Keywords :** Frailty, co-morbidity, functional decline

Tuesday June 25th

PS25 102-B

AGEING INTERVENTIONS AND MECHANISMS

PS25 102-B-1

PEPTIDERGIC REGULATION OF AGEING: PEPTIDES INCREASE VITALITY RESOURCE

Vladimir KHAVINSON¹, Boris VANYUSHIN² (*1. Biogerontology, Saint Petersburg Institute of Bioregulation and Gerontology, Russia; 2. Belozersky Institute of Physico Chemical Biology, Lomonosov Moscow State University, Russia*)

Introduction : Peptides restore functions of different organs of aging. The most valuable effect of peptide correction of age-related changes in animals consists in 25-30% increase in the average lifespan and 42% increase in the maximal lifespan. **Method :** Peptides Lys-Glu and Ala-Glu-Asp-Gly increase the amount of heterochromatin 1.4-1.7-fold in the lymphocytes of the elderly people. In transgenic mice they suppress expression of the breast cancer gene HER-2/neu 2-3.6-fold and reduce tumour diameter. In the culture of fibroblast cells peptide Ala-Glu-Asp-Gly induces expression of the gene of telomerase, contributes to the 2.4-fold lengthening of telomeres accompanied by an increase in the number of cell divisions by 42.5% and correlates with an increase of the lifespan in animals. Application of the pineal and thymus peptides in patients (15 years of observation) led to the reliable improvement of physiological functions and reduction of the mortality rate in people aged 65 years and older. **Results :** Peptides bind to deoxyribonucleotides which are targets for DNA methylation in eukariots and modulate wheat endonucleases. Binding of peptides with promoter CG or CNG sites of the DNA can make these sites be inaccessible for DNA-methyltransferases. As a result promoter remains unmethylated, this being a factor of genes activation. **Conclusion :** Thus, peptidergic regulation of gene expression is manifested at all levels of living matter organisation and is common for all eukaryotic organisms. Changes in the expression of

genes are accompanied by the restoration of the synthesis of proteins encoded by relevant genes. Keywords : peptides, pineal gland, thymus, resource

PS25 102-B-2

HORMETICS, HORMESIS AND HORMETINS FOR EXTENDING HEALTH-SPAN AND LONGEVITY

Suresh RATTAN (*Laboratory of Cellular Ageing, Aarhus University, Denmark*)

Ageing occurs in spite of the presence of complex pathways of maintenance, repair and defence, and there is no “enemy within”. This viewpoint makes modulation of ageing different from the treatment of one or more age-related diseases. A promising strategy to slow down ageing and prevent or delay the onset of age-related diseases is that of mild stress-induced hormesis by using hormetins. Physical, nutritional and mental hormetins, which initiate stress responses and strengthen the homeodynamics, are potentially effective aging modulators. The rationale and a strategy for discovering novel hormetins as potential drugs for aging intervention are presented, by elucidating multiple stress responses of normal human cells in culture. Establishing immediate and delayed stress response profiles, followed by cell type-specific functional assays, after exposure to natural or synthetic compounds and mixtures, is the first step in identifying prospective hormetin drugs. A recent example of a successful product development based in the ideas of hormesis and by following the strategy described here is a skin care cosmetic. As a biomedical issue, the biological process of aging underlies all major diseases, and although the optimal treatment of every disease, irrespective of age, is a social and moral necessity, preventing the onset of age-related diseases by intervening in the basic process of aging is the best approach for achieving healthy aging and extending the healthspan.

Keywords : longevity, stress, hormesis

PS25 102-B-3

MULTIFUNCTIONAL MORTALIN AS AN AGEING MODULATORY MACROMOLECULE

Renu WADHWA, Sunil KAUL (*Biomedical Research Institute, National Institute of Advanced Industrial Science & Technology (AIST), Japan*)

Introduction : Mortalin is a member of the hsp70 family stress proteins. It is a dynamic protein with several essential functions including chaperoning, intracellular trafficking, mitochondrial import of proteins, regulation of cell proliferation and oxidative stress signaling that are essential for continued proliferation of cancer cells. In contrast to its enrichment in cancer cells, the level of mortalin was seen to decrease in cultured senescent cells and in brain samples from Parkinson’s disease patients. Knockdown of mortalin homologue in worms (*C. elegans*) caused progeria like phenotype, associated with abnormalities in mitochondria and accumulation of molecular damage. Method : Biochemical, molecular and cell biological analyses of mortalin function in human cultured (normal and cancer) cells and during old age pathologies. Results : We report an existence of mortalin in the nucleus of cancer cells that causes (i) strong inactivation of tumor suppressor protein, p53, resulting in aneuploid cells, (ii) activation of telomerase, (iii) activation of heterogeneous ribonucleoprotein-K (hnRNP-K) leading to aggressively malignant and metastatic cancer cells. Cancer cells compromised for mortalin function enter growth arrest or apoptosis, the two innate checkpoints to carcinogenesis. Interestingly, mortalin was shown to be an important protein for neuronal differentiation and its overexpression was able to rescue cells against β -amyloid toxicity in cellular models of

Alzheimer’s disease. Overexpression of mortalin in normal human fibroblasts was shown to cause their lifespan extension. Conclusion : Mortalin plays an important role in stressed physiologies like aging and cancer and hence is an attractive candidate for preventive and therapeutic interventions. Keywords : mortalin, stress, multifunction

PS25 102-B-4

GEROPROTECTIVE ACTION OF THE PINEAL PEPTIDE IN PREMATURELY AGEING HUMANS: THE RESULTS OF LONGITUDINAL STUDY

Oleg KORKUSHKO, Valeriy SHATYLO*, Vadym ISHCHUK (*Clinical Physiology & Pathology of Internal Organs, State Institute of Gerontology Chebotarev named NAMS of Ukraine, Ukraine*)

Introduction : To evaluate the results of long-term use of pineal peptide (PP) in elderly patients with accelerated aging (AA) and coronary artery disease (CAD). Method : 79 patients, aged 65±3 years were divided into 2 groups. The 1st group patients (n=39) were administered PP during 1992-1996, the 2nd group patients (n=40) were not prescribed PP. For both groups the low doses of acetylsalicylic acid, ACE inhibitor, beta-blocker and simvastatin were prescribed during 1992-2007. Functional age (FA) was determined using indices of exercise working ability and hemodynamics at peak exercising. Over 15 years the causes of fatalities were verified. Results: After treatment with PP the degree of aging, that is the difference between FA and chronologic age, was decreased by 3.6 years. In of 2nd group the degree of aging increased by 4.5 years (p<0.05). In year 2007, the FA of patients, who had been administered PP, was significantly lower than in patients who did not receive PP. After 15 years since we began using PP, there remained 26 of 39 survivors (66.7%) in 1st group. In the 2nd group only 16 of 40 (40%) CAD patients were survived. Construction of Kaplan-Meier survival curves showed a statistically significant reduction of deaths from all causes among patients of 1st group. Long-term intake of PP reduced mortality rates relative cardiovascular disease. Conclusion : The results have shown that long-term use of the PP may reduce the rate of aging in elderly CAD patients. Prolonged use of PP significantly reduced a risk of premature death due to cardiovascular events. Keywords : Pineal peptide, geroprotection

PS25 201-R

THE INTERVENTION OF AGEING: APPROACHES AND STRATEGIES FOR THE DIGITAL AGEING ERA

PS25 201-R-1

RESPECT FOR THE ELDERLY IN EAST ASIA: CONTINUITY AND CHANGE

Kyu-taik SUNG (*Center for Filial Piety Culture Studies, Korea*)

Introduction : This presentation is to describe the way in which the overlooked value of elder respect is practiced by peoples in East Asia. Method : Based on empirical studies conducted in Korea, China, and Japan, an inventory of the forms of elder respect is formulated. Results: The studies reveal the commonality among East Asians in terms of their practice of multiple forms of elder respect, and that the forms are widely practiced among the three peoples. Conclusion : Gerontologists tend to emphasize instrumental and quantitative aspects of eldercare, and to undervalue affective and qualitative aspects of it, e.g., respect for the aged. Expressions of elder respect among the three peoples strongly resemble, as all of them have been much influenced by the Confucian ethical conception of filial piety. The expressions are shifting, however. The shifts indicate a new trend emerging--a move from authoritarian and patriarchal relationships to egalitarian and

reciprocal patterns of mutual support between generations. To counter the immense challenge from social changes, East Asians are searching for alternative ways of upholding the traditional value of elder respect. The East Asians would have to implement their own unique policies and programs for the aged in changing times by incorporating the traditional cultural value, which has, for many generations, integrated the elderly with the family and society, and enhanced the dignity and worth of aged persons. Keywords : filial piety, communality among East Asians, changing trend of elder respect

**PS25 201-R-2
MAINTENANCE OF HEALTHY BRAIN: PUTATIVE INTERVENTIONS OF DEMENTIA**

Takeshi TABIRA (*Department of Diagnosis, Prevention and Treatment of Dementia, Graduate School of Medicine, Juntendo University, Japan*)

Introduction : Amyloid-beta protein (A-beta) is produced and secreted with nerve activities at the presynaptic terminal, which is degraded quickly mainly by neprilysin. Phagocytosis by microglia and astrocytes and cerebrospinal fluid flow are also involved in the clearance of A-beta. The aging process seems to reduce all these activities, resulting in increase of A-beta in the nerve parenchyma. The increased A-beta aggregates to form oligomers which acquire synaptotoxicity and neurotoxicity. To keep our brain healthy, prevention of these processes is a key issue. Physical and cognitive exercise and certain nutrient may delay the mechanism, but it is uncertain how these protective factors act on the degradation and clearance of A-beta. Recently selective serotonin reuptake inhibitors were shown to reduce A-beta production and reduction of amyloid deposits in humans. Since the aggregated form of A-beta is recognized by immune system, immune-mediated enhancement of clearance is thought to be a hopeful strategy for prevention and treatment of age-related brain amyloidosis, Alzheimer's disease (AD). Since immunization trial with synthetic A-beta1-42 and adjuvant induced autoimmune encephalitis, trials with antibodies to A-beta are on-going. A humanized monoclonal antibody was reported effective in mild AD. Human intravenous immunoglobulin was also reported effective in slowing progression of AD. However, antibodies are extremely expensive, active immunization therapies are also developed. Method : We developed an oral vaccine using recombinant adeno-associated virus vector carrying A-beta1-43. Results : It was safe and efficient in AD mice and aged monkeys. Conclusion : Immunization is one of good strategies for brain anti-aging. Keywords : Alzheimer immune vaccine

**PS25 201-R-3
GERIATRIC APPROACHES BASED ON PREVENTION OF AGE-RELATED DISEASES**

Belong CHO (*College of Medicine, Department of Family Medicine, Seoul National University, Korea*)

Because it has been revealed that multiple factors are involved in occurrence of age-related chronic disease, the most important strategy in geriatric approaches to prevent age-related disease is 'Comprehensiveness'. Comprehensive preventive geriatric approaches start with comprehensive geriatric assessment which screens not only disease surrogate markers but also risk factors. Preventive approaches usually categorized the first and second, third. The first approaches with healthy lifestyle should start and be established as early as possible in life. The second approaches are to screen some diseases before their symptoms develop. The third approaches focus on adequate disease management not to develop complications from the

disease. This session will be talked about these comprehensive geriatric approaches to prevent chronic diseases in the clinics. Keywords : Age-related disease, Comprehensive care, Clinical prevention

**PS25 201-R-4
ANTI-AGING INTERVENTION: EPIGENETIC APPROACH**
Byung Pal YU (*Physiology, University of Texas Health Science Center, USA*)

Introduction : In the past, various intervention approaches have been tried with limited success. Using laboratory models, most attempted genetic modification, gene modulation, antioxidants and nutritional supplements, and pharmacologic agents. It is now known that the efficacy of these tests was limited mainly to the disease suppression, not necessarily the aging intervention. Recent studies made clear that to be effective, both the retardation of aging process and suppression of disease are required for the maximum intervention. Method : Recent advances in molecular biology proved that the aging is predominantly epigenetic process influenced by the extrinsic lifestyle like nutrition and exercise. Epigenetic analyses on aged animals and centenarians revealed altered DNA, histone, and chromatin, signifying the possibility that these altered structures can be targeted and prevented by anti-aging manipulations. It is now technically feasible to regulate gene expression by manipulating histone and chromatin that are altered by aging and diseases as exemplified by well-publicized resveratrol and many cancer drugs. Results : This presentation reviews what is epigenetics and why epigenetic approach would be more effective intervention by highlighting its merits and advantages over other measures. One distinct advantage of epigenetic intervention is the efficacy generated from epigenetic modifications may potential be passed onto subsequent generations through transgenerational inheritance without changing gene sequence. Conclusion : In summary, epigenetic approach promises a brighter future for the successful intervention because it attenuates both aging and its associated diseases by modifying the hierarchical histone and chromatin that are the master controllers for gene silencing and activation. Keywords : Epigenetics, Aging intervention, Healthy longevity.

**PS25 202-B
STEM CELLS REGULATION AND USE DURING HEART AND LIVER REGENERATION**

**PS25 202-B-1
EPIGENETIC REGULATION IN STEM CELLS AND ITS POSSIBLE ROLE IN AGING**

Mario FERNANDEZ FRAGA (*IUOPA, CNB-CSIC, Spain*)

Epigenetic mechanisms are essential elements for the regulation of cellular differentiation and the maintenance of cell type-specific gene expression patterns. They manipulate gene expression directly through modification of DNA (DNA methylation) or indirectly via modification of chromatin. Chromatin functionality and structure is tightly linked to covalent modification in histones which are regulated by histone modifying enzymes. Sirtuins are a class of histone deacetylases that play an essential role in the cellular response to environmental stress, promoting DNA repair, telomere stability, cell cycle arrest, cellular senescence and apoptosis. Much attention has been given to the role of sirtuins in aging and cancer development; however, less is known about their role in stem cell regulation. I will focus my talk in this topic and I will discuss the possible implications in adult stem cell aging. Keywords : Epigenetics, aging, stem cells

PS25 202-B-2

HEPATOCTYTE SENEESCENCE: IMPLICATIONS FOR THE LIVER AND ITS DISEASES

Malcolm ALISON (*Tumour Biology, Barts Cancer Institute, Charterhouse Square, United Kingdom*)

Introduction : The liver in a healthy young to middle aged mammal is highly efficient at replacing hepatocytes, lost by either acute toxic injury or 'wear and tear'. On the other hand, in aged individuals many hepatocytes become reproductively sterile, unable to re-enter the cell cycle. Chronic liver injury also results in hepatocyte senescence, and further liver cell loss provokes activation of a facultative stem cell response located within the intrahepatic biliary tree. These so-called hepatic progenitor cells (HPCs) represent a transit amplifying compartment ultimately able to differentiate into hepatocytes. Method: We can model the HPC in rodent livers by chemically blocking hepatocyte regeneration after partial hepatectomy, shifting the burden of regeneration to these biliary-derived cells. We monitor the HPC response in rodents and man using in situ hybridization and immunohistochemical techniques for detection of biliary and hepatocytic mRNAs and proteins. We have also sought the existence of clonal populations in the human liver to prove the existence of stem cells, achieved by looking for families of hepatocytes sharing identical mtDNA mutations. Results : The HPC response is activated only when hepatocyte regeneration is compromised after liver injury. Clonally-derived hepatocyte populations exist in human liver and appear to emanate from the portal areas and migrate towards the central veins. The HPC response is activated in many types of cirrhosis, a disease that often is associated with senescence. Importantly, the cirrhotic regenerative nodules are clonal populations derived from HPCs. Conclusion : The HPC response represents a life-saving back-up system activated by ageing-associated regenerative stress. Keywords : liver, senescence, regeneration

PS25 202-B-3

ATTENUATION OF CARDIAC STEM CELL SENEESCENCE ENHANCES CARDIAC REPAIR

Antonio Paolo BELTRAMI (*Department of Medical and Biological Sciences, University of Udine, Italy*)

Introduction : Cardiac Stem Cells (CSC) expanded in vitro from explanted hearts of elderly patients suffering from end stage heart failure (E-) are characterized, compared to those obtained from young donors (D-), by shorter telomeres, a larger fraction of cells showing: telomere induced dysfunction foci, p16 and p21 positivity, and reduced proliferation and migratory capabilities. Aim of the study was to verify if CSC senescence impairs the in vivo reparative potential of cardiac primitive cells. Additionally, we investigated the pathways involved in E-CSC senescence and tested drugs able to reduce E-CSC senescence in vitro and to restore their reparative ability in vivo. Method : The ability of CSC to repair a myocardial infarction was evaluated in SCID/beige immunodeficient mice. Western blot analysis was performed to assess molecular determinants of E-CSC dysfunction. Results : D- CSC repaired infarcted hearts more efficiently than E-CSC. E-CSC showed a trend towards a higher activity of TORC1 complex (assessed as S6K phosphorylation on Thr389) and an arrested autophagic degradation. Inhibition of TORC1 and enhancement of TORC2 signalling (assessed as phosphorylation of Akt on Ser473) with a combination of 10nM rapamycin + 0.5µM resveratrol significantly reduced the fraction of senescent E-CSC in vitro and restored their reparative ability to D-CSC levels in vivo. This latter was associated with a reduction in myocyte apoptosis and senescence and with a significant increase in the tissue density of c-

Kit+ CSC. Conclusion : In vitro pretreatment of E-CSC with rapamycin and resveratrol enhances their reparative ability in vivo suggesting the use of such approach to enhance CSC therapy. Keywords : Cardiac Stem Cells, Cell Senescence, Heart Failure

PS25 203-C

INTEGRATING GERIATRICS INTO ONCOLOGY CARE

PS25 203-C-1

CAN WE PREDICT AND PREVENT SEVERE SIDE EFFECTS FROM CHEMOTHERAPY IN OLDER CANCER PATIENTS?

Martine EXTERMANN (*Senior Adult Oncology, Moffitt Cancer Center, USA*)

The majority of cancers occur beyond the age of 70, and the recent dramatic increase in options in chemotherapy and targeted therapies makes most of them potential candidates for such treatments. However, the oncogeriatric research from the last two decades has demonstrated that: 1) Older cancer patients do have a significant number of geriatric conditions; 2) That amount is highly variable from individual to individual; 3) Geriatric conditions influence outcomes independently from classic oncologic predictors. More recently, the efforts have focused on using that information to develop practical risk evaluation systems that could help guide treatment in older cancer patients. One such score is the Chemotherapy Risk Assessment Scale for High-Age patients (CRASH score). The other is the Cancer and Aging Research Group (CARG) score. Both scores aim at predicting the incidence of severe toxicity. Other tools allow us to identify patients at low risk of neutropenia, or patients at high risk of death within 6 months. On the other hand, proactive supportive care is a key to good chemotherapy tolerance in the elderly. We will review the most frequent issues encountered in the elderly and their preventability with an integrated oncogeriatric approach. Finally, we will discuss the respective place of chemotherapy and alternative options in the care of non-curable cancer in older patients. Keywords : cancer, chemotherapy, treatment tolerance, supportive care

PS25 203-C-2

TREATING COLON CANCER IN THE ELDERLY - MULTIDISCIPLINARY CHALLENGES AND OPPORTUNITIES

Jee Hyun KIM (*Department of Internal Medicine, Seoul National University Bundang Hospital, Korea*)

Colorectal cancer is one of the most pronounced example which shows increased incidence with increasing age. Approximately 50% of patients diagnosed with colorectal cancer (CRC) are 70 years of age or older. The standard treatment for early stage colon cancer include surgical resection and adjuvant chemotherapy based on the risk of recurrence. For metastatic diseases, systemic chemotherapy and targeted therapy are the mainstay of treatment while surgical removal of the primary and metastatic lesions can lead to cure in some patients. Recent advances in the surgery, perioperative care, systemic chemotherapy and targeted therapy have resulted in increased survival of not only early stage disease but also metastatic colorectal cancer. However, elderly patients have been under-represented in clinical trials, leading to lack of evidence based data regarding the appropriate therapeutic approach in this age group. Moreover, older patients are frequently denied of surgery and/or chemotherapy because of concerns about the complication of treatment and impact on quality of life. A multidisciplinary team including geriatricians can help determine which patients can be treated with aggressive approaches which can lead to cure. In the meeting, how multidisciplinary oncogeriatric approach can improve care of older patients with cancer will be

presented with an example of colorectal cancer. Evidences on the use of geriatric assessment in predicting tolerance to surgery and chemotherapy will be reviewed. Also, a pilot model of tailored dosing strategy which can be used to increase tolerance to chemotherapy will also be presented. Keywords : Colon cancer, Oncogeriatric, geriatric assessment

PS25 203-C-3

HOW DOES GERIATRIC ASSESSMENT AND INTERVENTION IMPACT CANCER TREATMENT? REVIEW OF RECENT DATA

Ravindran KANESVARAN (*Department of Medical Oncology, National Cancer Centre Singapore, Singapore*)

Cancer afflicts mainly the elderly. Nearly 60% of cancer patients are over the age of 65 years old. Cancer treatment can be toxic and as such it is important to be able to select the right treatment for the right patient. Elderly cancer patients form a very heterogeneous group in terms of their functional status and ability to tolerate cancer treatment. We have realised that age and currently available functional status scales alone (like ECOG or Karnofsky) or in combination is not accurate in stratifying these patients. There has been much research done in this area and we have found that the comprehensive geriatric assessment and its various domains have not only been able to predict prognosis in this group of patients quite accurately but also be used in evaluating and treating these patients whilst improving their outcomes. A number of CGA scales have been developed to help these patients, however many physicians find it time consuming and cumbersome. As such a number of screening tools have been developed to help physicians select the right patients for a full CGA. Here we will review the recent data and discuss the latest CGA tools available and how its use, together with selection of the right intervention can impact cancer treatment in this vulnerable group of patients. Keywords : Cancer, Geriatric Assessment, Treatment

PS25 204-R

GOVERNMENTAL RESPONSES TO GLOBAL AGEING: LESSONS FROM SIX NATIONS

PS25 204-R-1

GOVERNMENTAL RESPONSE TO AGEING SOCIETY

Sung Jae CHOI (*Department of Social Welfare, Graduate School of Public Policy, Hanyang University, Korea*)

The rapidity of population ageing in Korea during the past decade epitomizes how rapidly developing countries are aging compared to developed countries. The implications of population aging are not only limited to the welfare of older persons, but have a much wider effect. In this sense, population ageing may require a new perspective or a new paradigm in societal response to ageing society. Korea has attempted to model its policies for ageing society to resemble those of advanced welfare states, but as welfare states like those in advanced countries no longer seem viable, Korean policy makers are searching for more effective and efficient measures to deal with its rapidly ageing population. Following brief introduction of a profile of population ageing and recent development of relevant national policies, this presentation will highlight the comprehensive national policy plan for ageing society set by the Korean government and finally suggest a new perspective to approach an ageing society. Korean government's five-year policy plans for ageing society deserve our attention because it contains comprehensive policies from a broad and long-term perspective. The first five year-plan was already implemented during 2006-2010 and the second one (2011-2015) is

currently being implemented. The major policies of the second one consist of four parts: (1) creating an environment conducive to child birth and child rearing, (2) building foundation to improve quality of life of older persons, (3) ensuring power of economic growth and improvement of socio-economic systems and (4) building social environment responsive to low-fertility and ageing society.

PS25 204-R-2

AGEING IN ISRAEL: NEEDS, ACHIEVEMENTS AND CHALLENGES

Sara CARMEL (*Center for Multidisciplinary Research in Aging, Ben-Gurion University of the Negev, Israel*)

Introduction : In line with current global demographic trends, Israel's population has rapidly aged, and family members are the principal caregivers to frail adults. Unlike other immigration countries, Israel is unique in its high proportions of older immigrants. Immigration from over a hundred countries has created diverse needs for elder care and support. The purpose of this presentation is to describe Israel's ageing-related needs, current societal responses, and remaining challenges. Method : We will present the socio-demographical characteristics and trends of change, the health profile of older Israelis and current health and welfare related laws and services, the education and training system for professionals in the field of ageing, and the remaining needs and problems to be solved. Results : 'Ageing in Place' is the dominant approach guiding Israel's ageing policies. Accordingly, Israel has developed a community-based widely spread system of health clinics, as well as social and welfare services. Concomitantly to the establishment of a system of services for older people, Israel has developed an educational system for professionals in geriatrics and gerontology. Yet, a number of unsolved problems and needs continue to exist and may intensify with the foreseen economical and national security difficulties. Conclusion : The current Israeli responses to ageing-related needs in a diverse society of immigrants and family caregivers, along with the lessons learned from experience, may have relevance for other countries with similar features. Keywords : ageing, family caregivers, elder care policy

PS25 204-R-3

NATIONAL RESPONSES TO THE CHALLENGES OF AGEING SOCIETY WITH DECLINING FERTILITY RATES: JAPAN'S CURRENT STATUS

Noriko TSUKADA (*Graduate School of Business, Nihon University, Japan*)

Introduction : Japan is the world's most rapidly aging society. The proportion of older people aged 65 and over to the total population reached 23.3% in 2011 and is expected to be 33.4% in 2035. Although the fertility rate is slightly increasing after hitting its lowest rate of 1.26 in 2005, it is far below the replacement level. Coupled with the rapid development of economic globalization strategies, demographic pressures have forced Japanese society to confront many challenges, including worker shortages in critical areas of long-term care. This presentation examines recent policy initiatives for this aging population relating to health and social care issues in Japan. Further examinations will be made with special focus on newly started scheme for employing foreign care workers based on Economic Partnership Agreements (EPA) with Indonesia, Philippines, and Vietnam in Japan. Method : First, demographic data are briefly introduced. Then, recent public policy solutions regarding long-term care and employment of older people are summarized. Finally, the current status of recent activities on employing foreign long-term care workers based on EPA will be introduced and examined. Results : Although original

expectations in terms of cultural and value differences were not a huge barrier, foreign care workers had poor skills in writing the Japanese language, and in order for them to pass the national qualification exam for a certified care worker would be the biggest concern. Conclusion : Japan is hoping to learn how to solve its shortfall of long-term care workers from other nations with a longer history of this practice. Keywords : long-term care, foreign workers, EPA

PS25 204-R-4

COMPREHENSIVE NATIONAL POLICY PLANNING FOR AGEING SOCIETIES

Fernando M. TORRES-GIL (*Social Welfare and Public Policy, University of California, Los Angeles (UCLA), USA*)

The world is rapidly aging and governments across the globe are recognizing the demographic imperatives to plan and prepare for the growth of the older adult populations. Yet, nations are utilizing various approaches to the development of policies, programs and involving their elders. This session will examine various approaches and provide examples of how different nations adjust to the aging of their populations and prepare for the needs of older persons. While government differ depending on their political systems, the United States, Korea, Japan, United Kingdom, Australia and Israel provide case studies of lessons learned; achievements, mistakes, adjustments and innovations. Speakers from each of these countries will share the experiences of their governments and societies in responding to the needs, requirements and complexities of the aging of their populations but also, in many cases, the decline in younger populations. The session will serve as a guide for global aging and will illuminate diverse approaches for diverse populations and governing systems. No nation has the perfect solution to the unprecedented human experience of longevity, gerontocracies and aging but each nation can provide a guidepost to plan for the inevitable demographic destiny facing all nations. Keywords : Global Aging, Public Policy, Government

PS25 204-R-5

THE UNITED KINGDOM: THE POLICIES OF SUCCESSIVE POST-WAR GOVERNMENTS IN LEGISLATING, LEVERAGING AND LIBERATING RESOURCES TO MEET THE DEMANDS OF AN AGEING SOCIETY

Gregor RAE (*Business Lab, United Kingdom*)

Published on 2nd December 1942, the 'Report of the Inter-Departmental Committee on Social Insurance and Allied Services', commonly known as the Beveridge Report, set out a plan for eradicating the 'Five Giant Evils' of society ? squalor, ignorance, want, idleness and disease. Thenew Labour-led government of 1945, with Aneurin Bevan as its Heath Minister, adopted the Beveridge proposals and pledged to provide for the people of the United Kingdom 'from the cradle to the grave.' The Welfare State, conceived by David Lloyd George, framed by William Beveridge and nurtured by Aneurin Bevan,came into being in 1948. And at the heart of the system was the new National Health Service - free at the point of use, available to all who needed it, paid for out of taxation and used responsibly. Due to his concern about the ageing of the population and the contemporary evidence that many, but not all, people were fit to work beyond age 65, Sir William Beveridge also recommended a flexible pension age to discourage early retirement by providing significantly higher pensions for later retirement. Seventy-one years after the Beveridge ReportThe House of Lords Select Committee on Public Service and Demographic Change, chaired by Lord Filkin, concluded in its report,published on 14 March 2013, that Britain is 'woefully under-prepared' to cope with an expected explosion of older

people. This presentation will examine the policies of consecutive UK governments, from post war settlement through to the Big Society of the 2010 coalition government. And it will track the journey of the post-war Baby Boomers who are now reaching old age in a period of social, financial and economic uncertainty.

PS25 205-S

NEW PERSPECTIVES ON SUCCESSFUL AGEING: CROSS-CULTURAL AND INTER-DISCIPLINARY APPROACHES

PS25 205-S-1

SUCCESSFULLY AGING BODIES: PERCEPTIONS OF MIDDLE-AGERS IN THE UNITED STATES

Toni CALASANTI (*Sociology, Virginia Tech, USA*)

Introduction : Critical gerontologists have critiqued notions of "successful ageing" as being based on experiences and values rooted in particular class, race, and gendered positions. We (and others) argue that "successful ageing" is based on a middle-aged standard and is thus inherently ageist as well. Left relatively unexplored, however, is the extent to which these critiques reflect people's actual perceptions of what successful aging entails. That is, how do people interpret the dictate to age successfully? Method : In this presentation, we use in-depth interviews conducted among 19 middle-aged men and women in the U.S. to explore what successful aging means to them, and the extent to which their views reflect gender, race, and class as well as ageism. Results : We find that respondents equate successful aging with a prolonged middle age, one often judged on the basis of bodies: bodies that "look active," that seem to be "participating", that appear to contribute. While respondents make allowances for some bodily changes (in middle age and beyond), they rule out disability of significant functional losses. They equate looking inactive, overweight, or "soft" with failing to age successfully. ccessful aging and appropriate bodies look like. Conclusion : Middle-ager's perceptions of successful aging reflect ageism and are shaped by intersecting inequalities. Keywords : success aging

PS25 205-S-2

THE NUANCES OF SUCCESSFUL AGING: VIEWS FROM CULTURAL AND INTERGENERATIONAL PERSPECTIVES

Leng Leng THANG (*Japanese Studies, National University of Singapore, Singapore*)

Introduction : Anthropological studies on successful aging in different cultures have yielded rich understanding of what is regarded as 'successful' in later years and suggests the need for cultural sensitivity in understanding what constitutes successful aging. For example, the ability to successfully manage declining health, instead of good health, characterizes successful aging among the Canadian Inuit community (Collings, 2001). They also regard one's willingness to transmit wisdom and knowledge intergenerationally as critical in successful old age. What further nuances can be critically drawn from the Asian context? Method : In this presentation, examples especially from the Asian context will be discussed to highlight the cultural nuances that should be considered in understanding 'successful aging'. Results : In Asia, relatively high emphasis has been placed on the success of one's children and grandchildren as a measure of one's definition of successful aging. However, in late modernity, where more older Asians are desiring individual freedom in later life, will the nuances in the concept of 'successful aging' remain? Conclusion : The anthropological perspective on successful aging expands and questions the normative measures of 'successful aging'. For instances, it highlighted the significance of intergenerational connection and

generativity in old age. However, will the nuances continue to remain salient with changing cultural and intergenerational relationships? Keywords : successful aging, Asian context, intergenerational relationships

PS25 205-S-3

SUCCESSFUL AGEING IN AUSTRALIA AND CHINA: A SOCIAL SCIENCES APPROACH

Colette BROWNING (*School of Primary Health Care, Monash University, Australia*)

Introduction : Understanding successful ageing in different cultural contexts requires a strong recognition of the social determinants of health and well being and the influences of the processes of social change. This paper examines successful ageing in two countries: China and Australia. Method : The paper draws on a number of our ageing studies as well as policy documents to compare and contrast understandings of and approaches to successful ageing in China and Australia. Data from (1) qualitative studies of older Chinese people in China and Australia, (2) longitudinal studies in Australia and China, and (3) policy documents will be used to examine the differences and similarities in ageing experiences and policy approaches to population ageing in these two countries. Results : In Australia and China, successful ageing approaches have emphasized physical health as the central driver of ageing well. However, older people hold broader understandings of the concept that include psychological well being, independence, social contributions and generativity. The well being of their children is a particular driver of their own well being in older Chinese adults while older Australians value financial and functional independence. Conclusion : In order to promote successful ageing we need to understand the perceptions, aspirations and expectations of adults within their social and cultural contexts as they move through the life span. These understandings can help reconstruct our social and economic institutions to better respond to the needs and contributions of older people. Keywords : successful ageing, China, Australia

PS25 205-S-4

SUCCESSFUL AGING IN THE CONTEXT OF MIGRATION: ARE ESTABLISHED CONCEPTS RELEVANT?

Sandra TORRES (*Dept. of Sociology, Uppsala University, Sweden*)

Introduction : It is a well-known fact that successful aging (SA) has been one of the most debated constructs in gerontology since its inception into the social gerontological vernacular. Anthropogerontologists have, for example, problematized the established models for the study of SA for being culture-specific while critical gerontologists have questioned the fact that these models take for granted that continuity through the life course is the norm. In this presentation we will address the way in which the process of migration - a process characterized by discontinuity - can challenge the manner in which the construct of SA is understood. Method : The presentation departs from a culturally-relevant theoretical framework for the study of SA and the vignette-driven interviews with Iranian immigrants to Sweden that were collected in order to tap into the prior and post-migration value orientations that these older people prefer and the understandings of SA that they uphold. Results : The study showed that there is congruence between the value orientations that people prefer and the understandings of SA that they uphold. Understandings that are not recognized by the established models were also unveiled and the migratory life-course did challenge the way in which this construct is understood. Conclusion : The presentation will address the implications of these findings for the way in which gerontology understands, conceptualizes and measures SA by arguing that the

context of migration is a profuse source of information not only about how migrants make sense about gerontological constructs but also about how the gerontological debate on SA can move forward. Keywords : successful aging, migration, culture

PS25 302-B

CONSERVED MECHANISMS OF AGING: FROM MODEL ORGANISMS TO MAN

PS25 302-B-1

MOLECULAR MECHANISMS LINKING DIET, DISEASE, AND AGING

Matt KAEBERLEIN (*Pathology, University of Washington, USA*)

Introduction : Aging is controlled by a complex interaction between environmental and genetic factors. The best-characterized environmental modulator of longevity is dietary restriction (DR), defined as a reduction in nutrient availability in the absence of malnutrition. The longevity and healthspan promoting effects of DR are mediated in part by reduced signaling through the mechanistic target of rapamycin. Recent work in mice has indicated that the effect of DR on lifespan is strongly influenced by genetic background; however, the molecular mechanisms underlying this observation are unknown. Method : We have utilized the budding yeast to begin to define these mechanisms. From an analysis of about 200 unique genotypes, we have observed that genes involved in lysosomal function, superoxide detoxification, and mitochondrial function strongly influence the effect of DR on yeast lifespan. Results : These observations suggested that hypothesis that dietary restriction or mTOR inhibition might be particularly beneficial in the context of defective mitochondrial function. Here I will present these data and our efforts to test this hypothesis in the *Ndufs4* knockout mouse model of the human mitochondrial disease Leigh Syndrome. Conclusion : These studies will provide insight into the cellular mechanisms by which dietary restriction interacts with individual genotype to impact longevity and healthspan, and may also yield an effective therapy for treating mitochondrial disease. Keywords : mTOR, caloric restriction, mitochondria

PS25 302-B-2

PATHWAYS MODULATING AGING: APPROACHES TO EXTEND HEALTHSPAN

Brian KENNEDY (*Buck Institute for Research on Aging, USA*)

Introduction : The focus of research at the Buck Institute is to understand the molecular events that drive aging, to determine how aging enables chronic disease and to develop interventions that extend healthspan, the disease free period of life. Studies using invertebrate model organisms have been instrumental to understanding the aging process. Using yeast, worms and flies, investigators have identified hundreds of aging genes, and have been responsible in large part for discovering and characterizing three of the most studies longevity pathways: Insulin/IGF, TOR and Sirtuins. Method : Recently in the Kennedy lab, we have completed a genome-wide study of yeast replicative aging identifying nearly three hundred long-lived strains, each lacking one yeast gene. Insights from this screen will be described. Current goals in the Kennedy lab are directed at (1) determining whether longevity pathways identified in invertebrates and (2) understanding the mechanisms by which these pathways modulate aging. Another major direction of research involves studying the role of the mTOR pathway in mammalian aging and chronic disease states. Results : Data from our lab and others indicates the mTOR signaling is aberrantly upregulated in a variety of aging tissues.

This finding suggests that (1) altered mTOR signaling may be a response to the molecular events that drive aging and (2) the beneficial effects of rapamycin on aging may be through suppression of these age-related changes rather than a reduction in basal levels in the adult state. Conclusion : Altered mTOR signaling may also be a common response to pathology associated with a range of disease states. Keywords : Aging, Healthspan, mTOR

PS25 302-B-3

SYSTEMS BIOLOGY OF AGING: NEW TRICKS TO THE OLD PROBLEM

Jing-Dong (jackie) HAN (*Partner Institute for Computational Biology, Chinese Academy of Sciences, China*)

Introduction : Many fundamental questions on aging are still unanswered or are under intense debate. These questions are frequently not addressable by examining a single gene or a single pathway, but can best be addressed at the systems level. Method : Previously we have examined the modular structure of the protein-protein interaction (PPI) networks during fruitfly and human brain aging. Results : We found that in both networks, there are two modules associated with the cellular proliferation to differentiation temporal switch that display opposite aging-related changes in expression. Genes linking such modules are enriched for lifespan, transcription and epigenetic regulators, leading to prediction and validation of new lifespan regulators. One regulator thus uncovered is the histone modification enzymes for H3K27me3. By *C. elegans* genetic analysis, we confirmed that a demethylase for H3K27me3, *utx-1* is a key lifespan regulator acting through IGF-1 signaling pathway. Conclusion : Recently, we started to examine not only age-dependent transcriptomic changes, but also gene expression changes under different dietary conditions which result in different lifespans and aging-related phenotypes. This allowed us to identify genes and pathways that modulate the aging process through dietary intervention. In addition to examining transcriptomic changes, we also explored the epigenetic changes during the aging process in *C. elegans* and Rhesus macaque using ChIP-seq, and identified key epigenetic events modulating the aging process. Keywords : Systems biology, epigenetics, epigenome

PS25 302-B-4

FUNCTIONAL APPROACHES TO THE GENETICS OF HUMAN AGING

Yousin SUH (*Genetics, Albert Einstein College of Medicine, USA*)

Aging is a major risk factor for the most common human diseases. Identification of gene variants that predispose humans to crippling diseases at old age is likely to help find novel strategies for prevention and therapy. Moreover, such genetic insight in gene variants will provide important mechanistic insights into the molecular basis of aging. The discovery of evolutionarily conserved pathways with major impact on lifespan in animal models has provided tantalizing opportunities to test the relevance of these pathways for human aging. We hypothesize that genetic variation at loci involved in conserved pathways of aging can be related to individual differences in the rate and severity of aging in humans as well. We have been conducting systematic multidisciplinary studies to discover functional gene SNPs (single nucleotide polymorphisms) in these pathways. For a mechanistic understanding of the causal relationships between SNPs and the aging-associated phenotypes, candidate gene-SNP variants are screened for various parameters of cellular fitness in short-term cell culture studies. Functionally relevant gene variants are then further studied for their in vivo effect during aging by modeling them in

mouse. The results may open up the possibility of targeted and personalized intervention strategies, ultimately leading to improved quality of life of the elderly population. Keywords : Human Aging and Longevity, Functional Variation

PS25 303-C

LATE LIFE DEPRESSION: ADVANCES IN RESEARCH AND TREATMENT

PS25 303-C-1

THE PSEUDO-DEPRESSION OF "PSEUDO"-DEMENTIA

Donald R. ROYALL (*Department of Psychiatry, University of Texas Health Science Center at San Antonio, Family & Community Medicine, USA*)

Depressive symptoms, specifically subsyndromal depressive symptoms ("Pseudo-depression"), appear to be common in the elderly, and hasten progression to dementia and Alzheimer's Disease (AD). Paradoxically, this association is not mediated through common neurodegenerative AD pathologies. Using data from a variety of sources, I will show that: 1. Subsyndromal depressive symptoms are related to both cognitive decline and future AD diagnosis. 2. Subsyndromal depressive symptoms are "dementing" in their own right (i.e., a true, not "Pseudo"-dementia). 3. The association between subsyndromal depressive symptoms and cognitive decline is not mediated by AD neuropathology. 4. The Pseudo-depression of "Pseudo"-Dementia (PD2) is specific to Mild Cognitive Impairment (MCI). 5. PD2 may be associated with amyloid deposition in the Default Mode Network (DMN) (as distinct from neuritic plaque formation) (Royall et al., 2012). In addition, there appears to be a strong signal in PD2's relationship with its serum protein biomarkers. The latter clearly affect cognition and dementia in opposite directions, simultaneously! In summary, serum inflammatory biomarkers appear to be signalling reciprocal changes in the DMN and its anticorrelated Task Specific Network(s). The DMN changes are potentially disabling /dementing, and uncoupled (largely) from cognitive performance. They may bias clinicians into making an AD diagnosis at lower levels of pathology. This is consistent with the disabling nature of Major Depressive Disorder (MDD) and the difficulty of correlating it with cognitive performance. MCI may invoke such an inflammatory response. It is secondarily related to future AD, but more specifically related to depressive symptoms in AD.

PS25 303-C-2

DEPRESSION AND EXECUTIVE FUNCTION : LESSONS FROM EPIDEMIOLOGIC STUDY

Dong-Woo LEE (*Inje University Sanggye Paik Hospital, Korea*)

Executive function has been the focus of recent researches in elderly depression. A clinical subtype called 'depression-executive dysfunction (DED) syndrome' was suggested based on clinical, neuropathological, and neuroimaging findings. DED was known to be associated with loss of interest in activities, and psychomotor retardation. It is also known to be associated with disability, poor treatment response, relapse, and recurrence. DED was mainly studied on clinical population, and community epidemiologic data is relatively sparse. After briefly reviewing the concept of DED, the data from epidemiologic study will be presented, focusing on the similarities with clinical data.

PS25 303-C-3

NEXT GENERATION ANTIDEPRESSANTS

Sun Young YUM (*Global Clinical Development, Boehringer*)

Ingelheim, Korea)

Antidepressants are clinically effective, but there are still insufficiencies with response delays, and not enough patients benefiting sufficiently. Many patients experience recurrence, with each subsequent episode becoming more treatment-resistant. While the pathophysiology of depression remains an enigma, trends in research for new antidepressants have been dynamic. The monoamine hypothesis dominated for many decades. A couple decades ago, hyperselectivity of serotonin receptor subtypes promised SSRI efficacy without the side effects. More recently, 'dirty drugs' are once again fashionable as we view multiple neurotransmitter systems to be involved in the development and maintenance of depression. In parallel, pain/inflammation pathways have been associated with depression, as well as the stress response systems. These trends seem to be merging in neuroplasticity, and hence efforts from industry to target neuro/synapto-genesis, and neuronal/synaptic remodeling. Accompanying developments in genomics offer promises in identifying vulnerability to depression as well as treatment response. Keywords : antidepressants, clinical development

PS25 307-R

CROSS-ORGAN AGEING IS A KEY TO CARDIOPULMONARY DISEASE IN THE ELDERLY

PS25 307-R-1

NEURONAL AND VASCULAR AGING: ROLES OF TESTOSTERONE, ENOS AND SIRT1 AXIS.

Masato ETO (*Department of Geriatric Medicine, University of Tokyo, Japan*)

Introduction : Oxidative stress and atherosclerosis are risk factors for cognitive decline with aging. In a clinical study in men, testosterone improved cognitive function; however, it is unknown how testosterone ameliorates the pathogenesis of cognitive decline with aging. We investigated whether the cognitive decline could be reversed by testosterone in a mouse model, and the mechanism by which testosterone inhibits cognitive decline. Method : Senescence-accelerated mice prone 8 (SAMP8), which exhibit cognitive impairment and hypogonadism, were used in this study. Morris water maze test and open field test were performed for cognitive function. SA-beta gal staining was performed for the detection of cellular aging. Results : We found that treatment with testosterone ameliorated cognitive function and inhibited senescence of hippocampal vascular endothelial cells of SAMP8. Notably, SAMP8 showed enhancement of oxidative stress in the hippocampus. We observed that an NAD(+)-dependent deacetylase, SIRT1, played an important role in the protective effect of testosterone against oxidative stress-induced endothelial senescence. Testosterone increased eNOS activity and subsequently induced SIRT1 expression. SIRT1 inhibited endothelial senescence via up-regulation of eNOS. Finally, we showed, using co-culture system, that senescent endothelial cells promoted neuronal senescence through humoral factors. Conclusion : Our results suggest a critical role of testosterone, eNOS and SIRT1 in the prevention of vascular and neuronal aging. Keywords : testosterone, eNOS, SIRT1

PS25 307-R-2

SKELETAL MUSCLE CHANGE IN THE ELDERLY PATIENTS WITH CHRONIC HEART FAILURE AND CHRONIC OBSTRUCTIVE PULMONARY DISEASE: UNDERLYING MECHANISM AND CLINICAL SIGNIFICANCE

Kwang-Il KIM (*Department of Internal Medicine, Seoul National*

University College of Medicine, Seoul National University Bundang Hospital, Korea)

Exercise intolerance is one of the common symptoms of heart failure and chronic obstructive pulmonary disease (COPD), which has a detrimental impact on the quality of life. A variety of skeletal muscle abnormalities, including skeletal muscle atrophy, altered muscle metabolism, reduced mitochondrial-based enzymes, decreased mitochondrial size, and a shift in skeletal muscle fiber type, have been reported in patients with heart failure or COPD and show a strong correlation with exercise intolerance. Skeletal muscle atrophy has been considered an important contributor to exercise intolerance. Furthermore, previous studies showed that sarcopenia is associated with a poor prognosis irrespective of the severity of heart failure or COPD. Several mechanisms have been suggested to explain the cause of skeletal muscle atrophy in patients with heart failure or COPD. Malnutrition, metabolic dysfunction, disuse atrophy, inflammatory and neurohormonal activation, anabolic/catabolic imbalance, and cell death might play an important role in the pathogenesis of skeletal muscle wasting in patients with heart failure or COPD. However, the etiology of the muscle changes is not yet entirely clear. In this talk, I will present the clinical significance of skeletal muscle change in patients with heart failure or COPD, and then briefly introduce the underlying pathophysiological mechanism of skeletal muscle change in those patients. Keywords : Skeletal muscle, heart failure, COPD

PS25 307-R-3

ROLE OF METABOLIC SYNDROME TO HEALTH OF PEOPLE AGED 75 YEARS AND OLDER

Liang-kung CHEN¹, Chien-liang LIU², Ming-hsien LIN², Liang-yu CHEN² (*1. Center for Geriatrics and Gerontology, Taipei Veterans General Hospital, Taiwan; 2. Center for Geriatrics and Gerontology, Taipei Veterans General Hospital, Taiwan*)

Metabolic syndrome is a cluster of various cardiometabolic risks and is predictive for cardiovascular disease and diabetes. However, role of metabolic syndrome to people aged 75 years and older may be different and deserve further attentions. In classical approach, metabolic syndrome represents a global cardiometabolic risk and has been proved to increase risk of cardiovascular disease, diabetes mellitus, disability and mortality. However, among older old people, i.e. people aged 75 years and older, the role of metabolic syndrome may be less predictive to cardiovascular outcomes. On the contrary, the so-called cardiometabolic risk in this particular group of people may in some way reflect the nutritional status. Previous studies showed that metabolic syndrome is of survival benefits among people aged 75 years and older in 3-year follow-up and also prevents cognitive decline in 1-year follow-up. These confusing results may not be resulted from cardiovascular risk per se but the presence of malnourished status and frailty. The phenomenon of reverse epidemiology clearly suggested the need of shifting traditional approach of health care to older people. Although geriatricians are familiar with these concepts, it will be delivered to healthcare professionals of other domains. Maintaining optimal nutritional status, and preventing frailty and sarcopenia may be of greater importance to improve the quality of life among older old people. Health care expenditure should be directed to a proper direction targeted to health of older people, instead of disease approach. Keywords : metabolic syndrome, cardiovascular disease, dementia

PS25 307-R-4

ASPIRATION PNEUMONIA AMONG OLDER PERSONS

Takashi OHRUI (*Division of Geriatric Pharmacotherapy, Tohoku*

University, Japan)

Introduction : Pneumonia is the third leading cause of death despite the availability of potent new antimicrobials in Japan. Aspiration of oropharyngeal bacterial pathogens to the lower respiratory tract is one of the most important risk factors for pneumonia. **Method :** Impairments in swallowing and cough reflexes among disabled older persons having cerebrovascular disease or Parkinson disease increase the risk of pneumonia. Thus, strategies to reduce the volumes and pathogenicity of aspirated material should be pursued. **Results :** Since both swallowing and cough reflexes are mediated by endogenous substance P contained in the vagal and glossopharyngeal nerves, pharmacologic therapy using angiotensin-converting enzyme inhibitors, which decrease substance P catabolism, can improve both reflexes and result in the lowering the risk for pneumonia. Similarly, since the production of substance P is regulated by dopaminergic neurons in the cerebral basal ganglia, treatment with dopamine analogs or potentiating drugs such as amantadine can reduce the incidence of pneumonia. **Conclusion :** The main theme of this presentation is to discuss how pneumonia develops in disabled older people and to propose preventive strategies that may reduce the incidence of pneumonia among these subjects. **Keywords :** aspiration pneumonia, substance P, basal ganglia

PS25 402-B

STRESS RESPONSES AND HOMEOSTASIS IN AGEING

PS25 402-B-1

HOMEOSTASIS, STRESS RESISTANCE, AND LONGEVITY

Khachik Kazarovich MURADIAN (*Physiology, Institute of Gerontology NAMS Ukraine, Ukraine*)

Introduction : Restricted reserves and declined coordination of homeostatic systems resulting in lower stress resistance and elevated probability of death is a central paradigm of aging. **Method :** The relationship between homeostasis, stress, aging and longevity is analyzed on three principal gerontological models ? phylogenic, ontogenic and life span extension (LSE) using our own data and literature material. **Results :** Comparative studies show that maximum life span correlates with some, but not all, stress factors and counteracting defense or repair systems. Moreover, it is problematic to discriminate correlates and determinants of aging rate, thus, hindering further validating the findings in direct experiments with LSE - the most reliable choice in proving an anti-aging concept. The well known, though declarative, idea that longer-lived species could have superior homeostatic systems was quantitatively supported only for the acid-base balance. The age-decline of stress resistance was confirmed for most indices tested in experiments with both drosophila and mice. Significant age-alterations were found in coordinated action of homeostatic systems assessed by circadian rhythms of metabolic, motor and sleep variables in young, middle-aged, old and very old mice kept in standard conditions or in constant light and darkness. As to longevity association with stress resistance in LSE, it seems strongly dependent on the model. The suggestion was supported in experiments with drosophila kept at various temperature and feeding regimes, as well as in artificial atmosphere constructed by varying concentrations of carbon dioxide, oxygen, nitrogen, helium, argon and hydrogen. **Conclusion :** Further research is warranted to clarify the relationship between homeostasis, stress and aging. **Keywords :** homeostasis, stress, longevity

PS25 402-B-2

LIFESPAN EXTENSION BY HORMESIS IN D. MELANO-

GASTER

Kyung-jin MIN (*Department of Natural Medical Sciences, Inha University, Korea*)

Introduction : Hormesis means favorable biological responses by low exposures to toxins and other stressors. From an evolutionary perspective, plants have produced phytochemicals to dissuade insects and other pests from eating them. However, the amount of phytochemicals ingested by humans is subtoxic level and the ingested phytochemicals can induce hormesis, including anti-aging effects. **Method :** Curcumin, a yellow pigment extracted from the rhizome of the plant *Curcuma longa* (turmeric) has been widely used as a spice and herbal medicine in Asia. It has been suggested to have many biological activities such as anti-oxidative, anti-inflammatory, anti-cancer, chemopreventive, and anti-neurodegenerative properties. D-chiro-inositol, a member of inositol family, and pinitol, a 3-methoxy analogue of D- chiro-inositol, have been proposed to have anti-diabetic, anti-inflammatory, anticancer and stamina enhancing effects. *Viscum album coloratum* (Korean mistletoe) is a semi-parasitic plant growing on various trees. This plant has been shown to possess a variety of biological functions such as immunomodulating, apoptosis-inducing and antitumor activity. **Results :** Feeding these compounds/extract extended the lifespan of fruit fly without compromising locomotion, fecundity or feeding behavior. Some of them seems to work as calorie restriction mimetics. The mechanism of lifespan extension by these compounds/extract will be discussed. **Conclusion :** Curcumin, D-chiro-inositol/pinitol and mistletoe extract have anti-aging effect. **Keywords :** aging, drosophila, lifespan

PS25 402-B-3

HORMESIS: A KIND OF EPIGENETIC PHENOMENON?

Alexander VAISERMAN (*Laboratory of Epigenetics, Institute of Gerontology, Ukraine*)

Introduction : In a number of experimental and epidemiological studies it has been repeatedly found that agents that are harmful at high doses can up-regulate physiological/biochemical processes in the body to produce a beneficial (hormetic) response at lower doses. Convincing evidence exist that hormesis may be the result of a generalized whole-organism adaptive epigenetic response and hence can be considered as a kind of adaptive life-history tactic. **Method :** Epigenetic alterations are mitotically and/or meiotically heritable changes in gene function that cannot be explained by changes in DNA sequence. Epigenetic regulation of gene expression is a key molecular mechanism linking environmental factors with the genome with consequences for health status throughout the life course. **Results :** According to the modern view, epigenetic changes are far more likely than genetic changes to be directed, and many of these changes are manifestly adaptive. Recent experimental studies clearly indicate that environmental fluctuations can induce specific and predictable epigenetic-related molecular changes, and support the possibility of adaptive epigenetic phenomenon. The epigenetic adaptation processes implying alterations of gene expression to buffer the organism against environmental changes support adaptability to the expected life-course conditions. **Conclusion :** It appears likely that adaptive epigenetic rearrangements can occur not only during early developmental stages but also through the adulthood, and they can cause hormesis, a phenomenon in which adaptive responses to low doses of otherwise harmful conditions improve the functional ability of cells and organisms. In this report, several lines of evidence are presented that epigenetic mechanisms can be involved in hormesis-like responses. **Keywords :** Epigenetics, adaptive response, hormesis

PS25 403-C

SLEEP DISORDERS AND THE OLDER ADULT

PS25 403-C-1

SLEEP AND CIRCADIAN RHYTHMS: KEY TO SUCCESSFUL AGING

Phyllis ZEE (*Neurology, Northwestern University, USA*)

Introduction : Between 50-70% of older adults report sleep problems, in particular difficulty falling and staying asleep. Multiple age-related factors, including physical and mental health disorders and “usual” age related changes in sleep and wake regulation and circadian rhythms have been shown to contribute to the high prevalence of sleep disturbances in older age. Method : Eligibility for the study included a diagnosis of chronic insomnia disorder by clinical interview and a Pittsburgh Sleep Quality Index (PSQI) score > 5. Participants were instructed to engage in at least 30 min of aerobic physical activity > 3 times per week for 16 weeks. Self-reported sleep quality assessments questionnaires were completed at baseline and post treatment. Participants completed sleep and exercise logs and wore wrist activity monitors for the duration of the study. Data were analyzed using multilevel models to evaluate the day to day relationships between physical activity and sleep. Results : There was a significant improvement in sleep quality (objective and subjective), as well as quality of life (PSQI), daytime sleepiness level and mood in the exercise group compared to the non-physical activity group. Conclusion : Exercise improves sleep quality, mood and daytime function in older adults with insomnia. This lecture will discuss age-related changes in sleep architecture and circadian rhythms and their impact on performance, cognition and overall quality of life. Keywords: sleep, circadian, insomnia

PS25 403-C-2

SLEEP AND SLEEP APNEA IN OLDER ADULTS AND DEMENTIA

Donald BLIWISE (*Neurology, Emory University School of Medicine, USA*)

Dementia is associated with marked changes in sleep patterns. Evidence suggests that disturbed sleep may not only be an outcome or consequence of dementia but that it also may also be a potential risk factor for dementia and play a causal role in the development of certain types of dementia. This presentation will first review selected studies suggesting that disrupted sleep follows dementing illness, with an emphasis not only on Alzheimer’s Disease but also Dementia with Lewy Bodies. Then we will describe how disturbed sleep, generally, and particular sleep disorders, such as sleep apnea, may confer or accelerate risk for loss of specific neurotransmitter systems, hasten amyloid deposition, and accelerate neuronal apoptosis. These basic science observations will be balanced by human studies of disease natural history linking sleep apnea to dementia and clinical trials exploring the options for treating dementias in this manner. Keywords: Sleep, Sleep Apnea, Dementia

PS25 403-C-3

SLEEP AND DELIRIUM IN THE ACUTE HOSPITALIZED ELDERLY

Mei Sian CHONG (*Department of Geriatric Medicine, Tan Tock Seng Hospital, Singapore*)

Delirium is a common and serious condition, which affects many of our older hospitalized patients. The prevalence in hospitalized elderly patients is shown to be as high as 50%, with the diagnosis in 11-24%

of older patients upon admission and another 5-35% of them developing delirium during admission. It is an indicator of severe underlying illness and requires early diagnosis and prompt treatment. Despite varying etiologies, delirium has a characteristic constellation of symptoms suggesting a common neural pathway. Importantly, motor symptoms are core symptoms, associated with cognitive impairments and sleep disturbances. In this session, we will review the prevalence of sleep disturbances associated with delirium across the different acute care settings and the various interventions which may aid in addressing sleep disturbances in the acute hospitalized delirious older adult. Keywords : Delirium, Sleep, Hospitalized older persons

PS25 405-S

PRODUCTIVE AGING INITIATIVES IN ASIA: BEST PRACTICES FROM KOREA, JAPAN, SINGAPORE, AND INDONESIA

PS25 405-S-1

PRODUCTIVE AGING INITIATIVES IN ASIA: BEST PRACTICES FROM KOREA, JAPAN, SINGAPORE, AND INDONESIA

Kathryn L. BRAUN¹, Takeo OGAWA², Thelma KAY³, Tri Budi RAHARDJO⁴, Dong Hee HAN⁵ (*1. Public Health, University of Hawaii, USA; 2. Social Sciences, Kumamoto Gakuen University, Japan; 3. Ministry of Community Development Youth and Sports, Singapore, Singapore; 4. Centre for Ageing Studies, University of Indonesia, Indonesia; 5. Anti Aging, Busan National University, Korea*)

Introduction : Counties across Asia are experiencing rapid growth of the number and percent of older adults in their societies. Policy makers and planners are challenged to facilitate ways in which older adults can actively contribute to society, rather than becoming (or being seen as) dependent on it. The purpose of this symposium is to share “best practices” for productive aging from select Asian countries. Method : Presenters are country representatives of ACAP (Active Aging Consortium Asia Pacific), who work within their countries to demonstrate the real and potential social capital of older adults and to advocate for social policies that encourage and facilitate productivity aging. Dr. Braun will moderate the session. She will provide a brief overview of the trends that have led to rapid aging and describe ACAP’s individual-family-social policy framework for the development of active-aging initiatives. She will summarize arguments for productive aging, as well as the criticism of productive aging from the field of critical gerontology. Results : Dr. Han will describe the aging situation in South Korea and share best practices from the Research Institute of Science for the Better Living of the Elderly and from Busan National University. After reviewing Japan’s aging situation, Dr. Ogawa will describe initiatives such as Fukuoka City’s “active aging” plan. Ms. Kay will discuss productive-aging-related policy developments in Singapore, including increasing retirement age and promoting volunteerism. Dr. Rahardjo will discuss differences in the urban and rural experience of aging in Indonesia, and describe productive-aging projects in these settings. Conclusion : All countries must develop suitable productive-aging initiatives. Keywords : active aging, work, volunteerism

PS25 405-S-2

PRODUCTIVE AGEING IN INDONESIA

Tri Budi W RAHARDJO¹, Lindawati KUSDHANY², R Irawaty ISMAIL³, Vita Priantina DEWI³, Dinni Agustin NUGRAHA³, Sri Lasmidjah DIPONEGORO³, Eef HOGERVOST³ (*1. Centre for Ageing Studies, Universitas Indonesia, Indonesia; 2. University of Indonesia,*

Centre for Ageing Studies, Indonesia; 3. Centre for Ageing Studies, University of Indonesia, Indonesia)

Introduction : The purpose of this presentation is to share the level participation in workplace, community, and family among older persons in promoting productive ageing in Indonesia. **Method :** We analyzed the data of Susenas, the National Socio and Economic Survey of Indonesia, 2009, which included a representative sample of older adults. **Results :** The results showed that 58.95 % of older persons were in the position of head of household for their extended family, and 47% were still active in place for more than 35 hours per week. However, most of them (71%) were active in social activities, including religious activities as supervisor and participants, in scientific meetings as speakers and facilitators, in education as voluntary teachers, in older persons association doing various kinds of activities, such as dancing, painting, producing handicraft, etc. Most of them conducted social activities using their own money, supported by the family and cooperation. There was also evidence that active aging had a significant association with the level of disability and cognitive declining. Assistance provided by the government is still very limited. **Conclusion :** We conclude that productive ageing in Indonesia is significant and dominated by social activities with high motivation of older adults. Although causation cannot be determined from this cross-sectional dataset, active aging may be a protective factor against disability and cognitive decline. **Keywords :** Older persons, productive aging, workplace and social activities

PS25 405-S-3
INITIATIVES TO INCREASE THE PRODUCTIVITY OF OLDER ADULTS IN SINGAPORE

Thelma KAY (*Ministry of Social and Family Development, Singapore*)

Introduction: With a rapidly ageing population, a shrinking workforce and increasing dependency ratio, and growing sensitivity against foreign workers, initiatives have been introduced in Singapore to increase the productivity of older adults particularly through active ageing and enhancing employability. **Method :** The presentation will cover studies done on active ageing (including wellness programmes), age-friendly environment, factors influencing the employment of older adults from the perspective of employees and employers, and legislative and institutional measures to promote the employment of older adults. **Results :** Studies evaluating the outcome of active ageing initiatives will be presented. These cover pilot wellness programmes which have shown their effectiveness in enhancing participation, neighbourliness and social cohesion. Intergenerational activities, lifelong learning, reskilling programmes, process redesign and IT enablement, and use of technology will also be covered. Of particular interest will be the outcome of interventions to employ and manage older adults such as the Tripartite Alliance for Fair Employment Practices, the enactment of Re-employment of Older Workers legislation from 2012, and the increased Workfare Income Supplement Scheme for older low-wage workers. Challenges however remain with older workers more likely to be unemployed and also more likely to be in long term unemployment. **Conclusion :** Results of studies indicate the increasing acknowledgement of the importance of productive ageing in Singapore. This is being enabled with policies and programmes on active ageing (as both preventive and productive measures) as well as legislative/regulatory, awareness raising and mindset changing imperatives recognizing older persons as assets/resource and contributors. **Keywords :** Active ageing, productive ageing, intergenerational interdependence

PS25 405-S-4
PRODUCTIVE AGEING IN KOREA
Dong Hee HAN (*Research & Development, Research Institute of Science for the Better Living of the Elderly, Research Center for Anti-Aging, Korea*)

Introduction : Koreans are living longer, and more programs and roles need to be developed to help older Koreans stay productive. The purpose of this study is to introduce best practices of productive aging in Korea. **Method :** Case studies were gathered from the Elderly Welfare Center, Healthy Family Support Center, Senior Clubs, and the Research Institute for Science of the Better Living of the Elderly. Interviews were conducted with older people on their late-life roles. **Results :** The case studies feature programs that engage older Koreans as teachers, internet navigators, mentors to young people and new immigrants, and in other productive roles. Older persons wanted to be considered as social capital and to continue to contribute to families and communities in later life. More systemic education and training programs are needed to actualize this. **Conclusion :** It was concluded that productive ageing is significant in late life in Korea. Active Aging could also suggest productive aging, and a new conceptual model of productive aging will be shared. **Keywords :** productive aging, Active Aging, Social Capital

PS25 405-S-5
PRODUCTIVE AGING IN FUKUOKA-CITY, JAPAN
Takeo OGAWA (*Faculty of Social Welfare, Kumamoto Gakuen University, Japan*)

Introduction : Fukuoka-city is still young comparatively, although the demographic onus is progressing in Japan. However, some local communities are aging rapidly. We need to estimate the future population aging in Fukuoka-city, and actualize the social capital in communities for preparing to coming demographic onus. It means that older persons will have to work longer, and to maintain their healthy life. Also, younger generations will have to change their life style to follow up their parent-generations. **Method :** We make the empowerment tool of "Aging Imagination Game," which acknowledges residents the community aging in future. We select three communities for comparing their situation. Residents participate in workshops of 'Aging Imagination Game' Our research teams discussed their images on community aging, and try to cope their needs to community resources for creating sustainable communities in the super-aged society. **Results :** We have found some possibilities of intergenerational relationships which are not only family type but also neighborhood type. There are some paradigm shifts from individualism to contextualism. The social differentiation will be not well functions but the social integration will be alternative functions for realizing productive aging society. **Conclusion :** For promoting the productive aging, we will have to focus on the social capital in communities. The intergenerational relationship should be enforced for establishing productive/active aging society. We will design some intergenerational programs for promoting all-age friendly communities. **Keywords :** community design, intergenerational relationship, aging imagination game

PS25 410-R
COMPARATIVE LONG-TERM CARE SYSTEMS IN EAST ASIA

PS25 410-R-1
LONG-TERM CARE SYSTEM IN CHINA
Tuohong ZHANG (*Global Health, Peking University School of Public Health, China*)

Introduction : China is facing rapid ageing of population. China will only take about 20 years for the population of over 65 years old increasing from 7% to 14%, whilst France takes more than 100 years. Speedy ageing is accompanying with increased burdens of care, including clinic visit, hospitalization, self-care and long-term care. According to the analysis by the MOH, the total financial costs increases annually from 1993 to 2008 by 11.8% (post-adjusted by CPI, the consumer price index), even higher than the annual increasing rate of GDP during the same period of time (10.1%). **Method :** Second hand data analysis. **Results :** The need for long-term care could be proxy by the situation of functional loss or disability. In 2008, during the National Household Health Survey, the old people over 60 reported 16.9% of functional loss and 5.6% of disability. In China, there is no national program for long-term care insurance. Only one city has been starting the pilot by covering limited beneficiaries. The long-term care services have been provided separately by the Ministry of Civil Affairs (MCA) and the Ministry of Health (MOH). Officially recognized long-term care institutions and qualified human resources are in a big gap. In most nursing homes run by the MCA, The quality of service is doubted. The training for the long-term care staff is just started. **Conclusion :** China need to take urgent action to deal with the long-term care needs otherwise the financial burden due to LTC will not able to be met. **Keywords :** long-term care, China

PS25 410-R-2

LONG-TERM CARE IN JAPAN; SOCIO-POLITICO-CULTURAL DEBATE TOWARDS REFORM

Hideki HASHIMOTO (*School of Public Health, University of Tokyo, Japan*)

Long term care had been regarded as a private act in household under the traditional family system in Japan, and the concept is still vital in the current formal long-term care system established since 2000, where formal care provision is complementary to informal household care. Demographic change and subsequent decline in household function made a social driving force to prepare formal care provision under public financing. Japan chose social insurance system, no cash benefit, and relatively generous eligibility criteria solely based on functional evaluation. The choice allowed wide and rapid acceptance of the formal care, but also resulted in a financial threat to system's sustainability. Current debate over system reform includes a search for new financial source, rationing of service provision, improvement of service efficiency, and a more comprehensive policy beyond long-term care provision to build ageing-proof society. **Keywords :** Long-term Care Insurance (LTCI), Japan, Reform

PS25 410-R-3

LONG-TERM CARE SYSTEM AND POLICY IN KOREA

Soonman KWON (*School of Public Health, Seoul National University, Korea*)

Introduction : Rapid aging of population has fundamental effects on socioeconomic and health care system and policy in Korea. This paper will discuss the institutional design, cost containment, and key challenges and lessons of the long-term care system in Korea. **Method:** Based on a health system perspective, it reviews key aspects of health and long-term care system, such as governance and policy, financing, service delivery, and human resources in Korea. **Results :** In response to population aging, Korea introduced social insurance for long-term care in 2008. It contributed to reducing the financial barrier to care, but challenges remain in the areas of benefit packages, cost containment, over-supply of providers, and service coordination. The roles of long-term care hospitals, paid by health insurance, and long-term care

facilities, paid by long-term care insurance, are not clearly shared. **Conclusion :** Korea needs to better coordinate health and long-term care systems to improve health and well-being of the elderly and enhance financial sustainability of health and long-term care systems. **Keywords :** Long-term Care, Policy, Korea

PS25 410-R-4

DESIGN AND POLICY ISSUES OF THE UNIVERSAL LONG-TERM CARE INSURANCE SCHEME IN TAIWAN

Yue-chune LEE (*Institute of Health and Welfare Policy, National Yang-Ming University, Taiwan*)

Introduction : Following the footsteps of Germany, Japan, Korea and others, Taiwan Government is planning for the universal Long-term Care Insurance (LTCI) program, a compulsory social insurance program that would pay for basic long-term care (LTC) and support to the physically and mentally disabled persons, regardless of age, and their caregivers in Taiwan. The aims of this presentation are as following: 1. Introduce the basic scheme of the LTCI program, including the goals, eligibility, benefit, financing & payment system, cost containment and quality assurance mechanism. 2. Delineate the contents, methods, and application of the multi-dimensional need assessment instrument (MD-NAI). 3. Describe the methods to develop LTC case-mix system (LTC-CMS), which will be used to determine the levels of the NLTCI benefits. **Method :** Literature review, focus group and expert opinion were applied to develop MD-NAI. Cronbach's α were applied to determine the reliability. For the development of LTC-CMS, level of need were determined by MD-NAI, resources use were recorded by different kinds of LTC personnels who provide care to 5000 disabled persons received services from home, community care center and institution. Reliability test will be conducted by time-motion study on 10% of the samples. Tree-analysis will be conducted to develop care-mix system. **Results :** Except for emotional and behavior problems ($\alpha=0.76$), Cronbach's α were high (0.86-0.95) for the other five subdimensions of MD-NAI. **Conclusion :** Major policy issues regarding the financial sustainability, manpower demand and supply, cash benefits will be discussed. **Keywords :** Long-Term Care Insurance, need assessment, case-mix

PS25 503-C

PREVENTING DELIRIUM IN HOSPITALIZED PATIENTS: INSTITUTING THE HOSPITAL ELDER LIFE PROGRAM (HELP)

PS25 503-C-1

PREVENTING DELIRIUM IN HOSPITALIZED PATIENTS: INSTITUTING THE HOSPITAL ELDER LIFE PROGRAM (HELP)

Sandra Y. MOODY (*Medicine, Kameda Medical Center (Japan) & University of California, San Francisco (USA), Japan*)

Introduction : Delirium is a complex neuropsychiatric syndrome; its definition and pathophysiology are further complicated by the multiple synonyms or terms used to describe it. For example, several authors have noted more than 30, including acute confusional state, reversible dementia, and intensive care unit (ICU) psychosis. Despite description of delirium in the peer-reviewed medical literature for over 2,000 years, it remains under-recognized and frequently inappropriately treated and managed. **Method :** Delirium is prevalent in hospitalized patients, particularly among those aged 65 years or older, and is associated with significant morbidity and increased mortality risk. With aging societies, the incidence and prevalence of delirium are likely to markedly increase. Thus, prevention, and early diagnosis and

treatment are imperative. Results : Recent research has reported the development of tools and programs shown to improve early recognition, diagnosis, treatment, and more importantly, prevention of delirium. Conclusion : In this symposium, we will aim to accomplish the following objectives using an interactive approach. 1. Review the definition, risk factors, epidemiology, purported pathogenesis, prevention, diagnosis, and treatment of delirium. 2. Discuss the Inouye Hospital Elder Life Program (HELP) and its goal. 3. Using an example from Japan, describe one method of developing and implementing HELP at two community-based hospitals in Osaka area. Keywords : Delirium, Hospitalization, HELP.

PS25 503-C-2

PREVENTING DELIRIUM IN HOSPITALIZED PATIENTS: INSTITUTING THE HOSPITAL ELDER LIFE PROGRAM (HELP)

Miwako HONDA (*General Medicine, National Hospital Organization Tokyo Medical Center, Japan*)

Introduction, goal and objectives of the session Delirium is a complex neuropsychiatric syndrome; its definition and pathophysiology are further complicated by the multiple synonyms or terms used to describe it. For example, several authors have noted more than 30, including acute confusional state, reversible dementia, and intensive care unit (ICU) psychosis. Despite description of delirium in the peer-reviewed medical literature for over 2,000 years, it remains under-recognized and frequently inappropriately treated and managed. Delirium is prevalent in hospitalized patients, particularly among those aged 65 years or older, and is associated with significant morbidity and increased mortality risk. With aging societies, the incidence and prevalence of delirium are likely to markedly increase. Thus, prevention, and early diagnosis and treatment are imperative. Recent research has reported the development of tools and programs shown to improve early recognition, diagnosis, treatment, and more importantly, prevention of delirium. In this symposium, we will aim to accomplish the following objectives using an interactive approach. 1. Review the definition, risk factors, epidemiology, purported pathogenesis, prevention, diagnosis, and treatment of delirium. 2. Discuss the Inouye Hospital Elder Life Program (HELP) and its goal. Using an example from Japan, describe one method of developing and implementing HELP at two community based hospitals in Osaka area. Keywords : Delirium, Hospitalized Patients, Hospital Elder Life Program(HELP)

PS25 503-C-3

FINDING HIGH RISK PATIENTS FOR DELIRIUM IN ORTHOPEDIC PATIENTS

Narei HONG (*Dept. of Psychiatry, College of Medicine, Hallym University, Korea*)

Introduction : Delirium is a common substantial neuropsychiatric syndrome for older patients. Also patients with delirium have a worse prognosis than patients without delirium, and delirium is associated with many adverse outcomes including more prolonged hospitalization, increased mortality and increased health care costs. Delirium usually occurs as a result of multiple causes and many predisposing and precipitating factors are known for delirium. Some predisposing factors such as existing cognitive impairment and dementia, advanced age and main physical problems which lead patients to be hospitalized cannot be changed, however predictive risk models and early management of some risk factors can help to prevent delirium in older patients. Method : For developing predictive risk models for delirium which is clinically feasible in Korean surgical situation, we surveyed all elderly patients who were admitted to

orthopedic departments of one university hospital in Korea. For diagnosing delirium, Confusion Assessment Method (CAM) and diagnostic interview based on Diagnostic and Statistical Manual of Mental Disorders, Fourth edition, Text Revision (DSM-IV-TR) were used by psychiatrists. Preoperative blood results and past medical history which were usually done by orthopedic surgeon were also collected. Results : Using these data, we made provisional predictive risk models of delirium for orthopedic elderly patients. Conclusion : This model can help orthopedic surgeons to find high risk patients for delirium in elderly patients. The surgeons may observe high risk patients closer and refer them to psychiatric department easily with this model. Keywords : delirium

PS25 505-S

INTERNATIONAL PERSPECTIVES ON FAMILY ROLES AND OBLIGATIONS

PS25 505-S-1

CULTURAL FORCES AND AGING FAMILIES: A REAPPRAISAL

Merril SILVERSTEIN (*Department of Sociology and School of Social Work, Syracuse University, USA*)

Introduction: Culture and exigent need are often counter-posed as competing altruistic motivations driving intergenerational resource transfers. However, this distinction is likely a false dichotomy in the sense that culturally sanctioned roles and obligations are patterned responses to unfulfilled needs. In much the same way, cultural norms are consistent with welfare state structures also patterned responses to need and that are themselves built on cultural assumptions about what family members are obligated and not obligated to do for each other. Method: This paper builds on a decade review of the literature on cultural aspects of aging families. There view emphasizes Hispanic and African American families in the United States but also considers national and cross-national dimensions of intergenerational transfers within a cultural context. Results: A paradigmatic set of principles are derived to describe how culture forms preferences for intergenerational transfers of money, time, and housing resources--with demonstrable outcomes in terms of the well-being of older adults and their descendants. At the micro level, pro-social values represent a form of moral capital that becomes valuable when need arises, but can also be manifest in generalized and redistributive transfers to older adults at the societal level. These micro and macro elements are manifestations of cultural preferences that are mutually determined. Conclusion: Culture and need as the driving forces of intergenerational transfers are interdependent with each other. The concept of moral capital subsumes this symbiosis by making explicit the presumptions that guide altruistic helping behavior in the family and dictates the preferred course of action within a social context. Keywords : Culture, care, families, intergenerational transfers

PS25 505-S-2

INTERGENERATIONAL FAMILY RELATIONS: SOLIDARITY, CONFLICT AND AMBIVALENCE IN EUROPE AND ISRAEL

Ruth KATZ¹, Ariela LOWENSTEIN², Dafna HALPERIN³ (*1. Human Services, Yezreel Valley college, Emek Yezreel & University of Haifa, Israel; 2. president, Yezreel Valley College, Emek Yezreel & University of Haifa, Israel; 3. Health Services Management, Yezreel Valley College, Israel*)

Introduction : Population aging results in fewer family members and caregivers available for older people. Parallel to the ageing of

populations, changes in family structures occurred which creates uncertainty in intergenerational relations and expectations and a shrinking pool of family support. Changes in social policies suggest less government responsibility for elder care with associated pressures on families. Giving these trends, the paper aims to explore intergenerational relations among adult family members comparing European countries and Israel. Method : Analysis of data from two international research projects: OASIS (Norway, England, Germany, Spain, Israel) and SHARE (more than 20 countries from Scandinavia through Central Europe to the Mediterranean), both having rich range of topics regarding family intergenerational relations. Moreover SHARE is a multi-disciplinary cross-national longitudinal study, completed four waves of data collection. Results : intergenerational relations are affected by social changes however they are not uniformly in the direction of weaker ties; the majority of people acknowledge some degree of filial obligation, although moderate differences between countries were found; generous welfare state services have not crowded out the family and helped generations to establish more independent relationships; majority of respondents were involved in the exchange of resources both as givers and receivers; In Israel the impact of the LTC insurance law on care relations showed that involvement and care of families was not reduced but had changed to more emotional support. Conclusion : Policy implications: to strengthen intergenerational relations and obligations and to achieve a balance among the three systems: the welfare system, the labor market, and the family system. Keywords : intergenerational family relations, caregiving, SHARE, OASIS

PS25 505-S-3

INTERGENERATIONAL RELATIONS, AGEING AND RISK TO FAMILY IDENTITY: EXAMPLES FROM AUSTRALIAN SOCIAL POLICY

Simon BIGGS (*Social & Political Sciences, University of Melbourne, Australia*)

Introduction : This paper considers changing perceptions of adult ageing, the family and their interpretation in social policy. The need for cultural adaptation to population ageing becoming accepted in policy debate. The question now is which forms of intergenerational activity will be legitimated and whether these forms take a sufficiently broad series of life-priorities into account. Once wider international trends are outlined, Australian policy is used as a case example. It is argued that a mismatch between policy initiatives and personal change is a new social risk associated with demographic and socio-cultural development, having implications for the way in which social ageism and age discrimination should be considered. Method : Critical analysis of policy material. Results : Risks are located between a policy context which is changing rapidly and a set of identities and expectations associated with ageing, which may or may not be evolving in the same direction. A struggle for dominance and legitimacy emerges, which risks the submersion of personal, family and age-related priorities. Conclusion : Contemporary trends, both nationally and internationally evidence solutions to 'the problem of demographic ageing' by adopting a form of economic instrumentalism. This restricts legitimate age identities to those associated with work and work-related activity. Effects on family life run the risk of reducing intergenerational engagement to unpaid care roles, while personal development and age-related life priorities are in danger of being ignored. A new direction for social policy is proposed. Keywords : intergenerational identity policy

PS25 506-C

ORAL HEALTH AND QUALITY OF LIFE IN OLD AGE

PS25 506-C-1

POTENTIAL MOLECULAR TARGET FOR PERIODONTAL DISEASE AND OSTEOARTHRITIS OF AGING

Eun-cheol KIM (*Department of Maxillofacial Tissue Regeneration, School of Dentistry, Kyung Hee University, Korea*)

Introduction : Anatomical, functional, and cellular changes in periodontal and joint tissues have been reported as being associated with the aging process. Method : The inflammatory response such as periodontitis and osteoarthritis is a frequent occurrence, because it is a normal reaction of the body's defense against various stimuli, including oxidative stress and microbial invasion into tissues. Results : With the emerging principles of inflammation indicating the important relationship between polypeptide signaling mechanisms and tissue destruction, the control of tissue destruction via control of these processes will become an important therapeutic goal in periodontics and osteoarthritis. Conclusion : In order to further improve regeneration efficacy, the possible causes and solutions will be discussed on the basis of: (a) mechanism and novel molecular targets of periodontitis such as, Nrf-2, HO-1, and endoplasmic reticulum stress, HIF-1 α , and SIRT1 (b) application sites for growth factors and stem cells, and (c) application of scaffold and carriers for growth factors and cells, and (d) age-related changes in the PDL fibroblasts. ACKNOWLEDGEMENTS. This work was supported by the National Research Foundation of Korea (NRF) grant funded by the Korea government (MEST) (No.2012R1A5A2051384). Keywords : Periodontitis; Molecular Target; Aging

PS25 506-C-2

SWALLOWING PROBLEMS IN THE AGING SOCIETY IN JAPAN

Toru NAITO (*Geriatric Dentistry, Fukuoka Dental College, Japan*)

Introduction : The population aging rate was 24% in Japan in 2012. As the aging of society progresses, the configuration of the disease profile of the population changes dramatically. Last year, the third most common cause of death was recorded as pneumonia, followed by cancer and heart disease. Many elderly people have died from pneumonia in recent years. There has been an especially high rate of aspiration pneumonia in the elderly. Method : Reduced oral care is known to be a risk factor for aspiration pneumonia, and Japanese dentists are very interested in oral care for the elderly population. Results : A recent survey showed that eating was one of the favorite activities of elderly subjects, but many elderly people have chewing or swallowing problems, referred to as dysphagia. Stroke, dementia or other serious diseases sometimes lead to dysphagia. In particular, approximately 80% of patients in the acute phase of stroke show swallowing problems. Some Japanese dentists are now trying to identify and treat patients with swallowing problems. To successfully treat patients with dysphagia, dentists need to cooperate with otolaryngologists, speech therapists and other medical workers. Conclusion : In Japan, geriatric dentistry attracts many dentists. One of the final goals of dentistry is the rehabilitation or recovery of the fun of eating. Geriatric dentistry should therefore include academic activities to contribute not only to the general oral health of the patients, but also to their systemic health. That is to say, dentistry should help patients to meet their expectations about health and normal activities, such as eating. Keywords : Swallowing, Dysphagia, Pneumonia

PS25 506-C-3

XEROSTOMIA IN OLD ADULT AND DEVELOPMENT OF ARTIFICIAL SALIVA

Hong-seop KHO (*Dept of Oral Medicine & Oral Diagnosis, Oromaxillofacial Dysfunction Research Center for the Elderly, School of Dentistry, Seoul National University, Korea*)

Introduction : Xerostomia is common in the old adults and the prevalence is increasing with the advent of aged society. Patients with dry mouth have many complaints and inadequate saliva production can significantly diminish quality of life in these patients. At present there is no effective machinery for the treatment of dry mouth. Sialogogues are not always effective and have side effects. The clinical efficacy of saliva substitutes is usually limited and not satisfactory. Therefore, the development of novel sialogogues and artificial saliva with more therapeutic and lesser side effects is needed. Method : Development of ideal saliva substitutes requires understanding of the rheological and biological properties of human saliva. Animal or plant substances were evaluated as candidate molecules and innate defense molecules such as lysozyme and peroxidase were used as antimicrobial supplements. For rheological properties, viscosity and wettability were measured. For biological properties, antimicrobial enzymatic and antifungal activities were evaluated. For the evaluation of clinical effectiveness, mucosal wetness was measured. Results : Animal mucins, hyaluronic acid, and yam were evaluated as candidate molecules. They have viscoelastic properties similar to human saliva at certain concentrations. They showed additive or inhibitory effects on antimicrobial supplements in the aspects of enzymatic and candidacidal activities. Conclusion : For the development of ideal saliva substitutes, research based on pathophysiology of dry mouth condition and biorheology of human saliva is necessary. Keywords : Xerostomia, Artificial saliva, Old adult

PS25 506-C-4

ORAL HEALTH PROMOTION CAN CONTRIBUTE TO MAINTAIN SYSTEMIC HEALTH AND HIGH QOL FOR ELDERLIES

Hideo MIYAZAKI (*Oral Health Science, Niigata University, Japan*)

Introduction : Periodontal disease is associated with general health status such as cardiovascular disease and diabetes. Those with complex health conditions are at greater risk of oral diseases that complicate their overall health. However, integration on the other oral-systemic relationships are still unclear. Method : Randomly selected 763 individuals aged 70 and 80 years old were employed for the Niigata Elderly Study in 1998. Sample size was 12% of number of inhabitants registered in the city. A personal interview was performed to obtain the bulk of information including socioeconomic variables, life style, etc. Four trained dentists assessed subjects' oral health conditions with same methodology once a year since 1998. In order to monitor the general health condition, blood pressure levels were recorded and serum levels of disease markers, nutritional factors, and physical ability tests were also investigated. Results : Occlusal supports were associated with lower extremity dynamic strength, agility, and balance function at baseline. While, significant declines of leg extensor power (OR=4.61) and one-leg standing time (OR=4.27) were observed in 0-3 occlusion support group than those having 4 supports during 8-years follow up period. These findings suggest that maintenance of dental occlusion may prevent a decrease in activities of daily living in the elderly. Moreover, during 10-year follow up, cox regression analysis showed that high scores in muscle strength for lower extremities and isokinetic leg extensor power were related to decreases mortality. Conclusion : These results clearly reveal the oral-systemic relationships and also suggest that maintaining oral health can contribute to support higher QOL in elderly people. Keywords : Dental occlusion, Physical ability, Mortality

Wednesday June 26th

PS26 105-S

NAVIGATING NEW HORIZONS AT THE END OF LIFE

PS26 105-S-1

PALLIATIVE CARE AND AGED CARE - UNLIKELY PARTNERS?

Margaret O'CONNOR¹, Keunyoul KIM², Helen YUE-LAI CHAN³, Edward WING-HONG POON⁴ (*1. Palliative Care Research Team, School of Nursing, Monash University, Australia; 2. Respiratory Medicine, Seoul National University, Korea; 3. The Nethersole School of Nursing, The Chinese University of Hong Kong, China; 4. Nursing, Thye Hua Kwan Hospital, Singapore*)

Introduction : Palliative care and aged care services share much in common, clinically and organisationally, but in most parts of the world, there has been slow recognition of how these disciplines can work together. The key connection is that just like a hospice, residential aged care is a person's final home. Thus even though death may be a common occurrence in aged care settings, there is little recognition that care of the dying is a required clinical skill. Results : Palliative care services have adapted their scope of practice in recent years, to work alongside their colleagues in primary healthcare. This organisational shift recognised that most health professionals will care for a dying person at some stage in their career; and that not every dying person requires the expertise of specialist palliative care. Aged care is a significant area of primary healthcare. Over the last 10 years in Australia, the Government has made a significant commitment to supporting the development of primary care including aged and palliative care services, to support care of the dying in aged care settings. Conclusion : This paper discusses aspects of the development of primary healthcare, and the work undertaken to support older dying people who require palliative care. Keywords : End of life, palliative care, aged care

PS26 105-S-2

WHAT OLDER PEOPLE NEED TO KNOW WHEN THEY HAVE A LIFE THREATENING ILLNESS? - FOR THE PC SESSION

Wing Hong POON (*Nursing Service, Ang Mo Kio-Thye Hua Kwan Hospital, Singapore*)

Introduction : With the fast ageing population, dying of an old age in Chinese society is less understood than might be expected. This paper is to uncover the lived experience of older people with life threatening illness and receiving palliative care in the inpatient hospice. Method : As this study is to understand and interpret the meaning of the older people with life threatening illness, hermeneutic phenomenology, descriptive and interpretative research methods were used to guide the whole research. 15 older people aged 65 and above were recruited. An in-depth interview was conducted individually that last from 30 minutes to 60 minutes. The tape was transcribed by the researcher. Results : Nine themes were identified: 1. Dislike of hospital stay 2. Fear of pain and suffering 3. Reliance of religion 4. Defining hospice 5. Being in the hospice 6. Issue of burden 7. Worry about family 8. Communication Issues 9. Culture barrier. Conclusion : The fifteen participants have provided valuable insights to inform clinicians about their needs and have help clinician to alter their care approach. Keywords : older people, palliative care

PS26 105-S-3

PROMOTING ADVANCE CARE PLANNING TO CHINESE OLDER PEOPLE

Helen Yue-lai CHAN (*The Nethersole School of Nursing, The Chinese University of Hong Kong, China*)

Introduction : Many older people live with chronic progressive disease for years, but their preferences for end-of-life care have seldom been sought due to difficulties in prognostication and inadequate attention to their palliative care needs. However, discussing about end-of-life care is generally considered as sensitive and potentially distressing in the Chinese culture. This often results in an avoidance approach that downplays the end-of-life care needs of older people and their right to express their care wish. **Method :** Mixed-method approach was used to examine the acceptability of older people towards advance care planning (ACP) and its impact, and to explore their experience with the planning process. **Results :** Findings showed that most of the Chinese older people were aware of their deteriorating health and open to expressing their views regarding end-of-life care. ACP helped to clarify their goals of care and empowered them to communicate their care preferences with families and healthcare providers. While it has often been believed that older people would be disgraceful with the sensitive topic, our previous studies showed that challenges in promoting ACP to older population mainly arisen from their families and society. **Conclusion :** ACP, which is an integral part of palliative care, facilitates older people to better prepare for their end-of-life care. The concept has not been widely accepted because death and dying has been misunderstood as a failure of medicine. The philosophy of palliative care therefore should be promoted to the wider society, so that the concerns and needs of older people can be addressed. **Keywords :** end of life, decision making, advance care planning

PS26 105-S-4

END-OF-LIFE(EOL) CARE MEDICINE AND MEDICAL EDUCATION (KOREAN PERCEPTION)

Keun-youll KIM (*Executive office, Zero TB World (Headquarter Office, Seoul, Korea), Korea*)

Introduction : End-of-Life(EOL) Care Medicine and Medical Education (Korean perception) Keun-Youll KIM, M.D.,MPH,Ph.D. ZeroTB World, Republic of Korea Increasing population of aged senile patients in every large hospitals with multiple degenerative incurable diseases, and the development of newer medical technologies for Life- Sustaining Treatment(LST), make the clinical decision problems much more difficult than before and former decades era. Medicalized hospital demise is becoming as more common trend since the Korean National Health Insurance system and the issue of termination of LST from dying patients posed as one of the hot social issue of Korean society. Recent experience (in 2009 & 2005) of two such cases of Korean Supreme Court's verdict of 'Futile LST Withdraw cases', after many years of legal dispute via Seoul District Court and Seoul Superior Appeal Court would exemplify the incidents as one of the important social issue. The Supreme high court of Korea legal authority have endorsed the legality of 'LST Withdrawal' when medical doctors can establish the clinical diagnosis of 'Medical Futility', even though it has been quoted for long time that 'to try to define the 'futility' is itself futile'. Due Process Law of Korea in medical practise is to be initiated, implemented, activated and to be educated for the solution of the problem of terminating LST and for the quality care of EOL situation. **Method :** Review. **Results :** Review. **Conclusion :** The changing view of medical educators for EOL Care Medicine and the curriculum change of medical school and post-graduate education are to be needed as prime importance. **Keywords :** Withdrawal of Life-Sustaining Treatment, Due Process Law, Quality of life of dying

patients

PS26 201-R

STRENGTHENING THE RIGHTS OF OLDER PERSONS GLOBALLY: ADVANCES AND CHALLENGES

PS26 201-R-1

RIGHTS OF OLDER PERSONS: FROM DENIAL TO A (IN) CONVENIENT TRUE?

Laura MACHADO (*Director, Global Alliance for the Rights of Older People, Brazil*)

Introduction : Older persons represent a large and growing segment of the population and they face particular and urgent human rights challenges. Despite existing instruments on human rights, age discrimination and ageism are widely tolerated across the world and older persons continue to be highly vulnerable to abuse, deprivation and exclusion. Whilst 10 years of implementation of MIPAA has resulted in some advances there is some evidence demonstrating that the existing international and regional human rights law do not sufficiently protect older people's rights and that the failure at regional and national levels to adequately respond to discrimination in old age leads to continued systematic violations of older people's rights across the world. **Method :** The symposium will discuss the outcomes of recent discussions at regional, national and international levels towards a convention on the rights of older persons and/or a designation of a special rapporteur. **Conclusion :** It is very clear that a UN Convention on the Rights of Older Persons cannot be achieved without public support in many countries and that is essential the involvement of all sectors of society. Non-governmental organizations in every country have an important role in this process and we expect as an outcome of this symposium a better involvement of academia and civil society in order to facilitate, engage and empower older persons into this process.

PS26 201-R-2

HUMAN RIGHTS OF OLDER PERSONS - UNITED NATIONS PERSPECTIVE

Rosemary LANE (*Department of Economic and Social Affairs, United Nations, USA*)

Introduction : In 2010, the UN General Assembly adopted resolution 65/182 which established the open-ended working group on ageing for the purpose of strengthening the protection of the human rights of older persons. The working group met twice in 2011 and once in 2012. It has recently been agreed at the General Assembly that another session will be held in 2013. **Method :** Based on reporting from the UN. **Results :** What has happened during the sessions of the working group? What are the positions of Member States and how is civil society participating? What are the arguments both for and against an international human rights instrument for older persons? What are the latest developments leading up to the next session? **Conclusion :** A dialogue among participants about moving the human rights agenda forward. **Keywords :** human rights, older persons

PS26 201-R-3

AFRICAN AND GLOBAL ENDEAVOURS ON THE RIGHTS OF OLDER PERSONS: FORGING CONNECTIONS

Isabella ABODERIN (*African Population and Health Research Center (APHRC), Kenya*)

Introduction : Pioneering strides have been made at regional level in Africa in the formalization of the human rights of older persons in the

continent. In contrast, engagement of African member States in the global, United Nations level process of deliberation on a global convention on older persons' rights - the UN Open Ended Working group (OEWG) has been limited, thus undermining the chances of an eventual UN endorsement of such a treaty. This paper seeks to examine the potential for, and concrete avenues to foster, greater African participation in and active support for a global convention. Method : The paper draws on the outcomes of a recent expert workshop on human rights of older persons in Africa, and a critical review of relevant scientific and policy literature. Results : The African Union's recent 'African Common position on human rights of older persons in Africa', explicitly advocates for the development of a UN convention. This together with the open support for such a development expressed by a few individual countries, notably South Africa and Ghana, provides an effective basis for garnering broad African Member State backing of a UN convention. Conclusion : Regional- and national-level approaches and steps involving actors from African civil society, academia and public bodies are required to harness the current potential for fostering active African engagement in the OEWG and support for a convention. Keywords : Human Rights, Africa, Advocacy

PS26 201-R-4

THE GLOBAL MOVEMENT TOWARD A UN CONVENTION: THE VOICES OF OLDER PERSONS

Mark Robert GORMAN (*HelpAge International, United Kingdom*)

This presentation will examine the ways in which the voice of older people can be involved in the global debate on ageing. This becomes especially important as the campaign for a Convention on the rights of older people is now under way. The example of the joint UNFPA/HelpAge International report 'Ageing in the 21st Century' demonstrates both the processes of engagement with older people in different social and economic contexts and across the world, and will be used to illustrate how the voices of older people can be heard. The consultations undertaken for the report were also an opportunity gauge the impact of the Madrid Plan of Action (2002) over the past decade since it was agreed. I will examine what older people think about the process of consultation and the progress that they think has been made since MIPAA was agreed. The presentation will also consider the wider role of civil society actors including NGOs and academics, in the process of development towards a rights Convention.

PS26 202-B

NUTRITIONAL INTERVENTION IN AGEING

PS26 202-B-1

VITAMIN C AND AGING

Akihito ISHIGAMI (*Molecular Regulation of Aging, Tokyo Metropolitan Institute of Gerontology, Japan*)

Introduction : Vitamin C (L-ascorbic acid) has a well-documented, strong anti-oxidant function, evident as its ability to scavenge reactive oxygen species (ROS) in cells and blood. Additionally, an anti-aging effect has been attributed to vitamin C stemming from its deletion of ROS; however, no scientific evidence has yet proven this assertion. Method : The senescence marker protein-30 (SMP30) was first described as an age-associated protein of decreasing quantity in the liver and kidney late in life. Recently, we identified SMP30 as the lactone-hydrolyzing enzyme gluconolactonases (GNL) of animal species. GNL is a key enzyme involved in vitamin C biosynthesis. Therefore, SMP30/GNL knockout mice are unable to synthesize vitamin C in vivo. These knockout mice died by 135 days after the

start of receiving the vitamin C-free diet. Results : It cannot be said that the vitamin C deficiency promoted aging in this model, because SMP30/GNL knockout mice died of scurvy, when fed a vitamin C-free diet. A most important point is that scurvy is a disease; whereas, aging is not. Aging refers to a slow gradual decrease of physiological functions of the body as time passes. We found that these SMP30/GNL knockout mice were shorter in life span than the wild type when fed vitamin C low diet (about 2.5% a day of vitamin C). Conclusion : Until now, there was no scientific evidence for this conclusion despite the conventional wisdom that vitamin C has an anti-aging influence. This might be a first research to show in a scientific manner that the shortage of vitamin C decreased life. Keywords : Aging, nutrition, vitamin C

PS26 202-B-2

DIETARY RESTRICTION AFFECTS PROTEIN ACETYLATION IN AGED RATS: EFFECTS ON HISTONE AND CYTOPLASMIC PROTEINS

Sataro GOTO¹, Kyojiro KAWAKAMI¹, Hideko NAKAMOTO¹, Hisashi NAITO¹, Shizuo KATAMOTO² (*1. Institute of Health and Sports Science & Medicine, Juntendo University Graduate School, Japan; 2. Institute of Health and Sports Science & Medicine, Juntendo university Graduate School, Japan*)

Introduction : In recent years, much attention has been paid to protein acetylation in aging animals subjected to dietary restriction (DR). As the extension of our research on post-translational modifications of protein in aging, oxidation among others, we have studied epigenetic histone modifications that can influence chromatin activities and also cytoplasmic proteins that appear to have roles in energy metabolism. Method : Young and old male F344 rats were used. DR was either short term in old age or lifelong. Protein carbonylation and acetylation were studied by immunological methods. The gene expression was studied measuring mRNA by RT-PCR. The gene specific histone acetylation of chromatin was studied by immunoprecipitation with the antibody to site-specific acetylation and quantitative PCR (qPCR) using primers for gene specific DNA segments. Results : Contrary to our expectation, histone carbonylation was reduced in the liver of aged animals but was increased by DR. Similarly, we found that acetylation of histone is reduced in aged rats but increased in DR animals. These findings are consistent with the idea that chromatin activities are reduced with age but increased by DR. The results of qPCR did not explain those of RT-PCR influenced by aging and DR, however. Acetylation of cytoplasmic proteins, notably mitochondrial proteins related to energy metabolism, were also affected by aging and DR. Conclusion : Post-translational modifications of histone and cytoplasmic proteins appear to play important roles in aging and its intervention by DR. Keywords : Dietary restriction, protein acetylation, epigenetics

PS26 202-B-3

CALORIE RESTRICTION MIMETICS: STATE OF THE ART

Donald Keith INGRAM (*Nutritional Neuroscience and Aging Laboratory, Pennington Biomedical Research Center, USA*)

Introduction : By reducing dietary intake by 20-50% in a wide variety of species, many health benefits have been reported, including reduced incidence and retarded onset of chronic diseases, enhanced stress protection, and maintenance of youthful function in conjunction with increased lifespan. Calorie restriction (CR) has proven to be the most robust means to retard aging, but its application to human aging represents a challenge. Reports of persons who practice CR and from controlled clinical studies of CR also indicate such regimens can

positively impact indices of health and risk factors for disease. Nonetheless, despite evidence that CR produces beneficial effects in humans, therapeutic application would be problematic due to difficulties of compliance and other quality of life issues. Method : To address this challenge, the concept of CR 'mimetics' (CRM) has been introduced as a method to obtain the 'anti-aging' and health-promoting benefits of CR without requiring reduced food intake. Results : Several candidate CRM compounds have been proposed with different strategies involving both upstream and downstream targeting. These include sirtuin activators (resveratrol), insulin sensitizers (metformin), mTOR inhibitors (rapamycin), citric cycle intermediates (oxaloacetate), and glycolytic inhibitors (2-deoxyglucose, mannoheptulose). Conclusion : The field of CRM has evolved to commercial applications and is generating new candidates to evaluate, but there remains uncertainty about what targets will be most effective and what proof will be required to demonstrate efficacy of candidate CRM. Keywords : calorie restriction, anti-aging, metabolism

PS26 202-B-4

GLYCOLYTIC INHIBITION AS A STRATEGY FOR CALORIE RESTRICTION MIMETICS

George S. ROTH (*GeroScience, USA*)

Introduction : The emerging field of calorie restriction mimetics (CRM) is quickly attaining a high priority niche in biogerontological research. With the relevance and applicability of CR to humans under intense scrutiny, the more practical CRM approach is beginning to generate great momentum in both the academic and commercial spheres. Method : While there are numerous candidate CRM agents and strategies, our own focus for over a decade has been glycolytic inhibition as the most faithful reproduction of actual CR. This approach takes advantage of reducing energy flux through the glycolytic pathway in a manner quite analogous to reducing caloric intake, in effect 'tricking' the cells of an organism into adopting the CR phenotype. Results : The first candidate CRM in this category was 2-deoxyglucose (2DG) which inhibits phosphohexose isomerase to reduce the number of native glucose molecules metabolized. Although 2DG feeding to rodents reproduced many of the shorter-term CR endpoints, such as lower body temperature and plasma insulin levels, it exerted some cardiotoxicity and lower dosages were ineffective in extending lifespan. Most recently, however, we have employed mannoheptulose (MH), a 7 carbon sugar derived primarily from unripe avocados, to elicit many of both the long and short term beneficial effects of true CR. Studies have employed fruitflies, rodents, and dogs (very early work demonstrated antidiabetic effects in humans as well), and these include insulin/glucose control, improved body composition, increased strength/agility, immune/stress/inflammation protection, weight control and increases in median and maximal longevity. Conclusion : Clinical trials are being designed, and data from most recent studies will be reviewed. Keywords : glycolysis, calorie restriction, longevity

PS26 203-C

THE INTERPLAY BETWEEN FALLS, OSTEOPOROSIS AND MOBILITY DISABILITY: THEIR IMPACT IN SEVERAL POPULATIONS

PS26 203-C-1

UNDERSTANDING FALLS AND FRACTURES AS A LONG TERM CONDITION. THE ROLE OF GAIT VELOCITY AS AN EARLY SIGN OF DISABILITY

Manuel MONTERO ODASSO (*Director, Gait and Brain Lab, Lawson Research Institute, The University of Western Ontario, Canada*)

Falls and Fractures generate most of the disability associated with aging and expense in our health system. The approach has been fractionated and developed in silos. Osteoporosis was focused in to improve bone density with little attention of mobility and falls. In the same way falls research and prevention focused only in balance gait improvement with scarce attention to fracture risk. However falls and fracture are an indissoluble entity which should be approached as a whole. Falls and fractures present as a "acute catastrophic event" but need to be understood as a chronic condition where each increase the risk to suffer the other. It has been shown that early changes in gait strongly predict falls fractures and even mortality. The role of early gait and mobility assessment in high functional elderly will be reviewed and a proposal of screening will be shown. Keywords : falls, fractures, gait velocity

PS26 203-C-2

TARGETING "SARCO-OSTEOPOROSIS": A PRACTICAL APPROACH FOR THE PREVENTION OF FALLS AND OSTEOPOROTIC FRACTURES

Gustavo DUQUE (*Ageing Bone Research Program, The University of Sydney, Australia*)

Sarcopenia and osteoporosis affect older adults around the world and many times have devastating complications that affect their well-being and quality of life. Analysis of the pathophysiologic pathways of sarcopenia and osteoporosis reveal several overlapping features. These conditions are age-related, both are multifactorial processes and both are characterized by progressive loss of tissue mass. Additionally, physical inactivity, vitamin D deficiency and poor nutrition accelerate the progression of both conditions. Despite these similarities, most interventions to date target these conditions separately. In this symposium we will review the current state of knowledge about sarcopenia and osteoporosis and will analyze preventive measures and therapeutic interventions that can benefit both conditions simultaneously. We intend to go over the translational aspects of sarcopenia and osteoporosis research and highlight expected outcomes from different interventions for both conditions. We will initially review the mechanisms contributing to sarcopenia and osteoporosis including metabolic and cell signaling changes. For example, we will analyze how changes in protein and amino acid intake affect muscle and bone metabolism. Next, we will discuss the benefits and limitations of current diagnostic schemes for both conditions. For instance, the benefits and limitations of dual energy X-ray absorptiometry (DXA) as a diagnostic and research tool will be analyzed. Then, we will discuss evidence-based diagnostic and therapeutic interventions that pose promising opportunities for both conditions, which include the review of nutritional, physical activity and pharmacologic interventions. Finally we will translate this information into practical approaches that can improve older adult care. Keywords : falls, fractures, sarcopenia

PS26 203-C-3

SOCIO-ECONOMIC STATUS IMPACT, FRAILTY AND GAIT VELOCITY IN POOREST OLDER POPULATIONS

Jose Ricardo JAUREGUI (*Internal Medicine, Italian Hospital of Buenos Aires, Argentina*)

Introduction : We present some results from a study of frailty in a very poor and illiterate population of people 50 yr. old and more, compared with other group of rich and very educated persons. What happens in an elderly population living in extremely poor SES conditions (SES: Socio Economic Status) in Argentina with their gait velocity and frail conditions, and which are the other factors involved

to explain the findings. Method : Comparative and observational study. Two groups of 180 persons. We performed a comprehensive geriatric assesment, laboratory for nutritional status and an enviromental analysis, comparing functional performance and frailty status. Results : Those over 80 yr. poor and illiterates, compared with those without that condition, have worst results in physical performance, quality of life and frailty, as we expected. Those under 80 yr. have no significant differences between both groups. Conclusion : Till 80 yr. both populations have small differences in social impacts on gait velocity, functional status and frailty. We have not found specials differences between poor illiterates and people with high education and incomes. For those over 80 yr.`s poor people, functional status drops fastly and differencies are as we expected. More is needed to know about this poored old populations. Keywords : SES, Frailty, Gait Velocity

PS26 206-R

SENIORS, DISASTERS AND CLIMATE CHANGE: LESSONS FOR RESPONSE, RECOVERY, MITIGATION AND PREVENTION

PS26 206-R-1

ROLE OF ELDERLY IN DISASTER PREPAREDNESS: LINKING KNOWLEDGE TO CAPACITY DEVELOPMENT

Aslam PERWAIZ (*Disaster Risk Management System, Asian Disaster Preparedness Center, Thailand*)

The ageing population requires special attention in times of disaster and distinct role in building resilient societies. They have wisdom and experience in forging partnerships at the local level across political, institutional, government, NGOs, private sector and academic lines. With more than 11 percent of the global population, people over 60 are rising and are estimated to reach 2 billion (22% percent of world population by 2050). These numbers are equally important to Asia, which is one of the most disasters prone in the world. With the increase of disaster losses across Asia and facing unpredictable nature of hazards, the frontline role of old people through their formal or informal association is critical. One such initiative is called the Older People's Associations (OPA) in Asia, which have increased their representation in local and national disaster risk reduction bodies and engagement with local government in pre-disaster activities. The older people groups have been recognized as a key stakeholder in integrating disaster risk reduction and climate change adaptation in the local development planning. This session will showcase existing practices with empirical evidence of OPAs playing important roles in developing and implementing plans for community based disaster risk reduction (CBDRR) in Thailand, Philippines, Bangladesh, Nepal, Myanmar, Vietnam, India, Indonesia and Cambodia. Lessons derived from Japan, which has an 'ultra aged society' with 29.47-million older person, is equally important for other countries in incorporating disaster preparedness plans with specific focus on ageing population
Keywords : ageing, disaster preparedness, capacity development

PS26 206-R-2

OLDER PEOPLE INITIATIVES IN BUILDING RESILIENT COMMUNITIES AND THEIR CAPACITY IN TIMES OF EMERGENCY

Fransiskus KUPANG (*NGO, Coalition of Services of the Elderly, Inc, Philippines*)

Introduction : The Philippines is the country most prone to natural disasters. This situation has challenged communities, policy makers and various actors on how to cope with the growing number of natural

disasters. The situation becomes more challenging for the vulnerable groups especially the older people living in poor conditions. Despite this situation, in our experience working with older people we have discovered that older people have huge potentials for making communities resilient and can play a bigger role in disaster response and recovery. Method : My presentation will also deal on the potential to develop and harmonize community mechanisms that will sustain the capacity of older people. In addition, the presentation will highlight our basic principle in working with older people in addressing their rights as active participants in building communities responsive to the needs of the older people. Results : The presentation will highlight the features of community based programs of the older people and the leadership role of the older people. Aside from that, community based mechanism developed by older people in response to disaster. As result of advocacy of older people, indigent older people have received social pension. Conclusion : Since 1989, worked at communy level such developing community Gerotologist, older people reponsive livelihoods, home care volunteers among oder people and work at wider context for policy changes, COSE since 2009 pushed its effort to develop resilient communities with acitve participation of the older people. Since then, less casualties in recent calamities in our communities where lder people have been prepared. Keywords : Older people as actors, disasters, resilience, community development, capacity-building

PS26 206-R-3

MOVING TO RESILIENCE: THE EVOLVING ROLE OF HELPAGE INTERNATIONAL IN MULTI-RISK ENVIRONMENTS

Godfred PAUL (*Programme, HelpAge International, Thailand*)

Introduction : This presentation gives an overview of the work of HelpAge in building resilience of communities worldwide. As an international organisation focusing on the rights, needs and capacities of older people, HelpAge International responds to emergencies and supports older people and their communities in recovering after disasters. Method : Following growing understanding of why disasters happen and how to reduce their impact, HelpAge has gradually strengthened its commitment to disaster preparedness and mitigation with a particular focus on older people and people with disabilities. In the wake of climate change, HelpAge International has supported older people's response to this and other environmental risks through Disaster Risk Reduction approaches. This is done through direct implementation of projects, often in partnership with local partners, older people groups and international organisations, but also by advocating for the inclusion of older people in disaster risk reduction and climate change interventions and greater resource allocation with governments and the wider humanitarian community. Results : Helpage has come to realise that reducing people's vulnerability in an increasingly multi-risk environment with a range of economic and social shocks requires a two pronged approach. The first is to work directly with vulnerable people in the communities lead largely by older people. They have a strong commitment to the common well being of their families and communities. The second is to aggressively advocate for the inclusion of older people in policies, programmes and resource allocation. Conclusion : The resilience approach is premised on the need for integrated analysis and improved ways of working across multiple disciplines. Keywords : Older People lead DRR

PS26 303-C

U-HEALTH CARE IN AGING SOCIETY

PS26 303-C-1

ROLE OF HEALTH INFORMATION TECHNOLOGY AND US HEALTHCARE REFORM

Seong K MUN (*Arlington Innovation Center for Health Research, Virginia Tech, USA*)

The advances in communication technology have fueled intense research in the area of telemedicine, u-health, e-health and now m-health. These technology driven tools of health delivery methods will have powerfully unique role to play in all aspects of healthcare transcending traditional boundaries and silos. In the US, the adoption of telemedicine started with the success of teleradiology in the 90's. Introduction of video teleconference opened many new possibilities and innovations. As the Internet became popular the concept of e-health brought more innovative ideas for connecting health care delivery organizations and patients. Recently popularity of cell phones and mobile technology has triggered exploding interests in m-health. In recent years, as an integral part of the healthcare reform effort, the US government initiated incentive programs to promote the adoption of electronic health records. Meaningful use of health information technology is an umbrella term for rules and regulations that hospitals and physicians must meet to qualify for federal incentive funding under the American Recovery and Reinvestment Act of 2009. Meaningful use sets goals that are about healthcare, not about information technology. Under this program a wide range of technology based innovations, such as e-health, u-health and telemedicine will be deployed as an integral part of electronic health records for all aspect of healthcare. Keywords : Telemedicine, U health, E health

PS26 303-C-2

U-HEALTH TO KEEP PRODUCTIVITY IN AGING SOCIETY

Naoki NAKASHIMA (*Medical Information Center, Kyushu University Hospital, Japan*)

Introduction : The most problematic issue in Japan is how to keep labor productivity, because Japanese population aging rate (65 years old or older) reached 23% as a leading runner of the aging society in the world. This is spurred by chronic diseases in productive generation as diabetes mellitus and hypertension, which deprive productivity by causing serious complications. It would not be an exaggeration to say that the mission of healthcare/medical service is to keep and increase labor productivity. Method : A patent usually visits clinic once a month, thus the chance of professional assessments is limited. To get information of daily life we have conducted verification studies of "information as medicine (info-medicine)" by sensor network. Info-medicine concept proposes that if the information is provided in a timely and appropriate manner, information can be medicine. We are researching of the usability and sustainability of sensor sets with IEEE 802.15.6 BAN in an attache case named "Portable Health Clinic (PHC)" with info-medicine in Bangladesh. We have been providing health checkup service followed by telemedicine for affected subjects from July, 2012. Results : At the end of March 2013, we have finished 8690 subjects in urban (35%), suburban (33%) and rural area (31%). Results show healthy was 16%, cautious, 64%, affected, 17%, and emergent, 2% determined by international standard. We found about a half of affected subjects improved to caution or healthy levels at 2 months after telemedicine. Conclusion : Now, we are analysing about detail of the final results. We are also planning to use PHC for nursing home or private home with nursing care. Keywords : ubiquitous-health, body area network, sensor network

PS26 303-C-3

U-HEALTH EXPERIENCES IN SNUBH

Hee HWANG (*Department of Pediatrics, Seoul National University Bundang Hospital, Korea*)

Introduction : U-Health (or mobile healthcare) is one of the rapidly growing convergence industries of healthcare and information technology (IT). Advances in information, communication, and smart device technology have transformed the healthcare delivery system from a traditional episodic and reactive care to a continuous and proactive care. This is an irresistible paradigm shift in healthcare posing new challenges to the industry as it moves towards prevention and management of diseases. In the era of smart health, the mobile healthcare solution is an essential element in providing connectivity to healthcare services, anytime and anywhere. Method : We developed the mobile healthcare solutions for diabetes, asthma, wound, and mild cognitive impairment. The solutions consisted of a server platform, mobile applications for patients, applications for physicians or health managers, and interface with hospital information system. Results : From our pilot study and trial use of the mobile healthcare solutions, we've found technical feasibility and possible clinical effectiveness for the management of diabetes, asthma, wound, and mild cognitive impairment. Conclusion : Although there are still needed big clinical trial studies to prove clinical effectiveness of the mobile healthcare solutions, our experiences on developing various solutions can show the possibilities of developing further disease management solutions using IT and mobile devices. Keywords : Mobile healthcare, disease management

PS26 305-S

PROCESS OF RETIREMENT AND QUALITY OF LIFE OF BABY-BOOMERS FROM INTERNATIONAL PERSPECTIVE

PS26 305-S-1

WORK AND RETIREMENT HISTORIES OF FOUR SUCCESSIVE COHORTS IN THE NETHERLANDS: ARE BABY BOOMERS DISADVANTAGED?

Hanna VAN SOLINGE (*Work and Retirement, Netherlands Interdisciplinary Demographic Institute (NIDI), Netherlands*)

Introduction : The socio-economic structure has changed considerably over the past decades. As a result work and retirement opportunities of successive birth cohorts may differ from each other. Method : This paper explores the work and retirement histories of four successive birth cohorts in the Netherlands: the pre WW2 cohort (1935-1939), the WW2 cohort (1940-1945), the baby boom cohort (1946-1949) and the post baby boom cohort (1950-1951). Does the process of retirement and the quality of life in retirement differ across cohorts? Is there any indication that baby boomers are disadvantaged in this respect? Easterlin's hypothesis that members of large birth cohorts face more restricted life opportunities will be tested. Results : The paper is based on the NIDI Work and Retirement Panel. The panel followed more than 2.500 older workers and their partners over a period of at least 10 years in the years between 1995 and 2011. Baby boomers tend to be better educated and wealthier than their predecessors, and they are the last cohort that had access to the generous early retirement schemes that existed in the Netherlands till 2006. The baby boom cohort retired relatively early and many boomers re-entered the labor force after (early) retirement. Motives for this un-retirement were mainly intrinsic. Conclusion : There is no evidence that baby boomers are disadvantaged. Instead, they appear to use their retirement as window for new opportunities and personal development. Work in retirement is increasingly common. Keywords : retirement baby boomers quality of life

PS26 305-S-2

Angelique CHAN (*Sociology, NUS Faculty of Arts and Social Sciences, Singapore*)

PS26 305-S-3

ARE LUCKY BABY BOOMERS UNLUCKY IN LATER LIFE? A COHORT

Gyounghae HAN* (*Child Development & Family Studies, Seoul National University, Korea*)

Introduction : The main purpose of this study is to examine the labor market outcomes of Korean boomer cohorts, born right after the Korean War, in comparison to the older cohorts. Method : We analyzed 16 cohorts, utilizing two data sets: Data of 9 cohorts from the “Korean Baby Boomer Panel” and data of 7 cohorts from a study of a young-elderly generation born right before the boomers for comparison. Results : First, the boomers stayed longer in school and were able to accumulate more human capitals. 23.9 percent of the baby boomers advanced to college while only 10.1 percent of the young elderly experienced tertiary education. Second, it took 2.5 years less for the boomers to find major job after their final education compared to their previous generation. However, the duration of major jobs for the boomers became shorter to a significant margin and the belief of “lifelong employment” became a myth. Third, the boomers were often stuck between their old parents who needed care and children who failed to find jobs and stayed with them. Because of this sandwich burden, boomers were not able to retire as planned and were forced to remain in the labor market even after they left major jobs. Conclusion : The Boomers, once thought to be “lucky cohort” due to fast economic growth, turned out to be unlucky in labor market due to massive restructuring caused by the IMF economic crisis in late 1990s. Keywords : Baby boomers, Cohort Perspective

PS26 305-S-4

RETIREMENT EXPECTATIONS AND OUTCOMES AMONG THE BABY BOOMERS

James RAYMO (*Sociology, University of Wisconsin, USA*)

Introduction : Widespread concern about aging of the large U.S. baby boom cohort centers on rising costs of Social Security and Medicare, loss of workforce expertise, and increasing numbers of older Americans without adequate financial resources for retirement. However, both anecdotal and survey evidence suggest that baby boomers are more likely than previous cohorts to plan to continue working beyond typical retirement ages. Careful documentation of the retirement plans of baby boomers, success or failure in realizing plans, and the correlates of both retirement plans and outcomes is thus critical for understanding the broader social and economic impacts of the aging of this large cohort. Method : We contribute to this objective by using data from the Health and Retirement Study (HRS) to describe cross-cohort differences in retirement plans and outcomes. Results : Preliminary comparisons of the original HRS cohort (born 1931-1941), the War Baby cohort (born 1942-1947), and the Early Baby Boom cohort (born 1948-1953) indicate that the Baby Boomers are significantly more likely to expect to be working full time after age 62 and after age 65. Furthermore, nearly one-third of both the War Babies and the Early Baby Boomers say that they have no plans to ever stop working, three-times higher than the proportion in the original HRS cohort. Conclusion : We build upon these preliminary comparisons to describe cross-cohort differences in the realization of retirement plans and to project employment patterns of the baby boom cohort going forward. Results provide an empirical basis for contemplating the

implications of the aging of the baby boomers. Keywords : retirement, aging, baby boomers

PS26 403-C

PREVENTION OF DEMENTIA

PS26 403-C-1

WHY HAVE WE NOT YET IDENTIFIED EFFECTIVE WAYS TO PREVENT ALZHEIMER'S DISEASE? IMPLICATIONS OF RECENT FINDINGS FROM BRAIN AUTOPSIES DONE IN THE CONTEXT OF LONGITUDINAL, POPULATION-BASED RESEARCH.

Lon WHITE (*Neuro epidemiology, Pacific Health Research and Education Institute, USA*)

The development of effective strategies for prevention of late life dementia is a global medical, social, and economic imperative. So far we have made only marginal progress toward that goal. Nearly all of the clinical trials aimed at the pharmacologic prevention of AD/cognitive decline have failed to demonstrate significant effectiveness. In addition, there is a paucity of consistently identified, modifiable risk factors that might inform preventive intervention strategies. Since genetic factors appear not to be dominant, and since some individuals maintain good cognitive functioning and relatively lesion-free brains into their tenth decades of life, it seems likely that the blame lies with an incomplete understanding of dementia pathogenesis. Recent findings from autopsies on individuals participating in several longitudinal, population-based studies have identified six likely aspects contributing substantially to the problem: (1) pathogenic heterogeneity involving at least 5 common, independent pathogenic processes – each likely to have independent risk factors, (2) a very high frequency of clinical diagnosis misclassification of both cases and controls, (3) ambiguities in the correspondence of brain imaging measures to specific neuropathologic abnormalities representing distinct pathogenic processes, (4) imprecise measurement of the specific cerebrovascular lesions most proximately linked to dementia, (5) failure to recognize the great frequency and geometrically additive impact of co-prevalent neuropathologic processes, and (6) a possible role for primary atrophy and/or other cryptic pathogenic processes not yet recognized as primary dementing diseases, operating alone or in concert with other processes. Each of these will be illustrated using data accumulated from 8 examination cycles and 852 standardized research protocol brain autopsies accrued over the twenty year lifespan of the Honolulu-Asia Aging Study. Keywords : Dementia, Prevention, Autopsy

PS26 403-C-2

MULTISTRATEGIC MEMORY TRAINING IN ELDERS FOR PREVENTING DEMENTIA

Seung-Ho RYU (*Department of Psychiatry, Konkuk University School of Medicine, Konkuk University Medical Center, Korea*)

With the increase of the population of older people, the need for effective training programs to improve cognitive functions in the elderly has been increasing. These cognitive enhancing training programs may contribute to the prevention of elderly cognitive decline by aging and demented illness as well based on cognitive reserve and plasticity. This study aimed to examine the effectiveness of multistrategic memory training with the metamemory concept on cognitive functions in the normal health elderly in Korea. This multistrategic program was used in this study. We applied the training program to the community-dwelling elderly with subjective memory complaints and mild cognitive impairment. This program consisted of 10 sessions and was administered once a week. We examined the

effects of this memory training by neuropsychological functioning and multimodal imaging analysis. There were significant improvements in some neuropsychological functioning including memory and equivocal findings in neuroimaging. This study shows that multistrategic memory training with the metamemory concept may improve memory ability and these results suggest the possibilities that cognitive training can delay dementia onset in the elderly.

Thursday June 27th

PS27 201-R

HOUSING DEVELOPMENT FOR SENIORS

PS27 201-R-1

ELDER COHOUSING IN DIVERSE COUNTRIES: CURRENT AND FUTURE PERSPECTIVES - ELDER COHOUSING: AN IDEA WHOSE TIME HAS COME?-

Anne P GLASS (*University of Georgia Institute of Gerontology, College of Public Health, USA*)

Introduction : Elder cohousing has existed for several years, primarily in northern Europe. Recently, the first elder cohousing communities have emerged in the United States (USA). Through these elder-only intentional communities, older adults proactively choose how and where they want to live, in a close-knit community where neighbors look after each other. Residents have their own homes, but share both inside and outside common space. Method : The results of research with the first three such communities in the USA will be presented, including the ongoing mixed-methods longitudinal study of one community since it opened in 2006. The distinctions of this living arrangement will be outlined, which include a physical design intended to promote social contact, self-management by the residents, and regular occasions to get together, such as common meals in the Common House. Results : While it has challenges, there are benefits to living in elder cohousing, which have led to creation of a model of how aging together in this setting helps participants have a better aging experience. The mutual peer support that is facilitated in these communities is particularly significant. The conceptual model, as well as several examples of these communities, will be shared. Conclusion : The presentation will highlight how these communities differ from other types of retirement communities. In addition, little research on elder non-kin caregiving exists, but the global caregiver shortage and desire for nursing home alternatives make understanding this housing alternative important. Lessons learned may help facilitate the efforts of others interested in "aging in community." Keywords : Elder Cohousing, Ageing in Community, Common House

PS27 201-R-2

AN INNOVATIVE ELDERCARE SYSTEM EVOLVED FROM SUPER AGING EXPERIENCE -MULTI-FUNCTIONALLY SERVICED LIVING COMPLEX IN CURRENT JAPAN-

Hideyo TAKAHASHI (*Community net Co., Ltd., Japan*)

Introduction : In the 80s', Japan reached rapid growth of senior business. Simultaneously, nuclear family became prevalent. Now, it is impossible for families to take care of the elderly at home without external service's help. This led various industries to join the eldercare business. Although many companies invested much to construct fine buildings, they suffered from management shortage, and went bankrupted. Different approaches were necessary. Method : A new innovative system evolved, which focused demands of elderly through participation and customization using various resources in their

surroundings. The elderly were consulted for life planning and took part in constructing senior housings Through accumulating and analyzing demands and following circumstances, and connecting related companies and customers, ideal housings for them have been developed. In this method, networking techniques were highlighted. Results : Because of the process, residents do not just move into housings, they participate throughout all stages from planning to housing management. Consequently, the housing is close to their ideals. Using this approach, Community-Net has been successful in realizing the idea of developing housings where users love to live. Various housing development cases in different situations will be shared for its logic, similarities, and dissimilarities. Conclusion : The elderly care system is not just composed of senior housings and in-home services. Exploiting social resources and involving government, residents, service users and companies, to overcome the super aging society are necessary to put in the system. Since it is time to share various models especially among fast aging Asian countries such as Japan, China and Korea, this innovative system has significant implications. Keywords : Innovative Eldercare System, Participation, Customized Senior Housing

PS27 201-R-3

CREATING NEW WELFARE INFRA THROUGH ARCHITECTURAL INTERVENTION -SOCIALLY INTEGRATIVE HOUSING INNOVATIONS FOR FAST AGEING KOREA-

Yeun Sook LEE (*Interior Architecture & Built Environment, Yonsei Univ., Korea*)

Introduction : For the past fifty years, over 9 million uniform apartments have been produced and now faced with population ageing which shows fastest speed in the world. Korea has little developed housing environments for seniors in a professional way. Therefore, innovative solutions which respect cultural context and social situations are needed urgently. The purpose of this presentation is to suggest an innovative socially integrated housing model. Method : The whole process of developing a model to cope with both social exclusion and fast ageing in a normal and effective way was planned. The process includes basic research, conceptual formation, social consensus, developing design ideas, disseminating, and validation research. The main concept is community shared space as a tool to innovate existing apartments, utilizing them as a social intervention. Results : The whole process of developing a model to cope with both social exclusion and fast ageing in a normal and effective way was planned. The process includes basic research, conceptual formation, social consensus, developing design ideas, disseminating, and validation research. The main concept is community shared space as a tool to innovate existing apartments, utilizing them as a social intervention. Conclusion : This research will have significant implication to many other countries who are facing rapid ageing especially who have enjoyed mass housing production like Korea in effectively dealing with ageing problems through housing. Keywords : Architectural Intervention, Social Integration, Housing Innovations

PS27 201-R-4

A CREATIVE PIONEERING NEIGHBORHOOD MODEL FOR DEMENTED ELDERLY -DE HOGEWYK, NORMAL LIVING FOR PEOPLE WITH SEVERE DEMENTIA-

Y.E. VAN AMERONGEN-HEIJER (*De Hogeweyk, Vivium Zorggroep, Netherlands*)

Introduction : De Hogeweyk is a real life example of how an innovative care vision united with a healthy environment maximizes

high quality of life for people with a severe dementia syndrome. The care vision is to offer people with dementia appropriate care in an environment which supports them in living life as usual, in a normal household, in a normal and safe society. Method : De Hogeweyk is built as a small village of 23 houses for between 6 and 8 residents each. It is a village community of 23 "normal" houses, a pub, a restaurant, a theatre, clubs, a supermarket, a beautician, and so forth. The environment supports people with dementia, which substantially enriches the lives of the 152 residents until the end of their life. Results: People with dementia very often show stress, anxiety, anger, fear and depression, largely because their environment does not fit in what these people know to be a normal house, a normal society and a normal life. The result of this vision is a strong increase of client satisfaction, as shown in the very high results of the satisfaction inquiry that is done every other year. Conclusion : This project is a balance of intimacy and support of a small "family" household and the experience of living in a normal society. De Hogeweyk offers a maximum of living life as usual and where the built environment acts as a safe, enclosing boundary. This showed the impact of environment on life quality of demented elderly in an empirical way. Keywords : Healthy Environment, Normal Lifestyles, Happiness, Demented Elderly

PS27 202-S

OLDER PERSONS' ATTITUDES TOWARDS INFORMATION TECHNOLOGY AND INFORMATION SOCIETY

PS27 202-S-1

THE USE OF INFORMATION TECHNOLOGY AND THE QUALITY OF LIFE OF THE ELDERLY IN KOREA

Youngjoon SEO (*Dept of Health Administration, College of Health Science, Yonsei University, Korea*)

Introduction : The elderly, in general, have been known to be isolated from using modern information technology. However, recent studies have revealed that many elderly persons are also interested in using information technology for improving the quality of their lives. We tried to examine what factors are related to the use of information technology of the elderly and how it is related to the quality of their lives. Method : A total of 30 articles which dealt with the use of information technology and its effects on the life of the elderly in Korea were selected from Korean journals of gerontology and geriatrics, information, health, and life-related science. Selected articles were systematically reviewed and analyzed in terms of the subjects, methods, results, and implications. Results : The use of information technology including internet by the elderly were found to have a significant impact on the quality of the life of the elderly. In detail, the following were obtained from the review. First, perceived ease of use, perceived usefulness, and self-efficacy have significant impacts on the intent to use IT of the elderly. Second, the use of IT was found to contribute to improving the level of self-esteem of the elderly which has a positive impact on the quality of life. Conclusion : The results imply that IT education program need to be connected to social welfare benefit for improving the IT use rate of the elderly, especially for the poor elderly. Furthermore, more systematic education system are needed for enhancing the quality of IT education for the elderly. Keywords : Information technology, The quality of the life of the elderly, Korea.

PS27 202-S-2

PREDICTORS FOR THE USE OF REMOTE TELECARE IN OLDER ADULTS

Angelo ANTONIETTI¹, Ryan BEST², Neil CHARNESS², Helianthe KORT³ (*1. Research Center for Innovations in Healthcare, Utrecht University of Applied Sciences, Netherlands; 2. Psychology Department of Psychology, Florida State University, USA; 3. Research Centre for Innovations in Healthcare, Utrecht University of Applied Sciences, Netherlands*)

Introduction : The requirement to use eHealth technology (eHT) in older adults is increasing, but they have greater difficulty learning to use this new technology than younger adults. Knowledge of predictors for the use of eHT in older adults can help to improve the acceptance process of eHT such as remote telecare (RTC) systems. We are attempting to identify predictors for the use of RTC in older adults who live independently at home in order to provide instruction that can enhance their digital literacy. Method : A battery of modified validated questionnaires is being used to measure the possible predictor items which includes: demographic data, general health, social influence, facilitators, technology experience, motivation for selfcare, perceived privacy/security, performance expectancy and effort expectancy. Our outcome measures are the willingness to use RTC and actual use of RTC. The Unified Theory of Acceptance and Use of Technology (UTAUT) model is used to group and better understand the interaction between the items listed above. An observation list was also developed to measure technology related skills in the homes of the subjects. Participants in this study are people age 65+. Experience with RCT was not required. Results : For the Dutch respondents who filled in the online questionnaire (n=183), 47.2% were male and 52.8% female. Most respondents were between 65-79 years (n=165) and only 9.8% were >80 years (n=18). Only 10.2% of these subjects (n=18) have experience with RTC. Conclusion : Understanding abilities and attitudes toward eHT can be used to structure appropriate training to enhance digital literacy in older adults. Keywords : digital literacy, ICT user acceptance, e-health

PS27 202-S-3

HOW DID THE ELDERLY UTILIZE ICTS AFTER TOHOKU'S BIG EARTHQUAKE AND TSUNAMI IN 2011?

Yasuko URANO (*Sociology, Teikyo University, Japan*)

Introduction : ICTs are powerful enabling tools for early disaster warning and safety confirmation. ICTs actually contributed to helping people in 2011 during the big earthquake and tsunami in the Tohoku region of Japan. For example, some people obtained necessary disaster warning information; other people used Twitter to tell family and friends that they remained safe. Since the elderly have a lower diffusion of ICTs than the general population, this research focuses on the elderly and examines how they utilized ICTs right after the disaster. Method : This research first reviews government surveys on ICTs and the 2011 disaster. Second, the research analyzes contents of news reporting in terms of the disaster management cycle. Results : The general population tends to rely on radio to obtain information, and they communicate with family and friends by using mobile phones and text messages immediately after a disaster. The elderly living alone have the lowest diffusion of ICTs such as mobile phones; thus, they are the most vulnerable population. When disaster strikes, it is more difficult for them to request help and communicate with family and friends. Conclusion : Senior-friendly ICT products and services that contribute to disaster relief need to be further developed. Keywords : elderly, ICTs, disaster response

PS27 203-C

HEALTH PROMOTION AND DISEASE PREVENTION FOR OLDER PERSONS

PS27 203-C-1

HEALTH PROMOTION FOR OLDER PEOPLE

Liang-kung CHEN (*Center for Geriatrics and Gerontology, Taipei Veterans General Hospital, Taiwan*)

The importance of preventive services has been recognized extensively. However, the benefits of preventive services in this age group need extensive considerations which differed from the general population. The preventive services included screening, vaccination, chemoprophylax, and counseling. The benefits of preventive services among older people should be weighed by a number of factors, such as estimated life expectancy, time to benefits, and time to adverse effects. Older people had a significantly shorter life expectancy than adult population and may suffer from various physical and mental disabilities. All these factors may change the balance between risks and benefits of preventive services. Therefore, special attentions should be paid to individualized preventive services for older people. The phenomenon of "reverse epidemiology" has attracted extensive attentions in recent years. Traditional approach for disease prevention may not be effective as expected and the disability prevention approach should be implemented to the health promotion programs in older people. Moreover, selecting proper outcome indicators should be considered. The cost-effectiveness of health promotion activities for older people should be re-organized. Evidence-based approach to promote health for older people is of critical importance. Keywords : health promotion, elderly, geriatrics

PS27 203-C-2

CARDIOMETABOLIC HEALTH CARE IN OLDER PEOPLE IN JAPAN

Hidenori ARAI (*Department of Human Health Sciences, Kyoto University Graduate School of Medicine, Japan*)

Introduction : As age progresses, the prevalence of cardiometabolic risk factors, such as dyslipidemia, diabetes, hypertension, and metabolic syndrome increases. Ageing per se is also an important risk factor for cardiovascular disease (CVD). CVD represents the main cause of mortality, morbidity, and health resource utilization in the elderly. However, the role of some of these risk factors has not been clearly defined among the elderly; therefore, the effectiveness of interventions on modifiable risk factors to reduce CVD should be addressed. Method : Data from the Japanese nationwide survey conducted in 2000 and other cohort data will be presented. The strategy in the guidelines for diagnosis and prevention of atherosclerotic cardiovascular diseases for Japanese is also presented. Results : Among the risk factors the prevalence of central obesity and dyslipidemia was increased only in women, and that of high fasting glucose and high blood pressure increased in both genders with ageing. Blood pressure was increased and triglyceride was decreased in both genders, and non-HDL cholesterol was decreased in elderly men. The prevalence of dyslipidemia was decreased in elderly men. Conclusion : Aging is an important factor that affects the metabolic abnormality. Therefore, the development of better approaches to the prevention and management of cardiometabolic risk factors is necessary to reduce mortality, morbidity, and health resource utilization in the elderly. Because CVD prevention in the elderly could generate many benefits for people in this age range as well, the guidelines for CVD prevention should be established in each country or region. Keywords : dyslipidemia, risk factor, cardiovascular disease

PS27 203-C-3

A PROPOSED GUIDELINE FOR GERIATRIC HEALTH SCREENING IN KOREAN NATIONAL HEALTH SCREENING

PROGRAM

Jong Lull YOON¹, Yun Hwan LEE², Yong Kyun ROH³, Mee Young KIM³, Belong CHO⁴ (*1. Dept of Family Medicine and Geriatrics, Hallym University College of Medicine, The Korean Geriatrics Society, Korea; 2. Dept of Preventive Medicine, College of medicine, Ajou University, Korea; 3. Dept of Family Medicine, College of Medicine, Hallym University, Korea; 4. Dept of Family Medicine, College of Medicine, Seoul National University, Korea*)

Introduction : In aging and aged society, the ultimate goal of health care system should be improving the disability-free life expectancy by disease prevention and minimizing the functional disabilities. And this is also the goal of the National Health Screening Program. Under the present system of the National Health Screening Program in Korea, all of the adults have to take the same screening program without considering their ages and life cycles. Method : For older people, concept of health screening should be expended to aim to maintain their disabilities and improving their own functions. In this study, for development of adequate health screening program for the elderly, authors tried to pass through following 3 steps; 1) choose the target diseases or health problems of Korean elderly, 2) evaluated their validities, 3) reviewed the research data in Korea. Results : Stomach cancer, colon cancer, hypertension, hyperlipidemia, urinary incontinence, depression, memory impairment, obesity, dental problem, osteoporosis(female), functional status of daily living, nutrition, exercise and physical activity, ciga- rette smoking, alcohol intake, vision, hearing, fall, medication review and vaccination(influenza and pneumococcal) are the essential items for this program. Conclusion : With this National Health Screening Program for Korean Older Persons, we can expect to achieve these objects. But, it is needed to evaluate for cost-effectiveness and practical acceptability from the clinical fields. And more researches for the validities of each item are needed. Keywords : Health Screening, Older adults, National health screening program

PS27 204-R

ADAPTING LOW AND MIDDLE INCOME COUNTRY HEALTH SYSTEMS TO AGEING POPULATIONS

PS27 204-R-1

REORIENTING HEALTH SYSTEMS IN AFRICA FOR AN AGEING POPULATION

Robert CUMMING (*School of Public Health, University of Sydney, Australia*)

Introduction : The number of older people (defined as those aged 60 years and over) in sub-Saharan Africa will increase 4-fold between 2010 and 2050, from 40 to 160 million. But the number of children will also increase, so that by 2050 the proportion of people aged 60 years and over in sub-Saharan Africa will still be less than 10%. Health systems will need to cope with a dual burden of disease: conditions that affect children (mainly communicable diseases) and conditions that affect older people (mainly NCDs (non-communicable diseases)). In addition, HIV among older people will become an increasingly important health issue. Method : The World Health Organisation (WHO) describes six health system building blocks: service delivery, health workforce, information, medical products and technologies, financing and leadership/governance. Results : All the WHO building blocks will need attention as the number of older people in sub-Saharan Africa increases. Health services need to be accessible to older people; health workers must be trained in management of NCDs and in geriatric medicine; health information systems need re-design to capture the changing patterns of disease; medications to treat NCDs must be made available; financing

arrangements are needed that make health care affordable for older people; and local and national leadership is required to drive all these changes. Conclusion : Health systems in sub-Saharan Africa need to change to cope with a massive increase in the number of older people. However, unlike the rest of the world, health systems will need to continue to make considerable investments in maternal and child health. Keywords : health systems, sub-Saharan Africa

PS27 204-R-2
SOCIAL ORGANIZATION OF CARE FOR THE AGED CHINESE: CHALLENGES FOR A SOCIETY IN TRANSITION
Xiaomei PEI (*Sociology, Tsinghua University, China*)

Development of long term care (LTC) services for the rapidly growing aged population in China is a key dimension of required health systems adaptations to respond to population ageing. Little systematic examination thus far exists of developments in social policy, practice and resource allocation to meet the increasing demand for health and social care in old age in China, in contexts of social transition marked by decreasing family resources, changes in labor market, migration, health care reform, and public concerns about social justice. This systematic review of relevant literature found that much effort has been made in organizing LTC for the aged people by the Chinese government in the last two decades. Despite the achievements, the nation is still facing serious challenges not only from lack of public and professional resources, but also from the inappropriate use of available resources, the unprepared state of the current health system to address the chronic conditions, the reluctance in coordination among government sectors, the ineffective measures for management and regulation, and the absence of a legislative framework for organization and operation. The findings of this review prove that the organization of LTC in China is more than a health care issue, but also a political-economy issue. While the rapid economic growth may generate more resources, the accountability of the government for the wellbeing of the aged citizens and for a fair distribution is the key to overcome the barriers along the way. Keywords : LTC Provision, Equality, Efficiency

PS27 204-R-3
PERFORMANCE OF MEXICAN POPULAR INSURANCE “SEGURO POPULAR” ON PERSONS AGED 60 OR MORE
Martin ROMERO (*National Institute of Public Health, Mexico*)

Introduction : Seguro Popular (SP) is health insurance which is public and offers an explicit package of medical services. SP was launched on 2004, and SP is subsidized by the federal government, so SP is an affordable option for people that are disadvantaged economically. SP has two main goals minimize health care costs and improve health conditions. Method : National Health Surveys of Mexico are probabilistic surveys of households. We compared the results of the National Health Surveys of 2006 and 2012 about SP. Results : SP has increased its coverage of population and its services. SP coverage on people 60+ has increased from 9% at 2006 to 30% at 2012. But, coverage is slightly greater on younger people; SP coverage among people 20 to 49 was 35% at 2012; similarly, coverage is greater among people on economical disadvantage; SP coverage on the lowest quintile was 39% at 2012. On the other hand, the number of medical interventions of SP has increased from 154 to 284 during the period 2005-2012. Regarding user satisfaction, we do not see a significant change, 86% of SP user's would return to the same place to get medical attention. Conclusion : SP has helped to provide medical services to people aged 60 or more that had no other option, which is not a small achievement. But, SP still faces two challenges: to improve

the quality of its services and to guarantee its economic survival.

PS27 301-R
LEVERAGING RESEARCH TO INFORM PRACTICE AND HEALTH POLICY

PS27 301-R-1
LEVERAGING RESEARCH TO INFORM PRACTICE AND HEALTH POLICY
Melissa SIMON¹, Xinqi DONG² (*1. OB GYN, Northwestern University, USA; 2. AoA, DHHS, USA*)

Introduction : Elder Abuse include psychological, physical and sexual abuse, neglect (caregiver neglect and self-neglect) and financial exploitation. Globally, elder abuse has become increasing common, especially among those who are more vulnerable. Protection of these victims and prevention of elder abuse is critical. The overall objective of this invited presidential session is to highlight the global issues of elder abuse from 3 continents (North American, Asia and Europe). Method : Global scan on the state-of-science knowledge on elder abuse as well as existing practice and policy issues to protect the vulnerable older adults. Results : The symposium will be four renowned speakers: 1) Dr. Melissa Simon will discuss the scope of elder abuse through the lens of gender and health disparities focusing on existing work in North America. 2) Ms. E-Shien Chang will focus on the broad issues of social and health policy to protect the health, safety and wellbeing of vulnerable older adults, with emphasis on the US Elder Justice Act. 3) Dr. MinHong Lee will explore the issues of caregiving and elder abuse and dissect the pathway analyses that might lead to elder abuse in Asia countries. 4) Dr. Gloria Gutman will highlight the work of International Network on the Prevention of Elder Abuse (INPEA) with special emphasis on the European perspectives on the issues of elder abuse. Conclusion : Through this symposium, we hope the audiences and the international communities will bring more attention to this human rights issue. Keywords : elder abuse, global health, health policy,

PS27 301-R-2
ELDER ABUSE, GENDER AND HEALTH DISPARITY
Melissa SIMON (*Preventive Medicine, Northwestern University, USA*)

Introduction : Elder abuse is pervasive public health issue and has been associated with morbidity and premature mortality. Moreover, elder abuse is disproportionately affected among women and minority groups. However, very little international awareness focuses on the relationships among elder abuse, gender and health disparities. Method: Systematic review of the US literature on the issues of elder abuse, gender and health disparity. Analyses of original scientific research published in the English literature. Results : In this presidential symposium, we will highlight the differences in the prevalence and incidence of elder abuse by gender and race/ethnicity. We found that elder abuse is more common among women and among non-Hispanic blacks. In addition, the risk/protective factors associated with elder abuse differ by gender and race/ethnicity. Moreover, we found that adverse health outcomes associated with elder abuse differ by race/ethnicity; in that African American victims of elder abuse have significant greater mortality risks compared to whites. Furthermore, we will explore the cultural and gender specific differences in the socio-cultural context associated with elder abuse. Lastly, we will synthesize the above findings in order to set the foundation for future research and policy recommendations to advance the field of elder abuse. Conclusion : The field of elder abuse needs greater attention to the role of gender and health disparity. Future research and policy

recommendations will be discussed in order to advance the field of elder abuse and achieve better equity to protect human rights. Keywords : elder abuse, gender disparity, health disparity

PS27 301-R-3

SOCIAL AND HEALTH POLICY AND ELDER ABUSE

E-shien CHANG¹, Xinqi DONG², Melissa SIMON³ (1. *Chinese Health, Aging and Policy Program, USA*; 2. *Rush Institute for Health Aging, Rush University, USA*; 3. *Northwestern University, USA*)

Introduction : The WHO has declared that elder abuse is a frank violation of an older adult's fundamental rights to be safe and free of violence. In the US, it is estimated that 1 out of 10 older adults are victimized each year from elder abuse. However, there is a still inadequate policy to protect the vulnerable populations. Method : Systematic review of the US policies that have relevance to the issues of elder abuse. Results : There are five major federal legislations that are aimed to protect the vulnerable older adults: Older American Act, Elder Justice Act, Public Health Service Act, Social Security Act and Violence Against Women Act. In this symposium, we will highlight the relevance of the Titles II, III, IV, and VII of the Older American Act; Section 393,399,758 of the Public Health Service Act; Title XI,XVIII,XIX, and XX of the Social Security Act; provision of the Violence Against Women Act for older battered women; and all major titles of the Elder Justice Act. We will highlight the recent World Elder Abuse Awareness Proclamation by President Obama, Senate Committee on Aging Hearing, and formation and hearings of the Elder Justice Coordinating Council. Moreover, we will synthesize the key policies issues and emphasize the major gaps in research, education, practice and policy in relation to elder abuse issues. Conclusion : Despite the existing policies aimed to protect elder abuse victims and prevent elder abuse, there are major gaps, which necessitate the collective efforts of all disciplines to advance the issues elder abuse and protect human rights. Keywords : elder abuse, health policy, social policy

PS27 301-R-4

THE ROLE ON INPEA IN SHAPING THE GLOBAL RESEARCH, POLICY AND PRACTICE AGENDA ON ELDER ABUSE

Gloria GUTMAN (*Gerontology Research Centre, Simon Fraser University, Canada*)

Introduction : Elder abuse is a global health and human rights issue. Since its founding in 1997, the International Network for Prevention of Elder Abuse [INPEA] has worked to increase global awareness of elder abuse and neglect, lobby for policy action and legislation, foster/facilitate research and education, disseminate information and support services to assist victims and protect vulnerable older adults. Method : This presentation focuses on recent awareness-raising activities, cross-national research and information-sharing initiatives designed to sharpen and deepen national prevalence and risk-factor studies to facilitate data massing and comparison, disseminate information on cutting edge research in such areas as financial abuse of older persons and home care abuse, & identify new educational opportunities. Involvement in tool development will also be described as well as UN activities. Results : Launched in 2006 by INPEA, World Elder Abuse Awareness Day [WEAAD] is now celebrated June 15 around the world and in 2011 became an official UN day. 8 successful elder abuse world conferences have been held. INPEA routinely organizes symposia and workshops at events sponsored by other international ageing-related NGOs (e.g. IAGG, IFA). It is an active participant in UN NGO activities in New York, Vienna and Geneva.

Conclusion : As an international elder abuse organization, INPEA is uniquely positioned to bring together researchers, practitioners, policy makers and advocates from around the world to address issues of victim identification, mitigation and prevention of elder abuse and neglect and to assist national elder abuse NGOs to leverage research to inform practice, health and social policy at national and local levels.

Keywords : elder abuse prevention

PS27 301-R-5

CAREGIVING AND ELDER ABUSE ISSUES IN ASIA

Minhong LEE (*Dept of Social Welfare, Dong-Eui University, Korea*)

Introduction : The purpose of this paper is to provide research-based implications for practice and policy against elder abuse in Asia. Method : Based on an extensive review on elder abuse literature with Asian populations, this study addresses sources of caregiving for the elderly, results of family caregiving, prevalence of elder abuse, and risk factors for elder abuse. Results : Family is the primary source of support for older adults with impairments in Asian countries. Family caregivers for disabled older adults might experience caregiver strain, psychological distress, physical health problems, caregiving burden, or mistreatment of care-recipients. Previous research on the prevalence of elder abuse has shown varied results, which range from about 2 to 20 % annual incidence. However, rates of elder abuse in the above mentioned studies are difficult to compare because the prevalence studies on elder abuse used different definitions and included different types of elder abuse. Previous studies on elder abuse have found numerous risk factors including functional disabilities, cognitive impairments, problematic behaviors, caregiver burden and lack of social support. Conclusion : Based on the findings of this study, implications for practice and policy against elder abuse can be discussed, particularly for Asian family caregivers who provide care for disabled older adults. Keywords : caregiving, elder abuse, family caregiver, social support, Asia

PS27 301-R-6

EUROPEAN PERSPECTIVES ON PREVENTION AND INTERVENTION IN ELDER ABUSE

Bridget L PENHALE (*School of Nursing Sciences, University of East Anglia, United Kingdom*)

Introduction : This paper will provide an overview of elder abuse, with a particular focus on international and specifically European perspectives. The issues and developments that have occurred globally will be briefly explored. Over the last ten years there has been increasing global recognition of the abuse and neglect of older adults as a social problem in need of attention. Method : This paper aims to examine some of the pertinent issues. Responses to the problem of elder abuse from several countries across the world will be explored, although there will be a concentration on techniques of intervention from Europe. There will be an exploration of a number of prevention strategies. Possible future developments and the potential for international action to resolve this problem will be considered. Results: A number of European countries have been working in this area but are at different stages of development. The identification of abuse remains problematic. Defining and identifying abuse remain difficult tasks, perhaps even more so when the abuse occurs within an institutional setting. Techniques of intervention with victims of abuse and those who abuse are in comparatively early stages of development, although progress in the production of policies and procedures for health and social care professionals has been made in recent years. Conclusion : Interventions in elder abuse are under development. A number of national and international organisations have been

established to combat abuse. Various research initiatives are underway. Education and training for professionals is taking place concerning prevention, recognition and awareness of abuse. Further work is needed internationally to tackle this social problem. Keywords: Elder Abuse and Neglect, international and European perspectives

PS27 305-S

LIFELONG EDUCATION AND THIRD AGE LEARNING

PS27 305-S-1

THIRD AGE LEARNING IN AOTEAROA NEW ZEALAND

Brian Christopher FINDSEN (*Faculty of Education, University of Waikato, New Zealand*)

Introduction : This presentation focusses on third age learning in Aotearoa New Zealand. Initially, it will look at the broader context of New Zealand society, including its bi-cultural character, before briefly surveying the formal education institutions derivative of British/European colonization and the current diversity of forms of older learning activity and provision. Necessarily, this will involve consideration of non-formal learning contexts too. Next an exemplar of effective practice will be examined, followed by an analysis of trends and issues in third age learning. Method : This presentation is based on both a theoretical study of third age learning and observation of different forms of older adult learning in the New Zealand context. Results : The overall outcome for this presentation is a clearer understanding of the character of older adult learning in New Zealand. Conclusion : The overall view of learning in later life in New Zealand is a synthesis of historical, cultural and social analyses related to the life circumstances of older adults. The current issues which older people face and the trends in older adult education must be related to these wider social forces. Keywords : third age learning, lifelong learning, ageing

PS27 305-S-2

OLDER ADULTS EDUCATION FOR COMMUNITY WELL-BEING IN KOREA

Youngwha KEE (*Lifelong Education, Soongsil University, Korea*)

Introduction : This article investigates the Korean local government's older adults learning programs in the context of daily life. Some key questions I answer include: why and how did adult learning develop in Korea? How does older learning affect community development from a community wellbeing perspective. Method : The organization of this paper is as follows. First, I provide a history of senior education in Korea and highlight policies that have played a key role in senior education development. Second, I research influencing factors of senior citizen participation in education. In particular, I will focus on how local governments have managed lifelong education programs to encourage high participation rates. Third, I examine senior education programs in the context of community development and community wellbeing. Results : In detail, I identify community stakeholders of senior education and investigate how senior education programs utilize community resources to enhance community participation, and ultimately community wellbeing. Conclusion : Lastly, the paper will conclude with critical commentary on using adult learning to encourage bonding among senior citizens and with other generations in the community. Keywords : senior education, older adult learning, community well-being

PS27 305-S-3

THIRD AGE LEARNING IN HONG KONG

Hok KA, Carol MA, Cheung MING, Alfred CHAN (*Department of Sociology and Social Policy, Lingnan University, Hong Kong*)

This presentation focuses on the third age learning in Hong Kong. Following a visit to the Australian Universities of the Third Age (U3As) in 2005, Hong Kong began to implement a modified version of U3A called Elder Academies (EAs). EAs are the platform for cross-sectoral collaboration and inter-generational harmony within a school setting. EAs not only aim to promote continuous learning among elders, encourage them to expand their social networks, maintain mental and physical health while acquiring knowledge, but also enhance students' whole person development through organizing and participating in EA activities. The presentation will first provide an overview of third age learning in Hong Kong, and then will talk about the set up of EAs, its development, various models and effectiveness. Keywords : Third Age Learning

PS27 305-S-4

OLDER ADULT LEARNING IN EUROPE

Marvin FORMOSA (*European Centre for Gerontology, University of Malta, Malta*)

Introduction : Older adult learning has gained a solid presence in international and national policies on lifelong learning as it is regarded as a necessary lubricant to keep a dynamo of opportunity and activity in the lives of older adults functioning effectively. This is especially the case for the European context where continuous learning through life is regarded as a comprehensive strategy to meet the requirements for a Single European Market and address the repercussions of increasing structural unemployment. Method : This presentation reports the data emerging from a critical case study of practices in older adult learning in Europe. Results : This presentation highlights four results. The first focuses on the wide range of European policy on late-life learning, with special focus on the directives issued by the European Union. The second presents good practices in older adult learning in Europe, focusing on both formal avenues such as seniors' university programmes and non-formal contexts such the University of the Third Age, whilst also stressing the contribution of Grundtvig to informal learning. The increasing opportunities of older adults to engage in elearning - largely as the result of Grundtvig funds - will also be addressed. The third and fourth parts of the results provide a critical commentary on the ideological and pragmatic elements of older adult learning in Europe by highlighting their social, economic. Conclusion : Although EU policy on lifelong learning does hold some promise towards more optimum levels of active, successful, and productive aging, it fails to render the fast changing world more hospitable to elders. Keywords : older adult learning, educational gerontology

SYMPOSIA

Monday June 24th

SS24 104-C

IMPROVING CARE IN NURSING HOMES: A SYMPOSIUM OF THE IAGG COMMITTEE ON NURSING HOMES

SS24 104-C-1

IAGG/WHO NURSING HOME RECOMMENDATIONS

John E. MORLEY (*Geriatric Medicine, Saint Louis University, USA*)

Introduction : Although nursing homes have evolved to be the centerpiece of the long term care continuum there is known variation in quality and experiences of care. We have a collective responsibility to address this situation to enhance confidence among older people and their relatives that the care provided within nursing homes is safe, clinically appropriate and delivered with respect and compassion by knowledgeable practitioners. **Method :** A Taskforce charged with identifying the main clinical concerns and quality of care issues within nursing homes was convened by the International Association of Gerontology and Geriatrics, with input from the World Health Organization. The group met in Toulouse, France, during June 2010. Drawing on the latest evidence, mindful of the international development agenda and specific regional challenges, consensus was sought on priority actions and future research. **Results :** Fifteen recommendations were agreed upon to serve as a guideline to help with the development of excellence in long term care. These focused on enhancing nursing home practice and leadership, developing clinical and quality indicators for nursing home care, educational approaches to change behavior of staff, improve care and increase prestige, and a research agenda. **Conclusion :** The Global Agenda developed by the Task Force on Nursing Homes represents a framework to enhance the quality of nursing home care. It is our hope that these recommendations will be embraced by politicians, physicians and other health care professionals throughout the world. If this occurs, the quality of life of all older persons needing nursing home admission will be improved. **Keywords :** Quality of Life

SS24 104-C-2
MEANINGFUL ACTIVITIES - EXERCISE IN THE NURSING HOME

Yves ROLLAND (*Gerontopole de Toulouse, CHU Toulouse, France*)

Introduction : Physical activity is one of the main factors that contribute to the maintenance of a healthy aging and the prevention of functional decline. Physical activity is already known as a cost-effective practice that has demonstrated numerous health benefits. Physical activity has also been shown to improve function even in frail nursing home residents and institutionalized Alzheimer's disease patients. **Method :** Review of the literature on physical activity in nursing home; **Results :** Physical activity yields an important and potent protective factor against functional decline, and various frequent and devastating complications that occurred in nursing home such as falls, fractures, malnutrition, or behavior disturbances. For demented patients living in nursing home, physical activity may also prevent these key problems that have a major impact on the burden of the disease and the quality of life of the resident. Institutionalized patients are very sedentary. Even a small amount of physical activity radically changes their way of life. It has been reported that in some institutions, demented residents spent only 12 minutes a day in any constructive activity other than watching television. Simple programs such as an aerobic exercise, twice a week, have been reported to slow the functional decline in nursing-home residents. Most randomized controlled trials suggest that aerobic exercise such as walking may promote cognitive and functional capacities in people with Alzheimer disease. Compliance is a major issue. The physical program has to be enjoyable. **Conclusion :** In this session, we will report evidences on the benefits and feasibility of physical activity in nursing home. **Keywords:** nursing home, physical activity, alzheimer

SS24 104-C-3
TECHNOLOGICAL ADVANCES AND THE NURSING HOME

John E MORLEY (*Geriatric Medicine, Saint Louis University, USA*)

Introduction : Modern technology is slowly transforming nursing home care. Technology is being used as a 'smart' monitor to allow older persons to stay in their own private environment and still be relatively safe. **Method :** Monitoring fall risk and sleep patterns can be done at a distance through 'the Cloud.' Nursebots such as Riba will become fixtures in nursing homes to allow safe transfer of residents. Companion robots such as AIBO the dog will also become more common. **Results :** Robots will be able to deliver medicine to the frail elderly and also to help feed the disabled. Exoskeletons will allow persons with paraplegia to walk. **Conclusion :** Robotics will enhance physical therapy. **Keywords :** Technology, Nursing Home

SS24 104-C-4
EVIDENCE BASED MANAGEMENT OF INFLUENZA-LIKE ILLNESS (ILI) IN NURSING HOMES

Jean WOO (*Department of Medicine & Therapeutics, The Chinese University of Hong Kong, Hong Kong*)

Introduction : ILI is a frequent cause of admission to hospitals, attendance at Accident & Emergency Departments, and of mortality. It is uncertain what proportions are due to acquired pneumonia of viral or bacterial origin, or to aspiration. Information regarding underlying etiologies would inform policies regarding vaccination and use of antibiotics. **Method :** A one year surveillance of 4 nursing homes was carried out. An ILI episode was defined as fever $\geq 37.8^{\circ}\text{C}$ or an acute deterioration in physical or mental ability, plus either new onset of one or more respiratory symptoms or an acute worsening of a chronic condition involving respiratory symptoms. **Investigations include:** sputum sample for bacterial culture including Mycobacterium; multiplex bested PCR for respiratory pathogens; paired sera for atypical pneumonia pathogens; urine sample for Legionella and Pneumococcal antigen; Chest X ray. **Results :** Infectious agents were identified in 61/4% of episodes (Bacterial 53.3%.viral 46.7%). The top 5 ranking pathogens were S. Pneumoniae, RSV, P.aeruginosa, Parainfluenza type 1 and Metapneumovirus.No significant differences were observed in any of the clinical characteristics between ILI of different etiologies. **Conclusion :** The findings support the recommendation of use of influenza and pneumococcal vaccines in nursing homes, but also highlight the potential value of RSV vaccines, if developed in future. The routine use of antibiotics as a first line treatment for nursing home associated pneumonia should be reviewed. **Keywords :** Nursing Home, influenza-like illness, pneumonia

SS24 108-R
HOW POLICY, ECONOMIC AND CULTURAL CONTEXTS SHAPE INTERGENERATIONAL LINKAGES IN FAMILIES

SS24 108-R-1
INTERDEPENDENCE AMONG LIVES AND SOCIAL POLICY

Gunhild Oline HAGESTAD (*NOVA, Norway*)

Introduction : Life course theorists have emphasized the need to recognize that people's lives are linked to others around them (Elder, 1994). Family members are "fellow life travellers", people with whom individuals travel through life as if in a convoy. Family members serve as resources available during times of need, but they are also recipients of help and care. Life course scholars, particularly in Europe, have also emphasized that where people live affects how lives unfold (Mayer, 2009). Political systems, educational systems, laws, social policy and social services shape the life course and structure interdependence. This presentation connects two theoretical strands: the notions of "linked lives" and "lives in context". It will address the dialectical interaction between (a) individual behaviour and choices (b)

households and family practices and (c) policy contexts. The concept of interdependence, which emphasizes the dynamic interplay between being embedded in a meso context of interconnected family ties and living in a macro context of policy arrangements will be elaborated. Examples from life course research serves to illustrate the usefulness of the concept of interdependence in studying late-life families. Method : Literature content overview. Results : Looking across differing welfare states, especially so-called care regimes and family responsibility laws, we find striking contrasts in degree of interdependence among parents and children; grandparents and grandchildren. Conclusion : In studying life pathways and extent of individual autonomy, it is essential that we carefully consider legal and policy contexts. Keywords : multigenerational interdependence, policy

SS24 108-R-2

FAMILY SOLIDARITY AND SUPPORT FOR POLICIES FOR THE ELDERLY: THE INTERPLAY BETWEEN PRIVATE PRACTICES OF INTERGENERATIONAL ASSISTANCE AND ATTITUDES TOWARDS PUBLIC WELFARE PROVISION

Pau MARI-KLOSE¹, Ines CALZADA², Antonio JAIME³
(1. *Psychology and Sociology, University of Zaragoza, Spain*; 2. *Institute of Policies and Public Goods, Spanish National Research Council, Spain*; 3. *Sociology, University of Malaga, Spain*)

Introduction : In this paper we used data collected through a survey-experiment conducted in Spain to assess how family experiences of intergenerational interaction shape support for public policies for the elderly among individuals who have no direct self-interest in the provision of such policies. We focus on an array of dimensions of family life: frequency and pattern of interaction in various activity types (communication, entertainment, care), the degree of affection and emotional attachment to family members belonging to other generations, the degree of commitment to family rules and to perform family roles, the degree of consensus (or conflict) among them (Bengston and Schrader 1982, McChesney & Bengston 1988). Our hypothesis is that such dimensions of family life shape the way individuals perceive the needs and empathize with the demands of older age groups. Our data allow us to test these propositions against alternative explanations on attitude formation which highlight the importance of the social, political and cultural background of individuals in determining their support for public welfare provision for the elderly. Method : Statistical analysis of a survey database. Results : The results of our research inform debates about the sources of social support for such policies in the face of the increasing fiscal burden that such policies entail. Conclusion : Our aim is to deepen our understanding about political reform options that may strengthen the legitimacy and social sustainability of public welfare provision. Keywords : family, welfare, elderly

SS24 108-R-3

INTERGENERATIONAL SOLIDARITY AND ELDERCARE

Cornelia MURESAN¹, Mihaela HARAGUS², Paul Teodor HARAGUS¹ (1. *Sociology and Social Work, Babes-Bolyai University, Romania*; 2. *Centre for Population Studies, Babes-Bolyai University, Romania*)

Introduction : Policy, housing contexts and norms of intergenerational solidarity shape the organization of caring and financial responsibilities for young and old family members. Our research intends to describe the state of re-familialization (Leitner 2003; Saraceno and Keck 2010) of the eldercare in Eastern Europe, with a focus on intergenerational support in Romania. First, we compare the formal support received by the individuals (supplied by state, market

or NGOs entities) with the family care, relying on concepts such as defamilialization (Lister 1993), and dedomestication (Kroger 2011). Second, we try to unravel the relationship between norms of family obligation and actual giving and receipt of financial support and care, in order to see if the norms of filial and parental obligations are rather a burden placed on family or if the family solidarity is changing character, as the resilience hypothesis states (Bengston et al 2002). Third, we investigate the type and direction of support in situations of intergenerational co-residence, as the co-residence of elderly with their adult children is considered a mechanism of social protection for the first (Lyberaki and Tinios 2005). Method : We adopt a micro-level perspective and use Generations and Gender Survey data from available countries. Demographic, socio-economic and attitudinal variables are taken into account for producing descriptive statistics and assessing explanatory regression models. Results : Our research supports, in some degree, the re-familialization hypothesis in Romania. Conclusion : Intergenerational support is shaped by policy, housing context and cultural tendencies. Keywords : re-familialization, intergenerational support, family obligation norms

SS24 108-R-4

GENERATIONAL SQUEEZES UNDER DIFFERENT LIFE COURSES AND THE STRUCTURAL AND CULTURAL CONTEXTS

Anita ABRAMOWSKA-KMON, Irena Elzbieta KOTOWSKA
(*Institute of Statistics and Demography, Warsaw School of Economics, Poland*)

Introduction : The paper focuses on strategies about care and financial intergenerational transfers to be chosen under different policy, economic and cultural contexts. Given the increased prevalence of families with three, four and even five generations, it is likely that the generation of adults at late-middle age, particularly women, will face commitments to simultaneous support for their elderly parents and their adult but still partly dependent children, i.e. so-called "generational squeezes". We would like to identify the life course patterns and contexts under which middle generations attempt to support equally up and down and those under which the young are prioritized over the old. An important question is whether the provision of support to parents reduces the likelihood of helping children (and vice versa). Method : The data used come from the Generations and Gender Survey. The logistic regression models will be applied. The dependent binary variable describes a fact of giving care/financial support both up and down generations. Results : One might expect that families differ in their commitment to intergenerational exchange and solidarity: more familialistic countries (with strong commitments to solidarity) and weak formal care provision tend to assist more both generations rather than prioritize recipients, whereas those with high level of de-familialisation of care and welfare are less likely to provide care and financial transfers to both generations, prioritizing the young ones. Conclusion : The revealed interdependencies between patterns of intergenerational transfers and the context may suggest how to ease "generational squeezes" by adapting social policy to changing relations between different generations. Keywords : sandwich generations, intergenerational transfers of care and financial support

SS24 109-R

ACTIVE AGEING IN THE HOME

SS24 109-R-1

EFFICACY OF INTENSIVE TAILORED HOME MODIFICATIONS AND ASSISTIVE TECHNOLOGY FOR

FALL REDUCTION IN OLDER PEOPLE PRESENTING TO US EMERGENCY DEPARTMENTS FOLLOWING A FALL

Susan STARK (Program in Occupational Therapy, Washington University School of Medicine, USA)

Introduction : Falls remain the leading cause of injury, long-term disability, premature institutionalization, and injury-related mortality in the older adult population. Home modification interventions, when delivered by occupational therapists are effective in reducing falls particularly in high-risk populations. However, few trials of home modifications to reduce falls have been conducted in the US where home modifications are self-pay. Method : We conducted a blinded, randomized sham-controlled clinical trial among 54 older adults to determine the efficacy of an intensive tailored environmental intervention to reduce the cumulative incidence of falls among community-dwelling older adults at high risk for fall. The intervention included intensive tailored home modifications prescribed to address problems with Activities of Daily Living (ADL) and Instrumental ADL and to maximize participants' functional performance. The home modifications will include assistive devices and architectural changes to the home and were delivered during a series of six 90-minute sessions. The control group received a sham treatment of equivalent time. All participants were assessed immediately post and at 6 months post intervention. Results : The average age of the participants was 78 years. Most (80%) were female and White (74%). The average number of daily activity problems addressed was 6. The intervention and assessment procedures were well tolerated. Home modifications do improve the performance of daily activities at home and may impact community participation. Preliminary analysis reveals a differential fall rate between the treatment and control group ($p=.01$). Conclusion : Home modifications, targeting ADL/IADL performance may reduce the rate of falls among older adults at high risk for a fall. Keywords : home modification, fall prevention

SS24 109-R-2

HOW SUPPORTIVE ARE AUSTRALIAN HOMES AND NEIGHBOURHOODS FOR HEALTHY AGEING? - FINDINGS FROM THE HOUSING AND INDEPENDENT LIVING STUDY (HAIL)

Julie E BYLES¹, Lynette MACKENZIE², Sally REDMAN³, Lynne PARKINSON¹, Lucy LEIGH¹, Cassie CURRYER¹ (1. Research centre for Gender Health & Ageing, University of Newcastle, Australia; 2. Faculty of Health Sciences, University of Sydney, Australia; 3. School of Public Health, University of Sydney, Australia)

Introduction : The NSW Government's Towards 2030: Planning for our Changing Population, emphasises appropriate housing, community and proximity to services as central to maintaining quality of life and independence as people age. This study sought to determine the extent to which home and neighbourhood environments of older community-dwelling people are "supportive" according to Australian AS4299 standards and to contrast these findings against people's expectations of their increasing needs as they age and of how these needs will be met. Method : Cross-sectional survey, in-home observation and interviews involving 202 participants (75-79 years). SF-36 Health Related Quality of Life and Late Life Function and Disability (LLFDI) scores, self-reported measures of home usability, accessibility, safety, and neighbourhood were assessed. Associations between home and neighbourhood characteristics were assessed using chi-square, t-tests and Pearson correlations. Results : Most people rated their homes and neighbourhoods highly on accessibility, usability and safety. Measures of neighbourhood satisfaction were also high (3.0 men, 3.2 women; 4 being the highest score). However, many homes failed objective

adaptability and safety ratings, particularly bathrooms: 77% did not have slip-resistant floors, 80% did not have a shower grab rail. 27% of homes scored ≥ 8 out of 25 possible hazards, and people living in these homes were considered at high risk of falls due to hazards in the home. There were significant correlations between perceptions of housing and neighbourhood and SF-36 and disability scores. Conclusion : Many homes and neighbourhoods of older people may not accommodate increased frailty or disability into the future. Keywords : Ageing, housing, independent living

SS24 109-R-3

IMPROVING FUNCTIONAL INDEPENDENCE FOR OLDER ADULTS THROUGH OCCUPATIONAL THERAPY DISCHARGE PLANNING: THE AUSTRALIAN HOME TRIAL

Lindy CLEMSON¹, Natasha LANNIN², Kylie WALES³, Collette DAVIES¹, Lynette MACKENZIE³, Ian CAMERON⁴ (1. Ageing, Health & Work Research Unit & Centre for Population Ageing Research, The University of Sydney, Australia; 2. Alfred Clinical School & Faculty of Health Sciences, La Trobe University, Australia; 3. Ageing, Health & Work Research Unit & Centre for Population Ageing Research, Faculty of Health Sciences, The University of Sydney, Australia; 4. Sydney Medical School & Ryde Rehabilitation Unit, The University of Sydney, Australia)

Introduction : Systematic reviews provide limited evidence but suggest discharge-planning practices should span hospital to home and include a flexible goal-oriented approach. We have shown there is huge diversity in who receives a home visit which is influenced by hospital policy, therapist experience or, very often, pragmatic reasons such as time or staff resources. Method : A randomised trial is recruiting 400 community-dwelling older people across five sites in NSW and Victoria, Australia. Intervention participants receive the HOME protocol (In-hospital assessment and rapport building, pre-discharge home visit, post discharge home visit and two follow up calls. The control group receive a structured hospital consultation. Results : To date 142 participants have been randomised. They had a mean Charlson Comorbidity score of 5.5 (SD 1.8), 50% reported restricting activities in the past 6 months due to medical conditions and 55% were female. A content analysis of collaborative goals ($n=223$) from the intervention participants developed around five main themes: incorporating health and physical activity goals into daily life activity; improving self-efficacy for ADLs at home and in the community; improving capability to walk, balance and mobilize; resumption of pre-hospital activities; and re-establishing social activity. Strategies used by therapists included negotiating and practising adaptations to tasks or routine with client and family; education with client/family; referrals including home modification and activity programs such as men's sheds; and, provision and trial of equipment to enhance independence. Conclusion : The HOME study provides the first evidence-based guidelines for occupational therapy discharge planning and has potential to impact on both policy and practice. Keywords : Discharge planning, occupational therapy, independence

SS24 109-R-4

THE APPLICATION OF TECHNOLOGY IN THE HOME FOR FALLS PREVENTION: PERCEPTIONS OF IRISH AND AUSTRALIAN OLDER PEOPLE

Lynette MACKENZIE¹, Amanda CLIFFORD² (1 Faculty of Health Sciences, University of Sydney, Australia; 2 Clinical Therapies, Faculty of Education and Health Sciences, University of Limerick, Ireland)

Introduction : Future initiatives to promote healthy ageing of older

people will need to incorporate the application of smart technology and e-health. Technology has potential to address better access to services for falls prevention. However, little is known about the perceptions of the current cohort of older people about their use of different technology. Whilst Australia has a high level of participation with technology, in Ireland take-up has not been as fast or comprehensive. This study will investigate the perceptions of Australian and Irish older people about the application of this technology for them, and will identify if any differences exist between these groups. Method : Three focus groups were held in Sydney, Australia, and three in Western Ireland. Participants were members of senior support community groups. Focus groups consisted of 6-8 older people and the discussion was recorded and transcribed. Examples of iPads and movement sensors were shown to group members to elicit their opinions. Transcripts were coded and key themes were identified. Results : Overall, participants recognised opportunities to prevent falls with technology, such as better access to exercise programs and health professionals, self-monitoring devices, falls detection devices and alert systems. Technology designers need to consider cost, user-friendliness, simplicity, speed of feedback, ease of visibility, incorporating familiar technology (such as TV), and education needs. A number of barriers to the use of technology were also identified. Conclusion : It is important to consider the opinions of key stakeholders when considering future technology, healthcare delivery, education and research in the context of falls prevention. Keywords : technology user-friendly, focus groups

SS24 110-R

BACK TO THE FUTURE: INNOVATIONS IN HOME-BASED PRIMARY CARE FOR FRAIL ELDERLS

SS24 110-R-1

A SYSTEMATIC REVIEW OF HOME-BASED PRIMARY CARE PROGRAMS

Nathan STALL¹, Mark NOWACZYNSKI², Samir SINHA³
(1. Department of Medicine, Faculty of Medicine, The University of Toronto, Canada; 2. Department of Family and Community Medicine, Faculty of Medicine, University of Toronto, Canada; 3. Division of Geriatric Medicine, Faculty of Medicine, University of Toronto, Canada)

Introduction : In Canada, 93% of older adults live at home and a substantial proportion of this population has complex and inter-related health and social problems. This sometimes renders them frail and homebound and poorly-served by predominantly office-based primary care delivery models. Several comprehensive and ongoing home-based primary care models have emerged internationally in order to address access-to-care deficiencies, postpone adverse health trajectories and reduce overall costs for homebound elders. Method : We completed a systematic review of studies investigating home-based primary care programs for community-dwelling older adults (age ≥ 65) that measured at least one of: hospitalizations, emergency department visits and long-term care admissions as an outcome of their intervention. Using the Cochrane, PubMed and MEDLINE databases from the earliest available date through January 13, 2013, we identified 346 abstracts, and 8 met our criteria for review. Results : The 8 reviewed interventions were all based in North America, with 4 emerging from the Veterans Affairs System in the United States. All eight programs demonstrated substantial effect on at least one of our inclusion outcomes, with four programs effecting two outcomes. All interventions were characterized by three common design principles: 1) house calls are made by the ongoing primary care provider, 2) the primary care provider leads an interprofessional care team, and 3) the

program provides after-hours support. Conclusion : Specifically designed home-based primary care programs can substantially affect patient, caregiver and systems outcomes. Adherence to the core design principles identified in this review could help guide the development and spread of these programs in Canada. Keywords : Home-based primary care, Homebound elderly, Physician house calls

SS24 110-R-2

THE EMERGENCE OF HOME-BASED CARE IN MEDICARE: OUTCOMES FROM THE DEPARTMENT OF VETERANS AFFAIRS

Dayna COOPER¹, Thomas EDES² (1. U.S. Department of Veterans Affairs, USA; 2. Office of Clinical Operations, U.S. Department of Veterans Affairs, USA)

Introduction : The frail and homebound elderly are poorly-served by predominantly office-based primary care delivery models, resulting in reliance on episodic alternatives such as emergency department visits and hospitalizations. Many of these high-cost episodes can be avoided through home-based primary care. Method : This presentation will explore the emergence of home-based care in Medicare in the United States by reviewing outcomes from the Department of Veterans Affairs. Results : We will begin by exploring how home-based primary care in the Veterans Affairs system differs from routine home care in the United States. We will then review clinical and economic outcomes as well as the growth of this model of care in the Veterans Affairs systems in recent years. Next we will explore the potential for proliferation of home-based primary care in the recent Independence at Home Act, part of the United States Patient Protection and Affordable Care Act. Finally we explore the novel Medical Foster Home model as well as overall opportunities for expansion and research. Conclusion : As we face the dual challenges of an unsustainable rise in healthcare costs concurrent with an increasing population with serious chronic disabling diseases, we need to recognize that the spectrum of geriatrics and extended care services are integral components of the solution. We can increase access, improve quality, and lower total costs of care, and we can achieve these goals by adding effective services rather than restricting services. Home based primary care is one of these key effective services that need to be increased. Keywords : Home-based primary care, Homebound elderly, Health care policy

SS24 110-R-3

THE LONGITUDINAL ONTARIO INTEGRATED HOME-BASED PRIMARY CARE STUDY

Tracy A. SMITH-CARRIER¹, Mark NOWACZYNSKI², Sabrina AKHTAR³, Thuy-nga PHAM², Samir SINHA³ (1. School of Social Work, King's University College at Western University, Canada; 2. Department of Family and Community Medicine, Faculty of Medicine, University of Toronto, Canada; 3. Division of Geriatric Medicine, Faculty of Medicine, University of Toronto, Canada)

Introduction : Health care systems will be increasingly challenged in the coming decades to meet the needs of an ageing population. Innovative methods are required to meet the complex and often inter-related health and social problems faced by one of the most marginalized populations in our society, the frail and homebound elderly. This presentation examines integrated home-based primary care (IHBPC), presented around two delivery models: one based in a hospital or community-based family health team and the other based in a community support service agency; different models that have emerged in the provision of IHBPC in Toronto (Canada). The presentation will address: (1) the purpose and objectives of IHBPC, and why this model of care is so important within our current context;

(2) the theoretical framework and methods used to evaluate the study's IHBPC models; (3) the preliminary findings from the qualitative and quantitative analyses; (4) the role of partnerships and dynamics of interprofessional care teams involved in IHBPC service delivery; and (5) the facilitators and barriers to replicating and scaling these models within and beyond national borders. Method : This research involves a mixed methods study. Interviews with patients, caregivers, team members and key external stakeholders were conducted and analyzed using a grounded theory approach. A retrospective matched cohort study was conducted using propensity matched scoring. Results : Greater access to care, increased satisfaction, decreased hospitalizations. Conclusion : This study is the first in Canada to track the outcomes of the IHBPC model, and to provide policy recommendations to facilitate its spread across Canada and beyond. Keywords : home-based primary care, elderly, interprofessional teams

SS24 110-R-4

LEVERAGING NEW POLICY AND FUNDING MECHANISMS TO SUPPORT THE DEVELOPMENT AND DISSEMINATION OF HOME-BASED PRIMARY CARE PROGRAMS

Samir SINHA (*Division of Geriatric Medicine, University of Toronto and Johns Hopkins University, Canada*)

Introduction : With the inability of traditional office-based primary care models to meet the needs of ever-increasing homebound populations, innovative and responsive policies and models for the provision of primary care will be required for them. Meeting the complex and inter-related health and social care issues faced by the frail and homebound elderly often requires a team-based approach to care that can be brought to these patients in their own homes. While these can be seen as time and resource intensive models, their ability to address access-to-care deficiencies, postpone adverse health trajectories and reduce overall costs, presents a value proposition to support the investment in the development and provision of home-based primary care. Method : This presentation explore health care policy and funding issues surrounding the uptake of home-based primary care. Results : We will first review established and emerging policy mechanisms, funding and payment models that are being developed in the United States, and Canada and elsewhere to facilitate the growth, development and spread of team-based models for the delivery of home-based primary care. The simultaneous development of evaluation and monitoring frameworks that promote quality and efficiency will also be reviewed. Finally, efforts to promote and develop the knowledge, skills and confidence of administrators and clinicians involved in delivering home-based primary care through the development of toolkits and manuals will also be presented. Conclusion : Levering new policy and funding mechanisms can support the uptake and widespread adoption of home-based primary care to meet the ever-growing needs of an ageing population. Keywords : Home-based primary care, Homebound elderly, Health care policy

SS24 113-S

THE MULTIPLE FACES OF SOCIAL INEQUALITY IN THE SECOND HALF OF LIFE: CONSEQUENCES FOR HEALTH

SS24 113-S-1

HEALTH TRAJECTORIES OVER 20 YEARS: EFFECTS OF EDUCATION, INCOME AND GENDER

Hiroko AKIYAMA¹, Ikuko SUGAWARA², Satoshi USAMI³, Jersey LIANG⁴, Sachiko KAMIYAMA⁵ (*1. Institute of Gerontology, The University of Tokyo, Japan; 2. Institute of Social Science, The University of Tokyo, Japan; 3. Department of Psychology, University of Southern California, USA; 4. School of Public Health, The*

University of Michigan, USA; 5. The KAITEKI Institute, Mitsubishi Chemical, Japan)

Introduction : Although it is known that social inequality affects health, the impact on health trajectory over years is not well understood. Using panel data, this study investigates pathways of social inequality to health. Method : The data came from two large national panel surveys: HRS (US) and Well-being of Japanese Elderly. By latent class analysis, typical health trajectories were identified for American and Japanese men and women by SES. Results : Across all groups, two patterns of health trajectories (early- and late-onset of disability) were identified. However, percentages of the early-onset of disability, average age experiencing disability, the speed of declining health were different by SES, gender and country. Conclusion : Policy and intervention programs need to consider differential pathways of social inequality to health. Keywords : Health trajectory, SES

SS24 113-S-2

INEQUALITIES AND HEALTH OVER THE LIFE COURSE: A LEBANESE PERSPECTIVE

Kristine AJROUCH¹, Toni ANTONUCCI², Sawsan ABDULRAHIM³ (*1. Sociology, Eastern Michigan University, USA; 2. Institute for Social Research/Psychology, University of Michigan, USA; 3. Health Sciences, American University of Beirut, USA*)

Introduction : In this paper we examine links between socioeconomic status, and health over the life course in Lebanon. Method : We use data from the Lebanon Family Relations and Aging Study (Ajrouch, Antonucci, & Abdulrahim, 2009) which included interviews with 500 community dwelling adults. Results : Regression analyses indicate that age is not associated with depressive symptoms, yet older age predicts lower self-rated health. A curvilinear effect of income is found with regard to both depressive symptoms and self-rated health. Both low and high levels of income predict more depressive symptoms and lower self-rated health. Conclusion : Findings illustrate the ways in which socio-economic status affects health over the life course. Keywords : health inequalities, life course, Lebanon

SS24 113-S-3

INEQUALITIES IN THE USE OF POTENTIALLY INAPPROPRIATE MEDICATIONS IN HC ELDERLY AND LTC RESIDENTS IN EUROPE: SOCIAL AND CLINICAL ASPECTS

Daniela FIALOVA¹, Jindra REISSIGOVA², Eva TOPINKOVA³, Graziano ONDER⁴, Roberto BERNABEI⁴ (*1. Department of Geriatrics and Gerontology and Department of Social and Clinical Pharmacy, 1st Faculty of Medicine and Faculty of Pharmacy, Charles University, Czech; 2. Department of Biostatistics- Euromise centre, Academy of Science, Czech; 3. Department of Geriatrics and Gerontology, 1st Faculty of Medicine, Charles University, Czech; 4. Centro Medicina dell'Invecchiamento, Universita Cattolica del Sacro Cuore, Italy*)

Introduction : The symposium presentation focuses on the role of socioeconomic inequalities, disability and psychosocial factors in the use of potentially inappropriate medications, patients' health and medication noncompliance in older home care (HC) and nursing home (NH) residents in Europe (EU). Method : ADHOC dataset (2707 EU HC patients 65+, mean age 82.2+/-7.2 yrs, prospective interRAI HC assessment between Sept 2001- Jan 2002, participating countries: Czech Republic-CZ, Denmark, Finland-FIN, Iceland, Italy-IT, the Netherlands, Norway and UK) and SHELTER dataset (4156 EU NH residents 65+, mean age 83.5 ± 9.4 yrs, prospective interRAI LTCF assessment in IT, CZ, UK, FIN, France, Germany and Israel between

Sept- Dec 2009) were analyzed to determine risk factors of potentially inappropriate prescribing (more than 350 demographic, functional, clinical and socioeconomic characteristics were tested). The multiple logistic regression model was created. Multicollinearity among risk factors was analyzed (x²-test and the coefficient of contingency) and interactions among them (Wald test and the likelihood-ratio test). Global model significance (x²-statistics) and ORs (95%CI, p<0.05) were computed. Results : Inappropriate medication use in the EU HC older adults was significantly associated with poor economic situation (OR=2.5(1.8-3.4)) and psychological factors- depression (OR=1.3(1.1-1.6)) and anxiolytic drug use (OR=2.2(1.7-2.8)). Polypharmacy was also a strong predictive factor (OR=2.2(1.8-2.7)). Among the EU NH residents, depression (OR= 1.3 (1.1-1.6)) and higher degree of disability (higher dependence on carer, OR=1.3 (1.04-1.6)) were associated with inappropriate prescribing along with polypharmacy 4+(OR=4.96(3.25-7.96)). Conclusion : Socioeconomic and psychological factors are highly associated with inappropriate prescribing and should be considered by new EU drug policy measures. Keywords : psychosocial and economic factors, inappropriate prescribing, home care, long-term care, Europe

SS24 113-S-4

SOCIOECONOMIC POSITION AND COGNITIVE ABILITY IN RELATION TO COGNITIVE AGEING

Martijn HUISMAN¹, Sean CLOUSTON², Scott HOFER²
(1. *Epidemiology & Biostatistics, VU University Medical Center, Netherlands*; 2. *Department of Psychology, University of Victoria, Canada*)

Introduction : The purpose of this study was to estimate the magnitude of associations of two indicators of socioeconomic position (SEP) - education and income - together with those of cognitive ability (CA = crystallised intelligence) with one of the most central features of the human ageing process: age-related decline in fluid intelligence. Method : Data were obtained from three longitudinal studies of ageing: the Longitudinal Aging Study Amsterdam (LASA), the English Longitudinal Study on Ageing (ELSA) and the Health and Retirement Study (HRS). We selected data covering largely overlapping time periods and age-ranges from their longitudinal databases. We performed full information multi-level, mixed-effects regression (MLM), to simultaneously model individual trajectories and to account for the impact that independent variables have on intra- and inter-individual intercepts and slopes. We estimated gross and independent effects of education, income and cognitive ability on the intercepts and slopes of fluid cognition. Results : SEP-CA associations differed between studies: there were stronger correlations in LASA and HRS than in ELSA, between education and income on the one hand and CA on the other. Results indicated that CA was strongly associated with baseline fluid intelligence and the rate of decline in fluid intelligence. Both SEP indicators remained independently associated with baseline fluid intelligence but not with its rate of decline. There was no evidence that depressive symptoms mediated any of these associations substantially. Associations were disparate between the studies. Conclusion : Aspects of SEP appear to influence cognitive ageing mainly through their association with cognitive reserve, not because they protect against cognitive decline. Keywords : Socioeconomic inequalities, Cognitive ability, Longitudinal analysis

SS24 115-S

GENETICS, ENVIRONMENTAL SUPPORT AND FUNCTIONING IN VERY LATE LIFE: INTERNATIONAL PERSPECTIVES ON CENTENARIAN RESEARCH

SS24 115-S-1

REGIONAL SIMILARITIES AND DIFFERENCES IN FUNCTIONAL STATUS IN JAPANESE CENTENARIANS

Yasuyuki GONDO¹, Yoshihiko SAITO², Hiroki INAGAKI³, Yukie MASUI⁴, Donald Craig WILLCOX⁵
(1. *Graduate School of Human Sciences, Osaka university, Japan*; 2. *Advance research institute for the sciences and humanities, Nihon university, Japan*; 3. *Research Team for Promoting Independence of the Elderly, Tokyo metropolitan institute of gerontology, Japan*; 4. *Human Care Research Team, Tokyo Metropolitan Institute of Gerontology, Japan*; 5. *International Public Health & Welfare and Gerontology, Okinawa International University, Japan*)

Introduction : Centenarians are believed to be a longevity phenotype. Recent studies, which explored environmental influence on longevity indicated warm climate, geometrical higher place influence longevity. Functional status in centenarians is not well maintained and higher frequencies of frail centenarians were reported in previous studies. This study aimed to explore the environmental influence on the functional status in centenarians. We compared regional difference and similarity of distribution of care level need among centenarians in Japan. Method : Distribution of nursing care level, which was rated 1 to 5 based on assessments of care requirements, was compared among 8 regions from north to south in Japan (Sendai city, Tokyo metropolitan, three regions in Hyogo prefecture, Yamaguti prefecture and Okinawa prefecture). These data were collected from published paper or presenter's own survey. Results : Over all, distribution of nursing care level were skewed to higher care level (4-5), except Okinawa, in which frequency of care level are centered on middle care level(2-3). Comparison between city area and rural area showed no difference in care level distribution. Conclusion : Warm climate might contribute not only longevity but also maintain health condition and functional status in centenarians. Compared to second highest yearly average temperature region (Yamaguti; 16.7 Celsius), Okinawa showed considerably higher yearly average temperature (23.1 Celsius). Lowest yearly average temperature region is Sendai (12.4 Celsius). Considering similarity of care level distribution between Yamaguti and Sendai, noticeable high temperature in Okinawa might contribute to maintain good functional status. Keywords : centenarian, longevity, function

SS24 115-S-2

PREDICTORS OF HEALTHY AGING AND LONGEVITY FROM THE OKINAWA CENTENARIAN STUDY AND THE HAWAII LIFESPAN STUDY

D. Craig WILLCOX¹, Christina BELL², Randi CHEN³, Kamal MASAKI², Qimei HE³, John GROVE³, Tim DONLON³, Makoto SUZUKI⁴, Bradley WILLCOX³
(1. *Department of Human Welfare, Okinawa International University, Japan*; 2. *Department of Geriatric Medicine, John A. Burns School of Medicine, University of Hawaii, USA*; 3. *Department of Research, Kuakini Medical Center, USA*; 4. *Research, Okinawa Research Center for Longevity Science, Japan*)

Introduction : To identify potentially modifiable risk factors predicting survival and healthy survival beyond age 90 years. Method : Candidate risk factors from the Okinawa Centenarian Study were identified as potential modulators of healthy aging from cross-sectional data. They were then tested using prospectively collected data from 8,006 Hawaii Lifespan Study participants, aged 45-68 years at the baseline exam in 1965, using regression analyses on survival and healthy survival, from both mid-life (mean age 54 years, 40 year follow-up) and late-life (mean age 76 years, 20 year follow-up). Results : Statistical analyses

demonstrated that survival and healthy survival were modified by several biological, behavioral, and social risk factors. Significant predictors ($p < 0.01$) included biological factors (e.g. BMI, fasting glucose and insulin, insulin sensitivity, fibrinogen, genotype), behavioral factors (e.g. diet, smoking, alcohol, physical activity), and social factors (e.g. marital status, education). Biological risk factors were increasingly dominated by markers of inflammation at older ages. Risk factors had cumulative effects such that those with no major risk factors had up to six-fold increased odds of survival or healthy survival versus those with 5-plus risk factors in analyses conducted from both mid-life and late-life. Conclusion : Several potentially modifiable factors in mid-life and late-life were significantly associated with healthy aging and survival into the nonagenarian and centenarian years. This suggests that the odds of healthy aging may be, at least in part, within our control. More research is needed to find interventions that might increase our odds of healthy aging. Keywords: Healthy Aging, Longevity

SS24 115-S-3

DISTAL AND PROXIMAL INFLUENCES ON MENTAL HEALTH AMONG CENTENARIANS

Peter MARTIN¹, Grace DA ROSA¹, Leonard W. POON² (1. *Human Development and Family Studies, Iowa State University, USA*; 2. *Gerontology Center, University of Georgia, USA*)

Introduction : Very little research has addressed the question whether centenarians are in good mental health and to what extent proximal and distal variables influence mental health functioning in centenarians. Utilizing data from the Georgia Centenarian Study, we investigated a number of distal and proximal influences on mental health. Method : Six alternative hypotheses (demographic, health, personality, social and economic support, stress and coping, distal influences) were tested for 137 centenarians and near centenarians (i.e., 98 years and older). Additional data were collected from proxies of these centenarians. Results : All but one hypothesis received at least partial support. None of the demographic variables (age, gender, ethnicity, and residence) predicted positive or negative affect. Health predicted negative and positive affect. Extraversion was significantly associated with positive affect, whereas Neuroticism was significantly associated with negative affect. Better social support was associated with more positive and less negative affect. Proximal life events related to negative affect only for the self reports, but coping was strongly associated with positive and negative affect for self- and proxy reports. Finally, distal events reduced negative affect for proxy reports, whereas engaged lifestyle was positively associated with positive affect for self reports. Conclusion : Distal and proximal variables are associated with mental health. Keywords : centenarians, mental health, distal and proximal influences

SS24 115-S-4

KOREAN CENTENARIANS AND THEIR QUALITY OF LIFE: MEDICAL TREATMENT AND IMMIGRANTS IN TIME

Gyounghae HAN (*Child Development & Family Studies, Seoul National University, Korea*)

No abstract

SS24 116-C

INTEGRATED BIOLOGICAL, CLINICAL AND POPULATION COMPONENTS OF FRAILTY

SS24 116-C-1

BLOOD BIOMARKER SIGNATURE OF FRAILTY IN THE

NUAGE COHORT

Pierrette GAUDREAU¹, Tamas FULOP², Helene PAYETTE³, Jose A. MORAIS⁴, Francois BELAND⁵ (1. *Department of Medicine, University of Montreal and Centre Hospitalier de l'Université de Sherbrooke, Canada*; 2. *Department of Medicine, University of Sherbrooke and Institut universitaire de gériatrie de Sherbrooke, Canada*; 3. *Department of Community Health Sciences, University of Sherbrooke and Institut universitaire de gériatrie de Sherbrooke, Canada*; 4. *Division of Geriatric Medicine, MUCH-Royal Victoria Hospital and McGill University, Canada*; 5. *Department of Health Administration, University of Montreal, Canada*)

Introduction : Aging is associated with frailty and several potential disturbances of circulating metabolic, hormonal and inflammatory biomarkers. However, it is still unclear whether or not a blood biomarker signature can predict or characterizes frailty. The objective of this study was therefore to quantify fasting serum levels of glucose, cholesterol, triglycerides, insulin, insulin-like growth factor 1 and binding protein 3, and markers of inflammatory status such as C reactive protein, tumor necrosis factor-alpha and interleukin 6 in a subset of 366 community-dwelling elderly people from the Quebec NuAge cohort. Method : The selection was performed according to a stratified (i.e. age strata and sex) random sampling frame. Blood biomarkers were measured at recruitment in the cohort (year 1) and at year 3. Serum glucose, cholesterol and triglycerides were analyzed in clinical biochemistry laboratories while immunoreactive levels of other biomarkers were quantified in our laboratories. Results : Appropriate data modeling and statistical analyzes is performed to determine whether or not blood biomarker regulations are associated with frailty components. Conclusion : Identification of a specific blood signature of frailty would be of great interest to develop pharmacological and/or lifestyle interventions to prevent or reduce its deleterious effects on functional autonomy. This research was supported the Canadian Institutes of Health Research and the Quebec network for Research on Aging. Keywords : biomarkers, elderly, cohort study

SS24 116-C-2

FRAILTY AS A CLINICAL TOOL: FROM RISK TO PREDICTION

Howard BERGMAN (*Family Medicine, McGill University, Canada*)

Introduction : The concept of frailty has received increasing attention among clinicians and researchers. In spite of a growing body of knowledge, there is no widely accepted definition of frailty. The literature abounds with different models, criteria and definitions. While consensus has yet to be attained, work accomplished to date while revealing exciting new horizons, has also raised important issues and questions. Although there remains debate on the conceptual and operational definition of frailty, there has been increasing interest to utilize frailty as a clinical prognostic tool in order to predict various outcomes in individual patients. Essentially all of the research on frailty to date has been based on secondary analyses examining explanatory ability, that is, testing frailty as a significant risk factor for adverse outcomes within a given population. Authors have used those results to infer predictive ability, that is, the ability of frailty to predict adverse outcomes in new out-of-sample subjects. However, even highly significant risk factors can make poor predictors for a prognostic tool. Little is known of the true predictive ability of frailty in new subjects in various clinical settings. Recently, there have been a few papers reporting the predictive ability of their frailty models. Yet we have yet to elucidate what frailty actually adds to basic demographic and medical information, such as age, sex and the

number of chronic diseases. Conclusion : The presentation discusses the complex relationship between the concepts of frailty, aging, and disability, and implications for developing relevant clinical instruments. Keywords : frailty; risk; prediction

SS24 116-C-3

SOCIAL FACTORS AS DETERMINANTS OF FRAILTY STATUS. BIOLOGIC MECHANISMS AND MEDIATORS.

Luis Miguel GUTIERREZ-ROBLEDO (*Director General, Instituto Nacional de Geriatria, Mexico*)

Introduction : Health inequities arising from the societal conditions, in which people live, are social determinants of health. These include early years' experiences, and current conditions. The dearth of available longitudinal, nationally representative data with extensive information on socioeconomic status and health status gives us an opportunity to understanding how early, middle, and late life factors influence the life cycle trajectory of health and thus of frailty. Method: We describe how social factors play a role in determining and modulating the adverse outcomes of frailty. Research in this field is still limited. Social factors, often ignored in the medical context, represent risk factors for the development of frailty we conducted a review and analysis of published studies. Results : Social factors influence health outcomes at a number of levels: biological, health behaviors, availability of social support, and access to healthcare. Mainly through allostatic load, as a function of greater SES adversity cumulated across the life course. We describe the evidence linking social factors to frailty, and the interplay of molecular, clinical, and social factors, including how social stress is expressed through epigenetic modulation or triggering of inflammatory processes. Conclusion : A life course approach to determine the correlates and trajectories of frailty is proposed. The allostatic load through life and chronic inflammation in the elderly are mediators of this relationship. Social profiling should be systematically performed and considered when evaluating an elderly person. So, the present review proposes how to include social factors as determinants, and modulators of adverse outcomes of frailty. Keywords : Frailty; Social factors; Allostatic load; Immunosenescence; Disability

SS24 116-C-4

IS FRAILTY IN THE EYE OF THE BEHOLDER?

Francois BELAND¹, Howard BERGMAN², Pierrette GAUDREAU³, Helene PAYETTE⁴ (*1. Ecole de sante publique, Universite de Montreal, Canada; 2. Family Medicine, McGill University, Canada; 3. CRCHUM, Universite de Montreal, Canada; 4. Centre de recherche sur le vieillissement, Universite de Sherbrooke, Canada*)

Introduction : In the classical sense, a "syndrome" is a set of characteristics running together. Two features define geriatric syndromes: 1) it is a unified manifestation of a phenotype, shared in a population by at least one group of persons, while at least another group will not; 2) the same etiological factors may contribute to more than one geriatric syndrome. Method : A measurement model for frailty as a geriatric syndrome has two parts: 1) heterogeneity among groups : with and without frailty; 2) "extra-correlations" among frailty components attributable to other geriatric syndromes. The two parts are modelled jointly with factor mixture analysis (FMA) were latent profiles analysis captures heterogeneity; and factor analysis, "extra-correlations". Thus, a counterfactual model for frailty as a geriatric syndrome implies: 1) rejection of heterogeneity : only one group is identified; and/or 2) rejection of "extra-correlations" : associations among frailty components are fully accounted for by latent profiles. Results : To test for the counterfactual, data from the FReLE, a

longitudinal study of 1643 elderly persons living in the province of Quebec - Canada, were used. Frailty was measured with continuous indicators specifically chosen to represent the five Fried's frailty components. Conclusion : FReLE reproduced Fried's results using Fried's measures and statistics procedures. However, using Montecarlo methods, the Bayesian Information Criteria (BIC), and entropy to identify the right model lead to a spiral of models. No single model performed well on all of the criteria. The best model with Montecarlo was not acceptable on the BIC, while the best on BIC was rejected. Keywords : Frailty; Geriatric syndrome; Factor mixed model

SS24 117-C

HEALTH AND LONGEVITY OF EAST ASIAN ELDERLY FEMALE

SS24 117-C-1

INTRODUCTION AND OVERVIEW OF THIS SYMPOSIUM

Koichiro INA (*Department of Geriatrics, Nagoya University Graduate School of Medicine, Japan*)

Introduction : In late elderly, atherosclerotic diseases like myocardial infarction become more often than malignancy as the cause of death. Oriental people suffer stroke more than myocardial infarction. The difference of gene mutation, life style, and food might affect the racial difference as above. In fact, adverse effects of hormone replacement therapy(HRT) for post-menopausal women are reported to be less in oriental people than those in caucasians. Female proceeds atherosclerosis after menopause rapidly compared with men, and consequently impaired their ADL in last several years. Method : In this symposium, we introduce our collaborative study supported by Japan Society of Promotion Science(JSPS). Prof. Yoon is most famous gynecologist on HRT in the world, and Dr. Zang introduces Chinese gender oriented medicine. I support Dr. Hayashi on this projective study at Nagoya Univ. Japan. Results : We evaluated genetic mutations through the observational study of about 700 Chinese (Chengdu and Kuming), Korean (Seoul) and Japanese (Nagoya) elderly women. Single nucleotide polymorphisms(SNPs) related to either blood coagulation(factor V Leiden etc.), metabolic syndrome (PPAR α Leu162Val etc.), or endothelium/estrogen system were investigated and has been followed 6 years in relation to atherosclerotic disease and death. Further, we compared their ADL and performed the examination of screening-detected depression and the association with QoL by self-reported questionnaires using GDS-15 and the EQ-5D of EuroQoL Group etc. Conclusion : Analyses focusing on postmenopausal elderly women are rare, and may result in improved fundamental understandings of older people. Keywords : Postmenopausal women, Hormone replacement therapy(HRT), Atherosclerosis

SS24 117-C-2

CHARACTER OF KOREAN MENOPAUSAL WOMEN

Yoon BYUNG-KOO (*Professor, Department of Ob/Gyn, Sungkyunkwan University School of Medicine, Korea*)

Introduction : I introduce two studies. First study estimated an association between cognitive impairment and bone mineral density(BMD), a surrogate marker for cumulative estrogen exposure. Second one examined the impact of HRT on 24-h ambulatory blood pressure(BP). Method : This cross-sectional study included 120 postmenopausal women, classified into three groups: those with subjective memory impairment(SMI,n=40), amnesic mild cognitive impairment(n=50), and early Alzheimer disease(AD,n=30). Medical history and spine x-ray was also obtained. The relation between BMD,

major osteoporotic fractures and cognitive status were tested. In second study, 67 postmenopausal Korean women received 2 months of HRT consisting of conjugated equine estrogen with or without micronized progesterone. Ambulatory BP monitoring was performed at baseline and after HRT. Subjects were divided into those with normal BP(NBP:n=25) and those with high BP(HBP:n=42). Results : There were no significant differences among groups with respect to other clinical characteristics. Cognitive impairment was associated with lower BMD. BMDs at both the lumbar spine and total hip were lower in the AD group than in the SMI group. Mini-Mental State Examination score was correlated with BMDs. In second, parity and BMI were higher in HBPgroup than in NBPgroup. For both systolic and diastolic BPs, negative correlations were observed between basal and after HRT BP. During daytime, HRT increased systolic and diastolic BP in NBPgroup and decreased both BPs in HBPgroup. Conclusion : Cognitive impairment is associated with lower BMD in postmenopausal women. Cognitive aging is multifactorial, but estrogen deficiency may contribute. HRT had either BP-elevating or BP-lowering effects in postmenopausal women, depending on basal BP. Keywords : Hormone replacement therapy, post-menopausal women, bone mineral density

SS24 117-C-3

HEALTH OF CHINESE ELDERLY FEMALE

Zhang JIE (*Dept. of Internal Medicine, Medical Information Institute of Yunnan province, China*)

Introduction : We have analyzed the relation of medical conditions to the cause of the death which changes in the fast rise period of the female average lifespan from 1990 to 2006 in the Kunming Area, China. Method : We compared average life span with that in Shanghai, Beijing and Japan from 1950 to 2006 and found the similarity of Kunming from 1990 to 2006 to Japan from 1950 to 1959. Results : Female average lifespan is 61.9 years old in 1990. The main death causes were malignancy, cardio- and cerebro-vascular diseases, and respiratory diseases in turn. However, according to statistical data in 2006, female average lifespan became longer to 68.6years, the main causes were cardio- and cerebro-vascular diseases, respiratory diseases, and malignancy in turn. Even, above 75 years old, the causes were same orders. The primary cause of prolonging average life span seemed to be strengthening the public healthcare system, and increase of the number of doctors and medical establishments. This situation is very similar with that of Japanese female from 1950 to 1959, namely, the term of Japanese rapid economic growth period. At present, in comparison with female long average lifespan in Beijing City(74y. o.), Shanghai City(77y. o.) and Japan(85y.o.), that in Kunming (69y.o.) was still in shorter level, but in the past 16 years the rise speed of the prolongation of mean life in Kunming female is quite notable. Conclusion : We expect that these analyses contribute to the future plan of promoting the welfare of people in developed city like Kunming City area. Keywords : average lifespan, female, China, Japan

SS24 117-C-4

EAST ASIAN RESEARCH FOR HEALTH AND LONGEVITY SUPPORTED BY JSPS

Toshio HAYASHI (*Dept. of Geriatrics, Nagoya Univ. Graduate Sch. of Med., Japan*)

Introduction : 163 Japanese, 223 Korean and 186 Chinese women with a mean age of 67.9 years recruited from outpatient clinics of Nagoya University, Japan, Samson medical center, Seoul, Korea, Sichuan Univ. Chengdu and Kunning Central Hosp. Kunning, China were followed up for 6 years. We show our data in three parts. First

one is single nucleotide polymorphism(SNP) effect on biomarker and/or ischemic heart diseases(IHD) and cerebrovascular diseases(CVA). Second is their ADL and the association with QoL. Third one is combined analyses. Method : First study evaluated ten SNPs, which acts in or is related to either blood coagulation, metabolic syndrome-related pathways, or endothelium/estrogen system. Their relation to clinical values including lipids, B-type natriuretic peptide(BNP), fasting plasma glucose, tumor necrosis factor- α , interleukin-6, cyclic GMP, and nitric oxide metabolites were examined. In second study, we examined self-reported questionnaires and conducted the study. Depressive symptoms were assessed using a 15-item geriatric depression scale(GDS-15). For the assessment of QoL, we used EQ-5D of EuroQoL Group. Results : Correlations of factor VIIArg353Gln with HDL-C and eNOS Glu298Asp with triglycerides are found on registration. Polymorphisms in endothelium/estrogen system and heart failure marker, BNP are also correlated with ER α IVS1-401. Further analyses in relation to IHD or CVA are performed. Using cut-off of 5/6 for GDS-15, the percentages of subjects with depression were 39.0% of Korean, 29.2% of Chinese, and 33.9% of Japanese. Depression was significantly associated with lower level of some dimensions of QoL. Conclusion : SNPs and QoL study may help understanding the pathophysiology of atherosclerotic diseases in elderly women. Keywords : Postmenopausal women, single nucleotide polymorphism, QoL

SS24 118-S

WHAT IT MEANS TO BE VERY OLD: A COMPARISON OF COUNTRIES AND CULTURES

SS24 118-S-1

SOCIAL ENGAGEMENT AND SOCIAL SUPPORT IN THE VERY OLD

Carol JAGGER¹, Jacobijn GUSSEKLOO², Yasumichi ARAI³, Ruth TEH⁴ (*1. Institute for Ageing and Health, Newcastle University, United Kingdom; 2. Department of Public Health and Primary Care, Leiden University Medical Center, Netherlands; 3. Division of Geriatric Medicine, Department of Internal Medicine, Keio University School of Medicine, Japan; 4. General Practice and Primary Health Care, University of Auckland, New Zealand*)

Introduction : Social engagement and social support are important for maintaining quality of life in old age. Poor social engagement has been shown to be associated with cognitive decline as well as a contributor to reduced survival in late old age. We compare levels of social engagement and social support in four longitudinal studies of very old people (aged 85+) from countries with very different life expectancies (Japan, the Netherlands, New Zealand and UK) to explore the extent to which social engagement contributes to longevity. Method : Four longitudinal studies of those aged 85+ are analysed: the Newcastle 85+ Study (n=849); the Leiden 85+ Study (n=599); the Living to Advanced Age in New Zealand (LILACSNZ) study (n=937); and the Tokyo Oldest Old Survey on Total Health (n=542). Social support variables included marital status, proximity of and contact with children, contact with formal social care services. Social engagement was assessed by self-report of activities grouped into mental, physical, social, and productive with frequency of activity coded as at least monthly and less than monthly. Results : Social support and social engagement between studies will be compared in relation to other potential confounders such as cognitive and physical functioning and depression. In the two studies with the longest follow-up, the effect of social engagement on mortality will be compared and contrasted. Conclusion : Social engagement is not only an important predictor of length of life but also quality and, as a potentially modifiable factor, it

could form the basis for future interventions to improve healthy ageing. Keywords : Social engagement, oldest old

SS24 118-S-2

THE NATURAL COURSE OF DISABILITY AND THE ROLE OF CHRONIC DISEASES IN THE VERY OLD; A COMPARISON BETWEEN 4 DIFFERENT COUNTRIES

Jacobijn GUSSEKLOO¹, Ngairé KERSE², Ruth TEH², Carol JAGGER³, Andrew KINGSTON³, Yasumichi ARAI⁴, Wendy Den ELZEN¹ (1. *Public Health and Primary Care, Leiden University Medical Center, Netherlands*; 2. *General Practice and Primary Health Care, University of Auckland, New Zealand*; 3. *Institute for Ageing and Health, Newcastle University, United Kingdom*; 4. *Geriatric Medicine, Keio University, Japan*)

Introduction : Disability in older people is associated with a shorter life expectancy, more dependency and morbidity. As the population in the Western world is ageing, the number of older people facing disability will increase in the coming decades. This increasing incidence of disability will be accompanied by rising health care costs, since health care for disabled is more expensive compared to health care for non disabled persons. The natural course of disability and its determinants are important to study, since prevention and pro-active care are important. Method : The natural course of disability was compared between four longitudinal studies of those aged 85 years and over: the Life and Living to advanced age a cohort in New Zealand (LiLACS NZ) (n=937); the Newcastle 85+ Study (n=849); the Leiden 85-plus Study (n=599); the Tokyo Oldest Old Survey on Total Health (n=542). The severity of disability was longitudinally measured in all cohorts. We will study the effects of gender, age and the presence of chronic diseases on the course of disability. Mortality will be taken into account. Results : The natural course of disability and the influence of gender, age and prevalence of chronic disease will be presented per study and integrated by Individual Patient data analysis. This gives us the possibility to compare the relationship between chronic diseases and disability between the different countries. Conclusion : Facing the ageing population, understanding the natural course of disability and its determinants becomes increasingly important for older people, their caregivers, and policy makers. Keywords : functional status, chronic diseases, natural course

SS24 118-S-3

THE CONTRIBUTION OF ORAL HEALTH TO MALNUTRITION IN THE VERY OLD

Yasumich ARAI¹, Toshimitsu IINUMA², Carol JAGGER³, Jacobijn GUSSEKLOO⁴, Ruth TEH⁵ (1. *Division of Geriatric Medicine, Department of Internal Medicine, Keio University School of Medicine, Japan*; 2. *Department of Complete Denture Prosthodontics, School of Dentistry, Nihon University, Japan*; 3. *Institute of Ageing and Health, Newcastle University, United Kingdom*; 4. *Department of Public Health and Primary Care, Leiden University Medical Center, Netherlands*; 5. *General Practice and Primary Health Care, University of Auckland, New Zealand*)

Introduction : Deterioration of oral health is common and potentially serious problems among older adults. Epidemiological observations have suggested contributions of poor oral health to age-related chronic conditions, including diabetes mellitus, functional limitation, and cognitive impairment. Poor nutrition and dietary restriction are possible mediators of this relationship. We examined the associations of oral health and nutritional status in longitudinal studies of very old people (aged 85+) from countries with different dietary habits and dental care systems. Method : The Tokyo Oldest Old Survey on Total

Health is a longitudinal study of those aged 85+ (n=542) with a particular focus on dental examination and dietary assessment. Oral health measures include tooth counts, denture status, oral health-related QOL, a 15-item food acceptance, and maximum bite force. Dietary habit was assessed with a validated food frequency questionnaire, and nutritional status was assessed with body composition (BMI, circumference of arm and calf, skinfold thickness) and serum albumin levels. A variety of self-reported oral health measures as well as detailed dietary record are available in the Newcastle 85+ Study. Results : Cross-sectional associations between oral health measures, dietary intake, and nutritional status will be examined. The results will be compared between studies in relation to other potential confounders such as cognitive and physical functioning and socioeconomic factors. In some studies, longitudinal impacts of oral health on nutrition and general health outcomes will be examined. Conclusion : Incorporation of oral health assessment into geriatric epidemiology will further our understanding of multidimensional components of health, and provide key information for prevention strategies. Keywords : very old, oral health, nutrition

SS24 118-S-4

THE RELATIONSHIP BETWEEN CARDIOVASCULAR DISEASE AND BMI IN THE VERY OLD

Ruth TEH¹, Ngairé KERSE¹, Carol JAGGER², Jacobijn GUSSEKLOO³, Yasumichi ARAI⁴ (1. *General Practice and Primary Health Care, University of Auckland, New Zealand*; 2. *Institute for Ageing and Health, Newcastle University, United Kingdom*; 3. *Department of Public Health and Primary Care, Leiden University Medical Center, Netherlands*; 4. *Division of Geriatric Medicine, Department of Internal Medicine, Keio University School of Medicine, Japan*)

Introduction : Cardiovascular disease (CVD) is a major cause of mortality, morbidity and disability in adults aged 85+. Obesity is one of the traditional CVD risk factors. The relative risk of CVD associated with greater body mass index (BMI, kg/m²) decreases with age but there appears to be a paradoxical relationship between BMI and mortality risk in advanced age though numbers of oldest old are few. We compare the prevalence of CVD and examine the relationship between CVD and BMI in four longitudinal studies of people in advanced age (aged 85+). Method : Four longitudinal studies of those aged 85+ are analysed: the Life and Living to advanced age a cohort in New Zealand (LiLACS NZ) (n=937); the Newcastle 85+ Study (n=849); the Leiden 85+ Study (n=599); and the Tokyo Oldest Old Survey on Total Health (n=542). CVD is defined similarly in all cohorts, and measurement of traditional risk factors and BMI was conducted in a similar way. Nutritional status is assessed using 24 hr dietary recall (in two studies) and food frequency (in one study). Results : The prevalence of CVD and obesity between studies will be compared and the relationship between CVD and BMI will be explored controlling for other traditional CVD risk factors. The relationship between BMI and mortality, controlling for nutritional status, will be compared and contrasted. Conclusion : Understanding the relationship between CVD and BMI in conjunction with nutritional status in advanced age will inform future intervention strategies to improve cardiovascular health in advanced age. Keywords : Aged, cardiovascular disease, BMI

SS24 119-S

A CHALLENGE FOR THE "THIRD AGE": PRODUCTIVE ACTIVITIES AFTER RETIREMENT IN ASIAN COUNTRIES

SS24 119-S-1

EMPLOYMENT EXPERIENCES AMONG KOREAN OLDER IMMIGRANTS IN LOS ANGELES

Min-kyoung RHEE¹, Iris CHI¹, Jaehee YF² (1. *Social Work, University of Southern California, USA*; 2. *Social Work, University of Utah, USA*)

Introduction : With the rapid aging of the population in the United States and the nation's concern on the increasing costs of health care and Social Security, substantial amount of research has been done on the issue of how to recruit and retain older workers in the labor market. However, relatively very limited attention has been paid to the employment issues of ethnic minority older adults who often face dual risk of age and racial discriminations. **Method :** According to the U.S. Census, there were over one million Koreans in 2010 with approximately 20% of them being over age 50. This study attempts to fill the research gap by exploring the employment experiences among Korean older immigrants in Los Angeles. This study analyzes qualitative data of 36 Korean immigrants in Los Angeles who are 50 and above. **Results :** Based on six focus groups, and five individual interviews, the result of the study provides that Korean older immigrants experience diverse aspects of employment barriers such as structural, human/social capital, and cultural barriers. **Conclusion :** The study also provides foundation knowledge both for practitioners and policy makers in developing culturally competent employment services by exploring the employment barriers Korean older immigrants face both at individual and social level. **Keywords :** employment barriers, immigrants

SS24 119-S-2

HEALTH AND SOCIAL WELL-BEING OF PEOPLE OVER 50+ IN KOREA: EMPLOYMENT STATUS MATTERS?

Hongsoo KIM, Young-il JUNG, Moonhee SUNG (*Graduate School of Public Health, Seoul National University, Korea*)

Introduction : Work is a widely known factor affecting well-being of later-life; but only a few empirical studies examined its association with both health and social aspects of well-being in Asia countries, and fewer studies compared the association between the sexes. **Method :** Using a national representative sample of 4,972 (male 63.2%, female 36.8%) people aged 50 or older who participated in 2006 Korean Longitudinal Study of Ageing (KLoSA) study, we investigated how employment status affects self-rated health, depressive symptom, and social well-being. **Results :** Compared to those currently working, people who were unemployed or retired showed lower levels in self-reported health (OR=1.77, 2.49, p-value<.05) and depressive symptom (OR=1.98, 1.69, p-value<.05), but such difference was not observed in social well-being, while social-demographic and economic covariates were adjusted for. Between the sexes, the relationships between job status and social well-being were inconsistent. **Conclusion :** The findings imply employment status affects health and well-being of people over 50+ in Korea. Health and social policy should promote quality jobs for and active social engagement of mid-life and older people. Necessary are international comparative studies on work and well-being in later life. **Keywords :** Health, Social Well-being, Job status

SS24 119-S-3

PAID WORK AND SOCIAL CONNECTEDNESS AMONG JAPANESE OLDER ADULTS

Ikuko SUGAWARA¹, Naomi YATOMI², Hiroto MUROHASHI², Kouji SHIBASAKI², Katsuya IJIMA², Hiroko AKIYAMA² (1. *Institute of Social Science, The University of Tokyo, Japan*; 2. *Institute of Gerontology, The University of Tokyo, Japan*)

Introduction : It is well known that quite a few seniors wish to work beyond the average age of retirement not only for money, but also for psychological, social, as well as physical merits the workers might get from work. Among these benefits, social or relational merit of working may be critical for older people, considering the discussion that retirement can cause social isolation among older adults. However, little empirical research has been conducted on association between engagement / disengagement in paid work and social connectedness among the elderly. This study examined how paid work situation were associated with non-kin social relations. **Method :** Structural interviews were conducted with 1133 randomly selected people aged 55 and older living in Kashiwa, a suburban city of Tokyo. Work status, frequencies of going outdoors for social activities, and frequencies of meeting with friends and neighbors were used for this study. **Results :** The majority of the respondents retired or will retire from the paid work at around the age of sixty. Those who continued to work beyond the average age of retirement went out of their home more frequently and had more contact with friends than those who retired after controlling for the effect of gender, age, physical and mental health, contents of job, and income level. **Conclusion :** This result was compared with the longitudinal data obtained from seniors who attended a series of job seminars for retirees. The condition of post-retirement work to promote or deteriorate social connectedness will be discussed. **Keywords :** retirement, non-kin social relations, post-retirement work

SS24 119-S-4

A COMPARATIVE STUDY OF MATCHING PRINCIPLE TO VOLUNTEERING BETWEEN KOREAN AND AMERICAN OLDER VOLUNTEERS

Jihyun PARK (*Department of Social Work, Hanshin University, Korea*)

Introduction : The purpose of this comparative investigation is to determine whether planned "matching" of an older volunteer with an agency, based on the volunteer's skill set, results in greater volunteer satisfaction, commitment and role identity with the volunteering experience than when placement occurs without consideration of the volunteer's skill sets and/or organization's need both Korean and American older volunteers. **Method :** The availability sample is included; 274 volunteers engaged in volunteering at service organizations in Seoul and Gyeonggi Province, South Korea and 140 volunteers in Albany, New York, U.S.A. **Results :** In terms of mediating effects, both Korean and American highly motivated volunteers were associated with satisfaction on volunteering and enhancement of role identification. This suggests a significant mediator as the degree of matched skill set between motivation factors and satisfaction and role identification both Korean and American volunteers. However, in terms of personality factor, Korean extroverted older volunteers were more associated with volunteering activity than American volunteers, when mediated by degree of matching skill sets. **Conclusion :** A key implication at the individual level is that understanding the transitional phase of retirement and creating volunteer opportunities that match not only the level of willingness to volunteer but the skill set brought to the volunteer experience by the volunteer candidate will enhance volunteer outcomes both Korean and American older volunteers. Attention needs to be paid to the cultural aspects of older volunteering as it can compensate for personality related to enhancement of role loss thru volunteering in American older volunteers. **Keywords :** Volunteerism, Comparative Study, Retirement

SS24 120-S

GLOBALIZATION AND THE DECLINE OF THE 'SOCIAL' IN AGEING: NEW FORMS OF RISK AND INEQUALITY FOR OLDER PEOPLE

SS24 120-S-1

AGING IN A WORLD SOCIETY: FROM INDEPENDENCE TO INTERDEPENDENCE

Jan BAARS (*Interpretive Gerontology, University for Humanistic Studies, Netherlands*)

Introduction : Globalization forces us to think about global interrelations and interdependencies. These challenges imply another level of calibrating concepts such as autonomy or independence. In this paper the limited definition of autonomy as independence will be enlarged by including interdependence as its constitutive dimension. Moreover, autonomous choice will be placed in the context of structural preconditions which include distributional justice but also social justice in a broader sense, which addresses situations of vulnerability and (inter)dependency, rather than assuming that persons are independent and rational contractors. Such theorizing will be necessary to correct the dominant diagnosis of problems of aging in terms of the individualization of problems that are structurally constituted and to be able to embed such diagnoses in a broader perspective of social justice. Method : Conceptual analysis and theoretical development. Results : Theories of autonomy in aging need to be embedded in interpersonal contexts of interdependence and structural contexts of enabling preconditions. Conclusion : Theories of autonomy in aging need to be embedded in interpersonal contexts of interdependence and structural contexts of enabling preconditions. Keywords : interdependence, vulnerability, social justice.

SS24 120-S-2

IDEOLOGY ACROSS SOCIETIES: G-E INTERACTION, SOCIAL FORCES AND AGING

Dale DANNEFER (*Department of Sociology, Case Western Reserve University, USA*)

Introduction : Old ideas die hard. After demonstrating the importance of societal and cultural practices in shaping the character of age in both its biological and sociocultural dimensions, the seductive appeal of reductionist approaches has seemingly found a new path forward in the study of G-E interactions. It is clear the the initial enthusiasm and methodological intrigue surrounding the study of G-E interactions has outpaced critical and logical thought, creating a need for clear and cautious analysis. Method : In this paper , I analyze parallels between the initial introduction of cohort analysis which has been so influential and central to reframing the study of age, and the logic of G-E interaction. Results : I show that the dominant modes of work on G-E interaction in the social sciences is conducted without reference to an appropriately dynamic and interactive logic, and with little attention to the explanatory potentials of social forces in the regulation of gene expression. Evidence suggests that loneliness, for example, may have the power to regulate gene expression. Conclusion : In gerontology as elsewhere in the social scientists, the embrace of genetic explanation requires tempering by a full consideration of the interactive process through which genes and environments interact throughout the life course. Keywords : reductionism, ideology, gene-environment interaction

SS24 120-S-3

GLOBALISATION AND ECONOMIC CRISIS: NEW FORMS OF RISK AND SOCIAL EXCLUSION

Chris Raymond PHILLIPSON (*School of Social Science, The University of Manchester, United Kingdom*)

Introduction : The focus of this paper is on the crisis facing policies aimed at promoting social inclusion and combatting social inequality in later life. Global economic recession is promoting new forms of marginalisation in later life - ideological as well as economic. Economic crisis is re-shaping ageing in the twenty-first century, in respect of forms of state intervention, social behaviour and a deepening of inequalities within cohorts of older people. Method : The paper examines a range of government policies in the Global North to illustrate its broad theme regarding the impact of global economic crisis. It places the recession in the context of wider forces associated with globalisation and global social policy. Perspectives drawn from critical gerontology are used to examine new forms of social exclusion occurring in later life. Results : The paper will identify the emergence - in western economies - of a new 'moral narrative' for old age, one represented by a shift from the state to the market or from an ageing managed within 'private' rather than 'public' spaces. This new phase is by definition more open and less constrained by the traditional institutions supporting older people; it is also a more unequal old age - with new opportunities for inclusion on the one side, but varieties of exclusion on the other. Conclusion : Social policy is now faced with a different type of ageing underpinned by changing institutional forces. The move towards the promotion of markets to service old age is widening inequalities and promoting new vulnerabilities in later life. Keywords : social policy, globalisation, markets

SS24 120-S-4

DECONSTRUCTION OF "THE SOCIAL" IN OLD AGE POLICY

Carroll ESTES (*Institute for Health & Aging, UCSF, USA*)

Introduction : Attacks on US Social Insurance Schemes underscore contradictions between democracy and capitalism, with risk and inequality consequences. Method : Socio-historical methods of discourse, social movement, political economy, feminist, and race analyses examine Ideology, Power, Structure, and Agency. Results : Debates (2012 elections) suggest how corporations use their protected "free speech": Attacks on women, racial/ethnic minorities, workers, disabled, LGBT and voting rights. The Hegemonic Discourse of market individualism is interrupted and contested by a Resistance Movement opposing "privatized citizenship" (Somers 2008), increasing risk and inequality. Social Media and public intellectuals rise. Conclusion : Multiple frames (crises of capitalism, the state, globalization, demography) press radical state action to "save" Social Security and Medicare by destroying the universal "social" (privatization and cuts). Global reciprocal reverberations shadow all generations and vulnerable peoples. Research, theory, and praxis implications outlined. Keywords : Critical gerontology, policy

SS24 121-S

PERIPHERAL SERVICES OF COMMUNITY CARE FOR AGING IN PLACE; AIMING A MEANINGFUL LIFE FOR THE ELDERLY

SS24 121-S-1

THE POSSIBILITY OF EN-GAWA SERVICES; AN ATTEMPT TO INVOLVE THE ELDERLY WITH THE COMMUNITY

Naohiko HAYATA¹, Megumi KATAYAMA², Nana FUKUDA³
(1. *Information Media, Hokkaido Information University, Japan*; 2. *Design, Sapporo City University, Japan*; 3. *Media Arts and Design,*

Hokkaido Institute of Technology, Japan)

Introduction : 'EN-GAWA services' is lighthearted informal peripheral services of community care with formal core services for elderly, i.e., nursing home. The concept of 'EN-GAWA services' is elderly facilities encourage elderly people to social participation and networking among elderly through the peripheral services at the facilities. Method : In this presentation, some 'EN-GAWA services' will be compared to the several similar services of 'EN-GAWA services,' and discuss the differences of those services. Through this discussion, the definition of community-care will be reconstructed and theorized using the idea of EN-GAWA services. Results : The merits of 'EN-GAWA services' will be shown in this presentation. Community cafe and restaurant, educational programs for elderly, and other programs at a elderly facilities are able to be defined as one of the 'EN-GAWA services.' For define as 'EN-GAWA services,' the above services should have a function of mutual assistance among the elderly in the community. That is to say, the 'EN-GAWA services' have to be able to work for encourage elderly people to their community activities and to create a meaningful life of the elderly people. On the other hand, the elderly facilities have to give some effective assistance for the elderly to live permanently in their community. Conclusion : Removing the fear associated with aging, and creating a meaningful life in older age are very important for realizing 'aging in place.' Those are quite difficult problems in super-aged society. The idea of 'EN-GAWA services' is one of the best way to solve the problems. Keywords : aging in place, community care, meaningful life

SS24 121-S-2

INNOVATIVE DAY-CARE WITH COMMUNITY LIFE IN AN INNER CITY ENVIRONMENT IN TAINAN, TAIWAN: TAINAN CITY YMCA DAYCARE CENTERS

Potsung CHEN (*Institute of Gerontology, National Cheng Kung University, Taiwan*)

Introduction : The day care is one of the important services of community care services, which maintains the live of the elderly in their community and provides opportunities for the elderly and neighbors to interact. Considering diverse needs of the elderly in their life, implementing individualized care, providing the elderly with appropriate day care services and helping the elderly to extend original with community residents are the subjects that the institute concern the most. Method : This study investigated how the operators import the concept of community-based and mutual assistance in the initial stage of the environment design, to echo the original demands of the elderly in their community and home. YMCA Social Welfare Foundation in Tainan has set up three daycare centers for the elderly since 1988. Results : Further, by providing care services and community participation in the program activities for the elderly to create a safe and comfortable life in a variety of living spaces. Conclusion : Last but not least, the elderly have the access to independent life, maintain the appropriate intensity to interact with the community friends, and the institution can assist the elderly in getting the opportunity of continued aging in place. Keywords : day care, elderly, mutual assistance.

SS24 121-S-3

INTERGENERATIONAL COMMUNICATION OF "EN-GAWA SERVICE"

Megumi KATAYAMA (*School of Design, Sapporo City University, Japan*)

Introduction : Kyoto city has encouraged to built the complexes which combine the welfare facilities of elderly and children and investigated the effect of intergenerational communication. It is assumed that the

communication gives elderly self-respect, worth living and also reliefs progression of dementia such as enriching expression and utterance. Method : Kenkoen, social welfare service corporation in Kyoto, run the special elderly nursing home, the elderly day-care center and the after-school children's day-care center ("Gakudo hoiku-sho") in the same place. There are a salon space and a cafeteria in the entrance hall located in between the facilities. They also manage more than 100 volunteers to arrange many events to tie the both people inside and outside the complex. This system could be called "EN-GAWA service". We investigated the intergenerational communication of elderly and children in Kenkoen. Results : Elderly and children visit each other's facility to talk, play, take care and do the homework together. Those communications barely occur spontaneously. The caregivers always concern both generations and arrange activities to draw their common attention. Moreover some high school students who used to be the members of "Gakudo hoiku-sho" become the volunteers and continue the relationship with the community. Conclusion : We assume this place is the core of community welfare which supports "Aging in Place" and gives the children's growing environment focussing on the welfare experience. Keywords : Intergenerational Communication, Aging in Place

SS24 122-S

LONELINESS IN OLD AGE; WHO IS AT RISK?

SS24 122-S-1

DETERMINANTS OF LONELINESS OF OLDER CANADIAN IMMIGRANTS

Jenny GIERVELD¹, Suzan VAN DER PAS², Norah KEATING³, Janet FAST³ (*1. Social Demography, NIDI, Netherlands; 2. VUMC, VU University, Netherlands; 3. Human Ecology, University of Alberta, Canada*)

Introduction : Canada is one of the main migrant receiving countries. This study aimed at exploring the social integration versus loneliness of older immigrants in Canada, as compared to older adults born in the country. Method : We used data from the Canadian General Social Survey, Cycle 22 (N older adults = 4345). The study used the ideas of Bronfenbrenner's ecological systems theory to examine the individual and environmental factors affecting immigrant's integration after landing in the new environment. Dependent variable is the 6 ?item De Jong Gierveld loneliness scale. Determinants of loneliness included: sex, age, educational level, subjective health, experienced stress, several migration characteristics, the size and functioning of the network of familial and non-familial relationships, as well as Participation at the local level (in the community). Results : Results showed that immigrants are significantly lonelier than older adults born in Canada. Multivariate analyses identified the most important determinants; the language of childhood, experienced connectedness to the local community and the composition and functioning of the network of personal relationships are among the most decisive factors affecting loneliness among the migrant population of Canada. Conclusion : The ideas of Bronfenbrenner's ecological systems theory to examine the individual and environmental factors affecting immigrant's life course and integration after landing in the new environment are supported by the outcomes of this study. Keywords : loneliness, immigrants, participation

SS24 122-S-2

TALKING ABOUT LONELINESS

Christina VICTOR, Mary Pat SULLIVAN (*School of Health Sciences and Social Care, Brunel University, United Kingdom*)

Introduction : One consequence of the 'traditional' approach towards loneliness research with its focus on developing typologies and distinguishing types of loneliness, validating tools to determine its prevalence, outlining its negative consequences and evaluating interventions to reduce its negative impact on the lives of older people, is that we have effectively characterized loneliness as pathological and reinforced high levels of stigma for anyone who reports feeling lonely. **Method :** Secondary thematic data analysis of semi-structured in-depth interviews held with 45 older men (16), women (24) and married couples (5) between the ages of 66 and 91 in urban and rural areas of southern England. Prior to the interviews, all participants had identified themselves as lonely/ sometimes lonely using a self rating scale. Our aim was to explore the feelings and meanings associated with being lonely. **Results :** Participants were hesitant to disclose the loneliness experience and/or had difficulty in articulating this to the researcher. The variation in narratives reinforced the diverse ways this very intimate experience may be expressed. But age, gender and family status did not appear to be significant. The stigma of 'admitting' loneliness was evident but it was participant's awareness of loneliness and their feelings and meanings around physical, social, economic, and symbolic capital that characterised this complex human condition. **Conclusion :** Loneliness - although challenging to talk about - was a dynamic and multi-dimensional experience unique to each individual. The personal narratives illustrated an interaction between a range of external and internal factors that were both sources of strength to combat loneliness and sources of vulnerability for it. **Keywords :** loneliness

SS24 122-S-3

LATENT TRAJECTORIES IN LONELINESS

Marja AARTSEN¹, Marja JYLHA², Theo VAN TILBURG³ (1. Faculty of Social Sciences, VU University Amsterdam, Netherlands; 2. Tampere School of Public Health, University of Tampere, Finland; 3. Faculty of Social Sciences, dept. Sociology, VU University Amsterdam, Netherlands)

Introduction : This study aims to contribute to discussions about longitudinal trajectories of loneliness and factors that may shape these trajectories. The acknowledgement of different trajectories of loneliness is important for the theoretical and conceptual understanding of loneliness as well as for the development of intervention strategies. **Method :** Data came from the Longitudinal Aging Study Amsterdam, with observations between 1992 and 2009 among 3946 respondents. Latent class growth analyses were estimated with MPlus. **Results :** The analyses showed that we were able to identify different trajectories of loneliness, indicating four different subgroups. 65% of the respondents did not develop loneliness during the 18 years of follow-up, and 7% stayed at a constant high level of loneliness, 11% developed loneliness and 16% of the cases recovered from loneliness. **Conclusion :** Based on our study findings we can conclude that there are different trajectories of loneliness in older adults, and that most of the older adults are not lonely. Recovery from loneliness was also observed, indicating that loneliness can be reduced. Recovery from loneliness however is less likely if the partner dies and depressive symptoms (may be as a consequence) increase. Both situational factors and dispositional factors are related to the onset and chronicity of loneliness. Being or becoming lonely is thus not only a consequence of external factors, also personality characteristics are involved. **Keywords :** loneliness long term trajectories older adults

SS24 124-R A PRACTICAL TOOL FOR GLOBAL USE TO IDENTIFY AND RESPOND TO OLDER PEOPLE'S HEALTH

AND CARE NEEDS

SS24 124-R-1

CROSS CULTURAL ADAPTATION AND EVALUATION OF RELIABILITY AND VALIDITY OF EASY-CARE INSTRUMENTS IN MALAYSIA

Ee Ming KHOO¹, Valarmathi MASILAMANI², Sajaratulnisah OTHMAN¹, Wah Yun LOW³, Chirk Jenn NG¹, Karuthan CHINNA⁴, Ian PHILP⁵ (1. Department of Primary Care Medicine, Faculty of Medicine, University of Malaya, Malaysia; 2. Kinarut Health Centre, Ministry of Health Malaysia, Malaysia; 3. Faculty Of Medicine Dean's Office, University of Malaya, Malaysia; 4. Department of Social and Preventive Medicine, Faculty of Medicine, University of Malaya, Malaysia; 5. Warwick Medical School, University of Warwick, United Kingdom)

Introduction : EASY-Care Standard 2010 questionnaire is a patient-centered tool for assessing the functioning and well-being of the older people. It was initially developed for use in the European region. It consists of 49 items assessing seven domains and has three summary scores: the Independence score, Risk of Fall Score and Risk of Breakdown in Care Score. We evaluated the validity and reliability of this tool with elderly who attended a primary care clinic in Malaysia. **Method :** The face and content validity of this tool were first assessed by an expert panel. Subsequently, the questionnaire was modified, and face validity was conducted on a group of elderly patients and minor changes were made. The amended questionnaire was then administered to 337 elderly patients attending an urban public primary care clinic in Kuala Lumpur, Malaysia. Test-retest reliability of the questionnaire was performed in 32 respondents at an interval of two to three weeks. **Results :** The adapted version of the questionnaire has 7 domains with 47 items. Two items were dropped: vaccination status and financial allowances. The internal consistency of the Independence Score was good with a Cronbach alpha of 0.78. The mean scores for the Risk of Breakdown in Care Score and the Risk of Fall Score were 2.04±1.68 and 0.49±0.73 respectively. The kappa coefficient for most items ranged from 0.464 to 1.00. **Conclusion :** EASY-Care Standard 2010 questionnaire is a reliable tool with good face and content validity for use in the Malaysian primary care setting for assessing function of the elderly. **Keywords :** Easycare, validity and reliability, questionnaires

SS24 124-R-2

GLOBAL APPLICATION OF USE OF EASY-CARE

Vida ALIZAD¹, Ali ASGARI², Reza FADAYEVATAN¹, Maria Piedade BRANDAO³, Liliana SOUSA⁴, Alfred CHAN CHEUNG⁵, Carol MA HOK KA⁶, Rukie PINAR⁶, Ayse ERGUN⁷, Erol SAIME⁷, Kamer GUR⁷, Zeynep KURTULUS⁸, Katarzyna WIECZOROWSKA-TOBIS⁹, Ee Ming KHOO¹⁰, Ian PHILP¹¹ (1. Iranian Research Center on Ageing, The University of Social Welfare and Rehabilitation Sciences, Iran; 2. Department of Educational Psychology, The University of Kharazmi, Iran; 3. School of Health Sciences, The University of Aveiro, Portugal; 4. Health Sciences Section, The University of Aveiro, Portugal; 5. Department of Sociology and Social Policy, Lingnan University, Hong Kong; 6. Faculty of Health Sciences, Yeditepe University, Turkey; 7. Faculty of Health Sciences, Marmara University, Turkey; 8. School of Health, Namik Kemal University, Turkey; 9. Laboratory for Geriatric Medicine and Gerontology, Karol Marcinkowski University of Medical Sciences, Poland; 10. Department of Primary Care Medicine, The University of Malaysia, Malaysia; 11. Warwick Medical School, The University of Warwick, United Kingdom)

Introduction : EASY-Care is a holistic instrument designed to provide a brief and comprehensive assessment of needs of older people to calculate overall scores for risk of falling, independence and risk of breakdown in care. This study aimed to compare older people internationally to provide policy makers with a brief summary of elderly needs to specify what should be funded to ensure that resources are used for promoting older people's quality of life. **Method :** A sample of 2745 older people from Iran, Portugal, Turkey, Hong Kong, Malaysia and Poland completed EASY-Care. Data was analyzed based upon Classic Test Theory (CTT) and inference statistics. **Results :** The average internal consistency of scales of Independence, Risk of breakdown in care and Risks of falls were .91, .70 and .50 respectively. In all countries the indicators of shopping and walking outside had greatest effect on older people's independence, general health and experience of falling on risk of breakdown, while feet problems and feeling safe outside the home had the highest effect on risk of falls. Indicators of financial management and feeding had the lowest effect on older people's independence, using bath and toilet on risk of breakdown in care, whereas feeling safe inside the home appeared to have the lowest effect on risk of falls. **Conclusion :** EASY-Care is a reliable instrument for assessment of elderly when used in a global setting. More cross-cultural studies using appropriate sample size, including analysis of individual items in EASY-Care are needed to determine key indicators for policy planning and service development. **Keywords :** EASY-Care, Independence, Breakdown in care, Falls, Older people

SS24 124-R-3

EASY CARE STUDY AMONG OLDER PEOPLE AGED 65 YEARS OR OLDER IN KOSOVO

Naim JERLIU¹, Naser RAMADANI², Helmut BRAND¹
(1. *International Health, School for Public Health and Primary Care (CAPHRI), Faculty of Health, Medicine and Life Sciences, Netherlands*; 2. *National Institute of Public Health of Kosovo, Pristina, Kosovo, Albania*)

Introduction : Our aim was to assess the health status of older people aged 65 years or older in Kosovo; a transitional country in the Western Balkans currently experiencing a difficult period of political and socioeconomic changes. **Method :** A nationwide population-based survey using the EASY-Care Standard Instrument was conducted in Kosovo in January-March 2011. This included an age-sex and-residence stratified random sample of 1,890 individuals (83.5% response) aged 65 years and over. The EASY-Care Standard Instrument was used to assess the self-perceived health and care needs in conjunction with a questionnaire focused on the socio-demographic and socioeconomic aspects of older people. **Results :** Preliminary results suggest that 51% of participants have problems with their sight (47% males, 55% females), and 46% (43% males, 48% females) have hearing difficulties. Approximately 21% are unable to use the telephone (16% males, 25% females), whereas 41% can use it with some difficulties (34% males, 47% females). 15% had one fall in the last 12 months (11.5% males, 17.7% females); whereas 9% had two or more falls in the last 12 months (6% males, 11% females). Findings suggest that 6% of participants are unable to take their medicines as prescribed by their doctor (5% males, 7% females), and 41% need help in order to follow the instructions for how to take their medication (32% males, 50% females). **Conclusion :** These preliminary results from Kosovo indicate that the EASY-Care Instrument could be an appropriate tool for identifying older people with high and/or special needs in transitional countries of Southeast Europe. **Keywords :** EASY-Care Standard, older people, Kosovo

SS24 124-R-4

EVIDENCE BASE OF EASYCARE ASSESSMENT FOR DETECTING FRAILTY AND DEMENTIA, AND FOR DELIVERING INTEGRATED HEALTH CARE IN THE COMMUNITY

Marcel OLDE RIKKERT¹, Ian PHILIP², Marieke PERRY¹, Janneke Van KEMPEN¹, Rene MELIS¹ (1. *Geriatrics, Radboud University Nijmegen Medical Centre, Netherlands*; 2. *Warwick Medical School, The University of Warwick, United Kingdom*)

Introduction : In our aging societies we urgently need an evidence based and cost-effective feasible geriatric assessment instrument that supports primary care professionals in many countries to target and deliver integrated care to the needs and goals of the individual elderly. We conducted three Dutch trials on EASYcare, the Elderly Assessment System, to deliver a solid evidence base for it in international care and welfare for the elderly. **Method :** The first study was a cluster randomized controlled trial (RCT) in 151 community dwelling frail elderly on cost-effectiveness of EASYcare-based and problem-directed integrated care, delivered by a geriatric practice nurse in collaboration with general practitioner (GP) and geriatrician. The second RCT focused on improving dementia detection by EASYcare training of 105 pairs of GPs and primary care nurses (Perry, 2010). The third study validated the EASYcare Two Step Older frailty screen (EASYcare-TOS) for detecting frailty in older subjects (Kempen,2012). **Results :** Integrated care targeted by EASYcare was cost-effective as it improved wellbeing and functional performances (effect size>0.2; NNT:4.7), lessened hospitalization and institutionalization, and stimulated home care, adult day care, and meals-on-wheels. EASYcare training improved detection of dementia with 34% and improved adherence to diagnostic guidelines with 32% (p<0.01). EASYcare-TOS validly (correlation 0.63 with Rockwood's Frailty-index) and reliably (Cohen's Kappa:0.89) detected frailty more efficiently, as GPs' tacit knowledge was used. **Conclusion :** EASYcare assessment is evidence based for detecting frailty and dementia in older subjects and is cost-effective in delivering problem-based integrated care at home in frail older subjects, which warrants further implementation of EASYcare across similar health systems.

SS24 125-C

ESTABLISHING AN INTERNATIONAL UNITED FRONT OF MEDICAL SOCIETIES AND MEDICAL BOARDS AGAINST ANTI-AGING AND AGE-MANAGEMENT QUACKERY AND ORTHOMOLECULAR MEDICINE

SS24 125-C-1

DISEASE MONGERING AND LOW TESTOSTERONE: THE SELLING OF "ANDROPAUSE" AS REJUVENATION IN OUR TIMES

David J HANDELSMAN (ANZAC Research Institute, Univ of Sydney, Australia)

Introduction : Rejuvenation mania occurs when socio-economic affluence allows indulgence in the luxury hobby of health consciousness. The turn of the 20th Century rejuvenation quackery of Brown-Sequard (testis extracts), Steinach (vasoligation) and Voronoff (testis grafts) evaporated upon the discovery of testosterone (T) in 1935. But after the post-war golden age of steroid pharmacology failed to commercialize androgens by inventing an "anabolic steroid", androgen pharmacology stagnated until the major increases of T prescribing in recent decades. Without valid new indications, quasi-epidemic T prescribing is being driven by a renewed interest in rejuvenation, now termed "andropause" or synonymous neologisms. In

a classical disease mongering strategy to extend the boundaries of treatable disease, booming T prescribing is underpinned by clinical guidelines which deliberately blur the fundamental distinction between pathological and functional androgen deficiency. Method : Review of T prescriptions on per capita basis from Australia and 40 other countries over the last 1-2 decades. Results : The last 2-3 decades show a major, coordinated global increase in T prescribing with great regional & local variation. Conclusion : This unproven pathologizing of male ageing appears to be blindly emulating the misadventures of estrogen therapy for menopause. Decades of estrogen use claiming widespread health benefits were propelled by over-interpreted retrospective observational studies which were flawed by comparing healthier and wealthier estrogen-using women with non-estrogen using controls. This was only dispelled by the first prospective RCT and it can only be hoped that the equally expansive claims for health benefits of testosterone treatment for “andropause” does not take as long to be rigorously tested. Keywords : testosterone

SS24 125-C-2

TAKING A STAND: BRAZIL'S FEDERAL COUNCIL OF MEDICINE REJECTS ANTI-AGING AS A MEDICAL SPECIALTY AND BANS THE USE OF HORMONES AND PROCAINE FOR ANTI-AGING

Roberto D'AVILA¹, Gerson ZAFALLON², Elisa COSTA³, Milton GORZONI⁴, Maria DO CARMO LENCASTRE⁵, Jose Elias PINHEIRO⁶, Claudia BURLA⁶, Emelio MORIGUCHI⁷, Silvia PEREIRA⁸, Thomas PERLS⁹, Rubens DE FRAGA JR⁶ (1. Conselho Federal de Medicina (Federal Council of Medicine), Brazil; 2. Technical Chamber of Geriatrics, Federal Council of Medicine, Brasilia-DF, Brazil and Regional Council of Medicine of Parana, Brazil; 3. Technical Chamber of Geriatrics, Federal Council of Medicine, Brasilia-DF, Brazil and Hospital de Urgencias de Goiania, Brazil; 4. Technical Chamber of Geriatrics, Federal Medical Council of Brazil, Office of Geriatrics, Brotherhood of the Santa Casa de Misericordia de Sao Paulo, Brazil; 5. Technical Chamber of Geriatrics, Federal Council of Medicine, Brasilia-DF, Brazilian Society of Geriatrics and Gerontology, Brazil; 6. Technical Chamber of Geriatrics, Federal Council of Medicine, Brasilia-DF, Brazil; 7. Technical Chamber of Geriatrics, Federal Council of Medicine of Brazil, Brazil; 8. Technical Chamber of Geriatrics, Federal Council of Medicine of Brazil, Brazilian Society of Geriatrics and Gerontology, Brazil; 9. Geriatrics Section, Department of Medicine, Boston University School of Medicine and Boston Medical Center, USA)

Introduction : Brazilians have been inundated with anti-aging marketing and multiple television appearances by physicians claiming to specialize in anti-aging medicine. Hormone and “bioidentical hormone” replacement therapy (HRT) and procaine hydrochloride (e.g. Gerovital) are claimed to stop and reverse aging and to effectively treat a broad range of age-related maladies. Method : In 2012, Brazil's Federal Counsel of Medicine (CFM) examined a request for anti-aging medicine to be sanctioned as a subspecialty and reviewed the typical practices of anti-aging doctors. Results : The CFM concluded that claims that hormone or “bioidentical hormone” replacement and other anti-aging treatments such as procaine are effective and benign are not substantiated by dependable published findings. The CFM also found that anti-aging, age management and longevity medicine are not recognized subspecialties by other governmental bodies in the world and given specific concerns that emerged in the CFM's investigation, the CFM rejected the recognition of anti-aging as a medical specialty. Conclusion : In October, 2012, the CFM's opinion was codified and it is now unlawful in Brazil to prescribe hormone replacement therapy and procaine hydrochloride

for anti-aging. Keywords : anti-aging hormone replacement therapy

SS24 125-C-3

ANTI-AGING MEDICINE: A NEW PUBLIC HEALTH PARDIGM OR A FASHION TREND?

Astrid STUCKELBERGER (Faculty of Medicine, University of Geneva, Switzerland)

Introduction : Biotechnologies and therapies that were unthinkable a decade ago are a reality today. The expectation by the public that practically anything is possible makes some people all too trusting. Besides the debate on the scientific evidence, anti-aging medicine questions our way of considering the “norm” of the aging process and healthy aging. The new paradigm presented no longer sets aging as an irreversible decline process leading to pathological conditions, but considers the aging body as a simple “biological machine” marked by time (chronological age), which can be kept to an optimal functioning through high tech detection and intervention. Method : A review of the evidence and risks of anti-aging medicine was commissioned by TA-Swiss and the Swiss Academy of Medical Science. This project reviewed scientific theories and findings as well as clinical practices in Switzerland, Japan and the USA. The objective was to review the interventions, products, the socio-economic and ethical consequences and what recommendations could be drawn for governments, health professionals, the medical community and patients. Results : This presentation will explore the rise of anti-aging medicine, its claims and discuss some of the public health and financial implications. Conclusion : Nine key recommendations stem from the review, including ethical and professional conduct considerations, the lack of evidence supporting safe and efficacious treatments that stop and reverse aging and legislation to protect the public. Global public health policy needs to support innovation and technology while ensuring the development of safe medical interventions and products for our aging societies. Keywords : anti-aging ethics public health

SS24 125-C-4

ESTABLISHING AN INTERNATIONAL UNITED FRONT OF MEDICAL SOCIETIES AND MEDICAL BOARDS AGAINST USE OF HORMONE OR 'BIOIDENTICAL' HORMONE REPLACEMENT FOR ANTI-AGING AND AGE-MANAGEMENT

David J. HANDELSMAN¹, Gerson ZAFALON², Roberto LUIZ D'AVILA³, Astrid STUCKELBERGER⁴, Thomas PERLS⁵ (1. Reproductive Endocrinology and Andrology, Anzac Research Institute, University of Sydney, Australia; 2. Technical Chamber of Geriatrics, Federal Council of Medicine and Regional Council of Medicine of Parana, Parana, SP, Brazil; 3. President, Brazil's Counsel Federation Medicine, Brazil; 4. Faculty of Medicine, Institut de medecine sociale et preventive, University of Geneva, Switzerland; 5. Medicine and Geriatrics, Boston Medical Center and Boston University School of Medicine, USA)

Introduction : The Fountain of Youth has been marketed to gullible people for centuries. In the late 1800's salesmen exclaimed the wondrous virtues of animal testicular extracts. Now with the pharmaceutical industry's ability to produce mass quantities of various hormones, these promotions have become particularly dangerous because of mass marketing on the internet and the oft-times indiscriminant administration of multiple hormones by some doctors who don't disclose the high risk and low benefit of these drugs which can cause increased morbidity. Method : (1) Recurrence of the rejuvenation fads of the late 1800's: selling the public on “andropause” and the provision of testosterone (D.J. Handelsman) (2) Brazil's

Federal Counsel of Medicine bans hormone replacement and procaine for anti-aging and refuses to recognize anti-aging medicine as a specialty (Reubens de Fraga, G. Zafalon) (3) Anti-aging claims (A. Stuckelberger) (4) Silence is endorsement: Medical professionals must form an international common front against misleading claims about hormone replacement for anti-aging for the sake of their patients and the public safety (Perls). Results : Regulatory (Brazil), Endocrinology (Australia), Geriatrics (USA) and Public Health (Switzerland) points of view will be presented along with proposed next steps. Conclusion : It is the responsibility of the medical care community to police themselves and to protect the public from unsupported and grandiose claims that can lead to both financial and physical harm. The IAGG is an important opportunity for different countries and organizations to galvanize their efforts to effectively stop the promotion and provision of hormone replacement as a means to stop or reverse aging. Keywords : anti-aging, procaine and gerovital, hormone replacement therapy

SS24 125-C-5

THE MEDICAL AND FINANCIAL HARM OF GROWTH HORMONE REPLACEMENT FOR ANTI-AGING, AGE-MANAGEMENT OR WHATEVER THEY CALL IT

Thomas PERLS (*Medicine and Geriatrics, Boston University Medical Center, USA*)

Introduction : Despite U.S. State and Federal laws that prohibit the distribution of growth hormone (hGH) for anti-aging, Furthermore clinical studies reveal very little if no benefit from growth hormone for weight loss and increased muscle strength in normally aging individuals while the adverse event rate is high (around 50%) with some risks such as those for diabetes and cancer risk far outweighing any little or no benefit. Method : Literature Review (pubmed and media). Results : Associated Press News (Caruso D, Donn J. Big pharma cashes in on hGH abuse, 12/21/2012) analyzed IMS Health collected data finding that hGH sales grew by 69% from 2005 to 2011 while average drug sales grew by 12%. Medicare payments for hGH increased by 78% over 5 years. The pharmaceutical industry sold \$1.4 billion worth of hGH last year and this does not include the profits made by clinics and compounding pharmacies in their resale of the drug to patients in what is nearly all a cash-only business. The authors concluded that half of sales went to people not meeting the legal criteria to receive the drug. Conclusion : Distribution of hGH continues to grow with more than half for illegal uses. Resultant fines pale in comparison to profits and thus it is clear that Congress must further investigate this threat to the public health and to determine adequate steps to end this deceptive and dangerous practice. Keywords : testosterone , growth hormone, anti-aging

SS24 126-C

THE INTERPLAY BETWEEN COGNITION AND MOBILITY: IMPLICATIONS FOR DISABILITY AND FALLS IN AGING POPULATION

SS24 126-C-1

OVERVIEW OF COGNITION AND PHYSICAL IMPAIRMENT IN DISABILITY MODEL AND FALLS, SCREENING TOOLS FOR HIGH RISK GROUP

Mooyeon OH-PARK (*Stroke Rehabilitation Research Laboratory, Kessler Foundation, USA*)

Introduction : As the population is aging globally, main goal of health care is being shifted from increasing overall life expectancy to disability-free life expectancy. Method : Two major health problems in

aging leading to disability are cognitive and gait impairments which were traditionally understood as involving processes in two separate domains (cognitive or physical). Both of these impairments are also well known risk factors for falls. However, interventions targeting one of these domains showed success rate to be desired. Results : During the past decade, there has been increasing evidence that cognitive, gait impairments, and falls are interrelated. Slow gait speed is shown to proceed up to 12 years before the clinical presentation of cognitive changes in older adults who later developed mild cognitive impairment (MCI). At the same time, impaired executive function and working memory of cognition is associated with decreased gait velocity and predicts falls. Conclusion : In this introductory session, overview of the symposium addressing interrelationship among cognition, gait, and falls will be discussed. This will include epidemiology of gait, cognitive impairment, and falls, a critical review of the current literature for the role of gait assessment in single and dual-task settings in predicting falls and cognitive decline. In addition, the practical usage of gait assessment including interpretation and risk stratification in clinical setting will be discussed. Keywords : cognition, gait, falls

SS24 126-C-2

COGNITIVE AND NEURAL MECHANISMS OF MOBILITY DECLINE AND FALLS IN OLDER ADULTS

Roe Holtzer HOLTZER¹, Joe VERGHESE² (*1. Neurology, Albert Einstein College of Medicine of Yeshiva University, USA; 2. Neurology, Albert Einstein College of Medicine, USA*)

Introduction : Recent evidence suggests that gait is influenced by higher order cognitive and cortical control mechanisms. executive functions (EF) that are subserved, in part, by the pre-frontal cortex play a key role in predicting mobility limitations in older adults. Specifically, dual-task methodology can be used to assess the causal effect of EF on mobility. Structural neuro-imaging studies identified regions in the frontal cortex as important in subserving mobility. However, due to technological limitations less is known about the functional correlates of cortical control of gait. The described here is designed to identify how the brain, specifically the prefrontal cortex, is functionally involved in higher order control of gait. Method: Participants are non-demented adults enrolled in our ongoing studies. Dual-tasks paradigms involving walking and cognitive interference tasks are used to assess the effect of EF on mobility. Using functional near-infrared spectroscopy we evaluate whether increased activations in the prefrontal cortex (PFC) are detected in walking while talking (WWT) compared with normal pace walking (NW). Specifically, we hypothesized that oxygenation levels in the PFC would increase due to dual-task interference. Results : As expected, compared to NW gait performance is decreased in WWT due to increased EF demands. As hypothesized, significant bilateral increased oxygenation levels in the PFC were observed in WWT compared to NW and to a talking alone condition. Conclusion : Oxygenation levels are increased in the PFC during WWT providing first evidence for the functional involvement of this brain region in attention-demanding locomotion tasks. Keywords : gait, brain, cognition

SS24 126-C-3

MODALITY SPECIFIC STRENGTHENING PROGRAM FOR PREVENTION OF MOBILITY DECLINE IN AGING POPULATION: BENCH TO PRACTICE

Jae-young LIM (*Rehabilitation Medicine, Seoul National University College of Medicine, Korea*)

Introduction : Recent studies have focused on the evidence based interventions to prevent mobility decline or to enhance physical

performance in older adults. Several specific modalities other than traditional strengthening program have been designed to take control of age-related functional decline more effectively. Main purpose of the presentation is to delineate the role of physical function to disability and falls and to discuss the modality-specific intervention programs. Method : Age-related change in human skeletal muscles and its relationship with physical performance are discussed from the results of the in-vitro physiologic studies to human biomechanics studies. Sarcopenia issues are overviewed through recent consensus about diagnosis and management of sarcopenia. In addition, I will introduce some outstanding reports emphasizing on gait speed and mortality. Results : Mobility decline in aging population is closely linked with the change of force-velocity relationship. Specific modality interventions based on increased velocity and eccentric strength can improve the function of aging population more effectively than traditional strengthening program. Power and eccentric strengthening program are discussed as a typical modality specific program to improve both force and velocity. Conclusion : Decreased gait speed is a major indicator of mobility decline or sarcopenia in geriatric population. Power and eccentric training are modality-specific intervention programs to improve both force and velocity. Keywords : Modality specific intervention, mobility decline, sarcopenia

SS24 126-C-4

NEW AND CURRENT COGNITIVE INTERVENTIONS TO ENHANCE MOBILITY IN AGING POPULATION

Joe VERGHESE (*Neurology, Albert Einstein College of Medicine, USA*)

Introduction : The greying of populations worldwide is accompanied by a higher prevalence of disability. While physical exercise is recommended to prevent mobility disability and to improve gait speed, only a minority of seniors engage in exercise at recommended levels, necessitating an urgent exploration of new approaches to improve mobility and gait. There is growing recognition of the relationship between cognitive and motor function in the context of normal aging as well as disease. However, enhancing cognitive function as a strategy to improve mobility is not well explored. This presentation will discuss new and current cognitive interventions to enhance mobility in aging population. Conclusion : This presentation will discuss new and current cognitive interventions to enhance mobility in aging population. Keywords : Gait, Cognition, Intervention

SS24 127-C

CHALLENGING ASPECTS OF DELIRIUM: NEW INSIGHTS IN RECOGNITION AND TREATMENT

SS24 127-C-1

HALOPERIDOL EFFECTS ON PERI-OPERATIVE CHANGES IN QTc-DURATION: A PROSPECTIVE IN-HOSPITAL STUDY

Sofie JANSEN¹, Marieke BLOM², Annemarieke DE JONGHE¹, Barbara VAN MUNSTER³, Ton DE BOER⁴, Sophia DE ROOIJ¹, Hanno TAN², Nathalie VAN DER VELDE¹ (*1. Department of Medicine, section of Geriatric Medicine, Academic Medical Center Amsterdam, Netherlands; 2. Department of Cardiology, Heart Center, Academic Medical Center Amsterdam, Netherlands; 3. Department of Clinical Epidemiology, Biostatistics and Bioinformatics, Academic Medical Center Amsterdam, Netherlands; 4. Division of Pharmacoepidemiology and Clinical Pharmacology, Utrecht Institute for Pharmaceutical Sciences (UIPS), Utrecht University, Netherlands*)

Introduction : Haloperidol may prolong QTc-interval, but is often prescribed peri-operatively to hip-fracture patients, who have several

risk factors for QTc-prolongation. We aimed to determine (1) how QTc-duration changes perioperatively, (2) whether low-dose haloperidol use influences these changes, and (3) the associations between clinical variables and potentially dangerous QTc-prolongation. Method : Design: Prospective cohort study in a tertiary university teaching hospital. Participants: 89 patients (mean age 89 years, 24% male), enrolled in the MAPLE-trial (RCT of melatonin versus placebo on the occurrence of delirium in hip-fracture patients). Measurements: ECGs were made before and after hip surgery, 39 patients were treated with haloperidol. QTc-duration was measured by hand, blinded for haloperidol and pre/post surgery status. Mixed model analysis was used to estimate changes in QTc-duration. Logistic regression analysis was used to determine risk factors for potentially dangerous QT-prolongation (increase by >50 ms or to >500 ms). Results : Patients with normal pre-surgery QTc-duration had a significant increase (mean 12 ms, SD 28) in post-surgery QTc-duration. A significant decrease (mean 19 ms, SD 34) occurred in patients with prolonged pre-surgery QTc-duration. Haloperidol use did not influence the course of changes in QTc-duration ($p = 0.351$). Potentially dangerous QTc-prolongation ($n=8$) was not associated with measured risk factors. Conclusion : QTc-duration changed differentially, increasing in patients with normal, but decreasing in patients with abnormal baseline QTc-duration. Potentially dangerous QTc-prolongation was not associated with haloperidol use or other risk factors. In conclusion, low-dose oral haloperidol did not affect peri-operative QTc-interval. Keywords : Haloperidol, Qtc-Interval, Surgery

SS24 127-C-2

REST-ACTIVITY PATTERNS IN PATIENTS WITH DELIRIUM

Janet L. MACNEIL, Miranda VAN UITERT, Annemarieke DE JONGHE, Barbara C. VAN MUNSTER, Sophia DE ROOIJ (*Department of Medicine, section of Geriatric Medicine, Academic Medical Center Amsterdam, Netherlands*)

Introduction : Delirium is a frequent syndrome in elderly hospital patients. Symptoms typically show a fluctuating course during the day, with patients exhibiting disturbances of their sleep/wake rhythm. Delirium is frequently underdiagnosed, especially the so-called hypoactive subtype. Devices measuring 24-hr motor patterns could contribute to the recognition of delirium. The purpose of this paper is two-fold. First, the results of a pilot study are presented, in which 24-hr motor patterns of delirious patients are measured with a wrist-actigraph. Second, studies reporting 24-hr motor patterns in delirious patients are systematically reviewed. Method : The pilot study included 9 patients, 65 years or older, with a hip fracture in need of surgical repair. For the review, MEDLINE and Embase were searched for studies on motor activity assessment in delirious patients. Results: In the pilot study, the 24-hr activity rhythm was severely disturbed during delirium, and most actigraphic sleep parameter estimates indicated significantly worse sleep during delirious nights. The systematic search resulted in 10 papers. In 3 papers, the sleep-wake rhythm of delirious patients was significantly different from that of nondelirious patients. In 5 papers, delirious patients could be classified into delirium subtypes. In the 2 remaining papers, 24-hr motor patterns of delirium subtypes were not significantly different. Conclusion : Activity patterns revealed differences between delirious and nondelirious patients and between the different subtypes, even in small samples of patients. Future studies, with preferably larger sample sizes, should confirm the potential of activity pattern measuring devices in the early detection of delirium. Keywords : Delirium, Electronic Movement Devices, Early Recognition

SS24 127-C-3

EFFECTS OF MELATONIN ON DELIRIUM IN HIP FRACTURE PATIENTS: REPORT OF A RANDOMISED, PLACEBO-CONTROLLED, DOUBLE BLIND TRIAL

Annemarieke DE JONGHE (*Internal Medicine, Geriatrics Section, Academic Medical Centre, Netherlands*)

Introduction : During delirium, a disruption of the sleep-wake cycle is frequently observed. Melatonin plays an important role in the regulation of the sleep-wake cycle, so this raised the hypothesis that alterations in the metabolism of melatonin might play an important role in the development of delirium. The aim of this study was to investigate with a randomised, placebo controlled double-blind trial effects of melatonin on delirium in older, postoperative hip fracture patients. Method : Acutely hospitalized patients, aged 65 years or more, admitted for surgical repair of a hip fracture were randomized in this placebo controlled double-blind trial. For the first five consecutive days of hospital stay, they received melatonin 3 mg or placebo. The occurrence of delirium was diagnosed according to the Confusion Assessment Method within eight days after start of the study medication. Results : We included 411 patients showing no differences in mean age, 84.4 vs 83.0 years and 26.9 vs 28.3% were male. Living at home: 41 vs 38.7%. Preadmission Katz ADL index score: 6.9 vs 6.5 points. The overall incidence of delirium was 32.2%. Outcomes are the incidence of delirium, the severity and duration of delirium, prevalence of subtypes of delirium, length of hospital stay, haloperidol and benzodiazepines used during delirium, in-hospital complications and post-discharge mortality, and they will be presented. Subgroup analysis will be performed in cognitive impaired patients. Conclusion : Studies on prophylactic treatment of delirium in elderly patients with and without cognitive impairment are still scarce and this RCT contributes substantially to our body of knowledge. Keywords : delirium, prophylaxis, melatonin

SS24 206-C

NECESSITY OF SPECIFIC TREATMENT OF LIFE STYLE RELATED DISEASE FOR LATE ELDERLY -LESSONS FROM 4014 DIABETIC ELDERLY COHORT STUDY

SS24 206-C-1

JAPAN CHOLESTEROL AND DIABETES MELLITUS STUDY-NEW FINDINGS IN LATE ELDERLY

Toshio HAYASHI (*Dept. of Geriatrics, Nagoya Univ. Graduate Sch. of Med., Japan*)

Introduction : LDL-cholesterol(LDL-C) and glucose levels are risk factors for ischemic heart disease(IHD) in middle-aged, diabetic individuals; however, the risk among elderly, is not well-known. We tried to identify factors that predict IHD and cerebrovascular attack(CVA) in elderly. Method : We performed a prospective cohort study(Japan Cholesterol and Diabetes Mellitus Study) with 5.5 years of follow up. 4,014 patients with type 2 diabetes without previous IHD or CVA (1936 women; age 67.4±9.5 years, <65 years old, n=1261; 65 to 74, n=1731; and ≥ 75, n=1016) were recruited on a consecutive outpatient basis from 40 hospitals throughout Japan. Lipids, glucose, and other factors, such as blood pressure (BP), were investigated using the multivariate Cox hazard model. Results : 153 cases of IHD and 104 CVAs(7.8 and 5.7/1000 /year) occurred over 5.5 years. HDL-C and female gender were correlated with IHD in patients ≥75 years old (HR:0.629 and 1.132). Systolic BP(SBP), HbA1C, LDL-C and non-HDL-C were correlated with IHD in subjects<65 years old, and LDL-C/HDL-C ratio was correlated with IHD in all subjects. HDL-C was correlated with CVA in patients ≥75 years old(HR:0.536). Kaplan-

Meier estimator curves showed that IHD occurred more frequently in patients≥75 years old, IHD and CVA were both most frequent among those with lowest HDL-C levels. Conclusion : IHD and CVA in diabetic, late elderly patients were predicted by HDL-C. The LDL-C/HDL-C ratio may represent the effects of both LDL-C and HDL-C. These age-dependent differences in risk are important for developing individualized strategies to prevent atherosclerotic disease. Keywords : Diabetes mellitus, Ischemic heart disease, HDL-C.

SS24 206-C-2

MEDICAL ECONOMICAL APPROACH FOR LIFE STYLE RELATED DISEASES IN LATE ELDERLY

Koichiro INA (*Department of Geriatrics, Nagoya University Graduate School of Medicine, Japan*)

Introduction : Prospective 4014 Japanese diabetic individuals' longitudinal cohort study (67.4±9.5y.o, JCDM) is carried out as primary endpoints of incidence of cardiovascular(IHD) or cerebrovascular(CVA) diseases. Further, increase of medical expenses is drastic according to increase of elderly and diabetic individuals. In Japan, every late elderly needs \$10,000/year for medical expenses, and \$80,000/year for hemodialysis or nursing home. Method : We calculated medical expenses based on JCDM data and supposed treatment effect of risk factors on long-term costs. First study is to investigate the effect of LDL-C control on IHD and CVA. Second is to investigate the various lipid control effect on medical and living costs. We supposed the initial condition as 67 year-old male, 100,000 Potential Cohort. We simulated LDL lowering cases, 1)Present case(LDL=125mg/dl). 2)Guideline level(LDL=110mg/dl.) 3)Ideal level(LDL=90mg/dl). In second study, we supposed the condition as 55, 65 and 75year-old male, 100,000 Potential Cohorts. On IHD and CVA, acute phase, chronic phase of rehabilitation, nursing home or home visiting medical care and outpatient clinic status were supposed and each probability and medical expenses are calculated. Results : On IHD for 10 years, incidence decreases by 40% in ideal case. Similarly, LDL control decreases CVA by 30%. In second study, in case of CVA(stroke), 55y.o., 30years survey, reduction of 20mg/dl of LDL-C will decrease 24% of stroke, 14% of death, 18% of total number of patients and 25% of medical and care expenses. Reduction of LDL-C/HDL-C to 1.5, decrease incidence and expenses of IHD less than half. Conclusion : This kind of study is very rare and necessary in this field. Keywords : Diabetes mellitus, atherosclerotic diseases, medical and care expenses

SS24 206-C-3

WHAT IS BEST MEDICATION FOR LIFE STYLE DISEASES IN LATE ELDERLY?

Hideki NOMURA (*Department of Geriatrics, Aichi Sinryousho Nonami, Japan*)

Introduction : We performed the case?cohort study aims to investigate how agents such as HMGCoA reductase inhibitors(statins) affect the incidence of ischemic heart diseases(IHD) and cerebrovascular attack(CVA) using the results of our cohort study. We also tried to identify whether the effect of statin is direct or indirect through control of plasma lipid profile. Method : Incident cases of IHD or CVA occurring in our cohort study of diabetic individuals, Japan Cholesterol and Diabetes Mellitus(JCDM) study between 2004 and 2010 from 40 hospitals in Japan were ascertained and verified. Users of statin were divided into 4 groups, non-users, continuous users, new users, and stopping users. Cox regression and random-effects meta-analyses were used to investigate differences in diabetes incidence by age. Results : A total of 257 verified incident cases of 153 cases of IHD and 104

CVAs, and randomly selected 405 subcohort individuals among 4014 type 2 diabetic individuals (1936 women; age 67.4±9.5 years; <65 years old, n=1261; 65 to 74 years old, n=1731; and ≥ 75 years old, n=1016) for 5.5 years followed up period. For IHD, incident rate (cases per thousand people year) is 43.24, 85.53 and 92.29 in non-user, new user and continuous user (Odds ratio/non-user, 1.92, 2.07 in new and continuous user). On the otherhands, for CVA, incident rate is 50.41, 17.9, and 26.91 in non-user, new and continuous user. Conclusion : The effect of statins on IHD and CVA in diabetic patients might be different. More detailed analyses including age-dependent differences are done. Trial Registration: UMIN-CTR, UMIN00000516. Keywords: Subsohort study, HMGCoA reductase inhibitor, diabetes mellitus

SS24 207-S

GERONTOLOGICAL AND GERIATRIC EDUCATION AND TRAINING: STUDENT AND RECENT GRADUATE PERSPECTIVES ACROSS MULTIPLE IAGG REGIONS

SS24 207-S-1

EDUCATION AND TRAINING OPPORTUNITIES IN CANADA

Shannon FREEMAN (*School of Public Health and Health Systems, University of Waterloo, Canada*)

Introduction : This presentation will provide an overview of the history and present state of education and training programs in gerontology and geriatrics across Canada. Both the growth of academic programs and recent issues will be highlighted. Method : National organizations with a mandate for education and training in gerontology or geriatrics will also be discussed. Results : Specific attention will be given to the following organizations and related initiatives: - the Canadian Association on Gerontology (L'Association canadienne de gerontologie) and its Student Connection (Connexion Etudiante) - the Canadian Geriatrics Society, the National Geriatrics Interest Group, and related resources for trainees - the Canadian Academy of Geriatric Psychiatry (L'Academie canadienne de psychiatrie geriatrique) and other education and training resources, including the National Review Course in Geriatric Psychiatry -the National Initiative for the Care of the Elderly (Initiative nationale pour le soin des personnes agees) and associated opportunities for students -the Canadian Gerontological Nursing Association -the Institute of Aging (Institut du vieillissement) of the Canadian Institutes of Health Research (Instituts de recherche en sante du Canada) and the annual Summer Program in Aging (SPA) - other related national organizations. Conclusion : Canada has a strong focus on education and training in gerontology and geriatrics, and many of these learning opportunities may be of interest to other countries as examples that can be adapted abroad. Keywords : Education, training, students

SS24 207-S-2

THE AUSTRALIAN EXPERIENCE OF GERONTOLOGICAL AND GERIATRIC EDUCATION AND TRAINING

Claudia MEYER (*Australian Institute of Primary Care and Ageing, LaTrobe University, Australia*)

Introduction : Australia's experience of gerontological and geriatric education and training relates to understanding the complexity of ageing; and the multiple factors and disciplines involved in age-related health and illness. It's history extends over many decades, with the emergence of nursing, allied health and social science complementing the traditional input of medicine and healthcare services. Method : Gerontological and geriatric education and training draws together researchers, educators, policy makers and providers. Delivered through courses, conferences, seminars, and online options by: Higher and

vocational education sectors; Not-for-profit organisations; Peak bodies and associations, including the Australian Association of Gerontology. Results : Australian gerontological and geriatric education and training recognizes the challenges of: The imperative for translational research, as a dynamic exchange between the generation and end-use of evidence; Delivering education and training that covers the expanse of subject areas, including niche areas; Addressing gaps in research and education to build capacity and meet future needs of practitioners/policy makers; Breadth of the workforce requiring education and training (including rural and remote areas); Need for consumer engagement and broad collaboration; and The nature of a fast-changing technological world. Conclusion : For students and early career researchers and practitioners in diverse, but related fields of ageing, Australia has the support of two initiatives - the Student/Early Career Group within the Australian Association of Gerontology and the Emerging Researchers in Ageing network. These groups recognize the need to engage with, and encourage participation of, students and early career researchers and practitioners whom may be working across several disciplines and across geographically challenging distances. Keywords : Student/early career researcher; participation; diversity

SS24 207-S-3

THE ROLE OF THE INTERNATIONAL COUNCIL OF GERONTOLOGY STUDENT ORGANIZATIONS (ICGSO) IN EDUCATION AND TRAINING

Anthony KUPFERSCHMIDT (*Executive Director, British Columbia Psychogeriatric Association, Canada*)

Introduction : In 2002, the International Association of Gerontology (IAG) approved the creation of the International Council of Gerontology Student Organizations (ICGSO) through a unanimous resolution in Valencia, Spain. As a standing committee of the IAGG, two objectives of the ICGSO are to: - Promote the study of aging among students and the training of highly qualified personnel in the fields of aging, and - Contribute to topics of interest to IAGG, including education, training and other substantive issues. Method : The ICGSO met for the first time in 2005 during the 18th IAGG World Congress in Rio de Janeiro, Brazil, and again in Paris, France at the 19th IAGG World Congress. The membership of the ICGSO is comprised of the student and new professional sections of IAGG member societies. Results : This presentation will first briefly review the history and current standing of the ICGSO. It will then build upon the preceding papers and summarize how national student sections can enhance education and training in gerontology and geriatrics both nationally and through IAGG regional councils. This paper will then explore the role of the ICGSO in gerontological and geriatric education and training within the structure of the IAGG, and address related opportunities and challenges. Conclusion : As the importance of gerontology and geriatrics increase with global population aging, it is also important that students and recent graduates can contribute meaningfully to international conversations about training and education in the fields of aging. Keywords : Education, training, students

SS24 209-R

LONG TERM CARE SYSTEMS IN EAST AND WEST. THE ROLES OF CLIENTS, FAMILY CARE, COMMUNITY CARE, AND STATE IN KOREA, JAPAN, NORWAY AND THE NETHERLANDS

SS24 209-R-1

CHANGING ROLES IN LONG TERM CARE IN THE

NETHERLANDS

Cretien VAN CAMPEN (*Care, Netherlands Institute for Social Research | SCP, Netherlands*)

Introduction : Around a quarter of the Dutch population aged 65 years and over are classed as frail, i.e. have a higher risk of adverse health outcomes (functional impairment, admission to an LTC institution, death). Their number is predicted to increase by 50% between 2010 and 2030. Dutch elderly policy is focused on frail older people. The Netherlands has had a state-funded LTC system since 1968. In 2007 the Dutch government partly reformed this system, transforming it from a central state-provided care system to a community-based system of social services. How is the Dutch health care system coping with the growing frail older population? Method : Using statistics and trends drawn from national surveys on the use of family care, community services, state-provided home care and institutional care by frail and vital older people, I will explain the complex situation of LTC for older people in the Netherlands. Results : Only six out of ten frail older people use state-funded LTC in the Netherlands. Four out of ten live independently with the help of family care, medical care, social services and self-care. Frail non-users of home care are younger on average and more often share a household than frail older persons receiving LTC. Conclusion : The conclusion is that independent community-dwelling frail older persons have multiple problems and use a variety of social, health and housing services. This calls for an integrated approach involving case managers. Keywords : Long-term care, frailty, Netherlands

SS24 209-R-2

AGEING POPULATION AND LONG-TERM CARE INSURANCE IN SOUTH KOREA

Hyun-sil KIM (*Department of Nursing, Daegu Haany University, Korea*)

Introduction : With global ageing, Korean population is also ageing more rapidly than many other countries. Population ageing has become one of the serious social concerns in our country. The rapid growth of ageing population can be attributed to a combination of decreased birth rates and increased longevity as a result of effective public health measures and advanced health care. However, the expenditures on care and support of frail older people can become a burden for the younger generations. Method : This presentation reviews the statistics concerning the Korean ageing population. Introduction of the Korean Long-term Care Insurance. Results : In response to the ageing population, the Korean government has introduced a long-term care insurance for older people in 2008. The Korean long-term care insurance covers in-home and institutional care services for senior citizens of 65 years and older. The interim evaluation showed that the Introduction of the long-term care insurance resulted in the creation of jobs such as care provider, an improvement of the recipients' health status, and the emergence of an elderly-friendly industry. However, a number of challenging tasks remains to be solved, including the activation of care management system, the development of a decision support system for eligibility, skill development of the care provider, improvement of the service quality and delivery system, and its cost control. Conclusion : It is concluded that international discussions on developing health care for older people and sharing of knowledge and experiences concerning this care from developed countries are needed in Korea. Keywords : Ageing population; Long-term care insurance; South Korea

SS24 209-R-3

COMMUNITY-BASED INTEGRATED CARE AND LTC

WORKFORCE IN JAPAN

Satoko HOTTA (*Career Development, The Japan Institute for Labour Policy and Training, Japan*)

Introduction : The need and demand for LTC services have been on the rise in Japan. Introduction of the Long-Term Care Insurance System in 2000. In order to respond flexibly to this growing demand and to consistently provide quality service, it is mandatory that sufficient personnel are secured, retained, and trained so that they can provide quality care service. Method : Using statistical figures and trends based on national surveys on LTC workers to understand the state of LTC workforce demand and market, workers attributes and working conditions. Overview of recent developments in governmental policies regarding professional caregivers and HRM improvement in care providers. Results : Attention was first drawn to the quantity. With the call for quality improvement, the focus then shifted to credential requisites and training. When the growth of the workers slowed down, attention was back on quantity, and on worker treatment to allow this to happen. Regarding treatment, the importance of not only long-term care fee levels but management by care providers was recognized as well. With the revision of long-term care fees in 2009, the scope has widened: Discussions are under way on how expertise which directly effects care service quality improvement shall be appraised, and how this appraisal shall be reflected in treatment; and training systems are being reviewed to for establishment of the community-based integrated care system. Conclusion : Emphasis is therefore no longer on "quantity or quality," but on examining the system as a whole and good combination between self-help, mutual help, cooperative help and public support. Keywords : Long-term care, workforce, Japan

SS24 209-R-4

SUSTAINABLE CARE, SCANDINAVIAN RESPONSES

Svein Olav DAATLAND (*Norwegian Social Research, NOVA, Norwegian Social Research, NOVA, Norway*)

Introduction : Long-term care is a mixed responsibility in all welfare states, but the balancing between public and private, formal and informal, is quite different. The Scandinavian model leaves the primary responsibility with the welfare state. Most other countries operate under a family care model, or some form of (state) assisted familism. Which is the more sustainable model for an ageing population? Method : Different models are compared. Main instruments are in Scandinavia universal, tax-funded services, normally provided by local governments (municipalities), and comparatively generous in access and standards. Other countries tend to give the state a more limited and indirect role. Results : Challenges and dilemmas are different, in the Scandinavian case not to overburden the state, in other countries not to overburden the family. Recent trends indicate some convergence between models, Scandinavia leaning more towards the private sector, other countries expanding the role of the state, in particular via mandatory LTC insurances (e.g. Netherlands, Germany, Japan). Conclusion : The paper provides a general review of developments over time. Special attention is given to recent reforms, with particular reference to Norway, and discussing the role of problem pressures, past legacies (path dependency), and more recent ideological and political controversies. Keywords : Long-term care, Welfare state, Scandinavian model

SS24 210-R

CIVIC ENGAGEMENT OF OLDER ADULTS: CROSS-NATIONAL PERSPECTIVES AND RESEARCH AGENDA

SS24 210-R-1

VOLUNTEER ACTIVITIES OF OLDER PEOPLE IN KOREA

Dong-bae KIM (*School of Social Welfare, Yonsei University, Korea*)

Introduction : As Korea transforms from a developing country to a developed country, many people voice that a recovery of community is vital to resolve current social issues. Volunteering is an effective way to recover a community, and the senior citizens, who have lost their roles within the society, are considered valuable assets to partake in the voluntary works. The goal for the Korean senior citizens' voluntarism issue is to raise the current participation rate of 5 % to 10%, equal to half of the ordinary grown person's volunteer participation of 20%. Method : This study will address barriers and facilitators, programs and policies, and future directions of Korean senior citizens' civic participation. Results : The "Korean Association of Seniors", the largest senior organization in Korea, has set up the "Support Center for Senior Volunteers" to encourage more senior citizens to participate in voluntary works. "Community Welfare Center for the Elderly", is setting up many different programs to provide professional volunteer opportunities to those senior citizens who are more active and have richer academic background. The city of Seoul and other City Governments recruit professional volunteers to provide opportunities to participate in such activities as culture narrators, assistant teachers, etc. Conclusion : The purpose of this study is to summarize the current status of Korea's senior citizens' volunteer participation, evaluate effects of volunteering to society as well as individuals, and review what more efforts can be done to promote their volunteer activities by the government, by social organizations, and at local society level. Keywords : civic engagement, volunteering, participation

SS24 210-R-2

THE COMPARATIVE ANALYSIS OF THE CIVIC ENGAGEMENT OF OLDER ADULTS IN CHINA, JAPAN AND SOUTH KOREA UNDER THE CROSS-CULTURE BACKGROUND

Gong CHEN (*Institute of Population Research, Peking University, China*)

Introduction : Geographically, China, Japan and South Korea all belong to the East Asian countries and adjacent to each other; in the aspect of cultural backgrounds, there are some similarities in these three countries. However, the three countries have more differences. Therefore, it is very important for us to compare the civic engagement of older adults under different cultural backgrounds of China, Japan and South Korea. From the view of the cross-cultural, in this paper we will analyze the civic engagement of older adults in these three countries. Method : All of China, Japan and South Korea scholars have carried a certain degree of research including not only quantitative survey but also qualitative interviews, from different angles and aspects of older people's social participation measurement and analysis. Based on the summary of the existing literature and research, this paper compares and summarizes the civic engagement of older adults in China, Japan and South Korea. Results : From the view of result, the cultural background has an important influence on the civic engagement of older adults. Ideas of the elderly in the three countries are very close in some respects, which reflect the commonality of the elderly. Conclusion : Overall, comparing the civic engagement of older adults in China, Japan and South Korea under different cultural backgrounds is important. By contrast, we found that the social participation of the elderly has different characteristics, forms and effects. Keywords : civic engagement, cross-culture, older adults

SS24 210-R-3

INCREASING SUSTAINABILITY OF VOLUNTEERISM IN LATER LIFE: A CASE STUDY OF SINGAPORE

Song Iee HONG (*Social Work, National University of Singapore, Singapore*)

Introduction : The rapid growth of aging population in Singapore has raised societal interest in promoting active aging. In particular, the strategies for social participation in later life have been implemented in multiple ways. As a distinctive strategy, volunteerism has been highlighted through planned events, programs, or campaigns designed by government, non-profit organizations, etc. Nevertheless, the rate of older volunteers is relatively low. Method : A systematic review on the current strategies for senior volunteerism is critical to identify barriers to volunteering and its sustainability over time. Therefore, this study reviews a wide range of data sources such as journal articles, web-based information, government reports, and newspapers on volunteering. Results : This comprehensive review identifies potential reasons for the low rate of senior volunteerism in terms of (1) volunteers' profiles and capability, (2) motivation and barriers to volunteering, (3) types of volunteering and programs, (4) program management, (5) public awareness and attitude towards volunteering, and (6) community and social resources for older volunteers. By and large, as compared to older adults' increasing capability, social strategies and professional management for volunteerism are less developed in Singapore. Furthermore, governmental interventions are slanted to indirect ways such as public education and campaigns. Conclusion : The stagnation of social strategies on volunteerism leads to disengagement, unsustainability, and barriers to volunteering. A better understanding of strategic planning and management for volunteer programs and policies is necessary to shape and advance more appropriate opportunities for older volunteers. More inclusive strategies should be institutionalized to recruit and retain older volunteers for active volunteerism in Singapore. Keywords : volunteering, active aging, social participation

SS24 210-R-4

VOLUNTEERISM OF OLDER ADULTS IN JAPAN: AN EXAMINATION OF DATA FROM 1995 ONWARDS

Li-mei CHEN (*Department of Social Work, Kwansei Gakuin University School of Human Welfare Studies, Japan*)

Introduction : This presentation will discuss the development of Japan's older adult volunteerism and how today's older adult volunteerism needs to change in the face of a super-aging society coupled with changing social and economic needs. Method : The literature and data from 1995 onwards were reviewed to summarize the development of Japan's volunteerism among older adults. Results : Volunteerism did not become a major policy focus nationally until 1995, following the Hanshin Awaji Great Earthquake. Today, approximately one out of every five adults ages 50 years and above volunteers in Japan, a higher rate than for their younger counterparts. Volunteerism is concentrated mainly among older adults in their 50s and 60s (25.2% and 25.1%), and the rate declines for those 70 years and older (14.1%). Areas of interest for volunteering include nature and environmental protection, local and neighborhood activities, and caring for older adults and persons with disabilities. Older adults' interest in social issues grows as they age; however, their willingness to take action declines with age. Conclusion : The presentation suggests that senior volunteerism is necessary for Japan's aging society to provide meaning in later life and sustain good health and well-being. However, to encourage volunteerism among aging baby-boomers, Japan needs to alter its traditional approaches, such as its

top-down approach to organizing volunteerism and its focus on moral citizenship. With unique lives and experiences, the largely middle class baby-boomer generation will probably seek an experience of older adulthood different than that of their predecessors. Keywords : volunteerism, Japan, productive aging

SS24 210-R-5

FUTURE DIRECTIONS FOR ADVANCING NATIONAL AND CROSS-NATIONAL WORK ON VOLUNTEERING IN LATER LIFE

Nancy MORROW-HOWELL (*Friedman Center for Aging, Washington University, USA*)

Introduction : Because volunteering is seen as a win-win for both society and individuals, there is rising interest in increasing the involvement of older adults as volunteers. Method : Types and amounts of volunteering vary greatly between countries, shaped by sociocultural values and governmental support. A conceptual model that includes four types of determinants (socio-demographic, economic, physical environment, and public policies and programs) is presented to guide cross-national comparisons of factors associated with volunteer engagement. Results : Differences in family structure, labor market needs, community infrastructure, and existing programs contribute to volunteer engagement, and strategies to increase engagement must consider these factors. The conceptual model also includes the effects of volunteering on individual, family, and community outcomes. Different institutional arrangements for volunteering influence the effects of this unpaid work on older adults and well as the communities they serve. An accurate understanding of these outcomes is important for cost-benefit analyses to guide policy and program development. Conclusion : There is great potential for cross-national research on volunteering in an aging population. Top priority questions to be pursued include: What antecedents are most strongly related to volunteer engagement; and which can be manipulated? What policies and programs are most effective in engaging older volunteers? Finally, what level of engagement is best for society and for individuals? Data to partially address these questions are becoming available as the number and availability of international data sets on older adults increase; but original data will be needed to understand the most effective ways to attract and support older adults in volunteer roles. Keywords : volunteering, civic engagement, social participation

SS24 213-S

MEETING THE CHALLENGES OF POPULATION AGEING THROUGH CAPACITY BUILDING : INTERNATIONAL PERSPECTIVES

SS24 213-S-1

MEETING THE CHALLENGES OF POPULATION AGEING THROUGH CAPACITY BUILDING IN ASIA/OCEANIA REGION

Peng DU (*Institute of Gerontology, Renmin University of China, China*)

Introduction : Asian and Oceania countries have the majority of world elderly population, both of the developed countries and developing countries in the region have been experiencing rapid population aging and comparatively lack of the trained professionals on policy making, service providers to the elderly and research professionals. Method : This paper will summaries the efforts and experiences of capacity building efforts in the region, especially the international collaborations with key international agencies on training and

education, the progress and the unmet needs, suggestions for further improvement. Results : Since 2011, great efforts have been made by IAGG to develop the training programs for the young professionals in gerontology and geriatrics, especially for the junior researchers, some of the participants are from this region, two intensive courses were ran in France in June, 2011 and Spain in June, 2012. There are three regional intensive courses were run in Taipei, Hong Kong and Beijing in the last two years. Based on two Master Classes on Ageing in Korea initiated by IAGG Asia/Oceania region, a new regional training program has been shaped as the Gary Andrews Academy. Conclusion : However, the reality is the huge gap of capacity building exists in the region, between the developed and developing countries, and especially in the rural or remote areas, more efforts need to be made in the region to meet the challenges; Therefore, the capacity building on meeting the challenges of aging is still top priority in most countries in the region. Keywords : Capacity building, Asia/Oceania, training

SS24 213-S-2

MEETING THE CHALLENGES OF POPULATION AGEING THROUGH CAPACITY BUILDING : THE ROLE OF WHO

John BEARD (*Department of Ageing and Life Course, World Health Organization, Switzerland*)

Introduction : Populations around the world are rapidly ageing, particularly in middle income countries. Maximizing the opportunities and minimizing the challenges of populations ageing will require significant capacity building, both in terms of human resources and the infrastructure to support them. Method : WHO has recently identified population ageing as a priority, and will apply a "Whole of Organization" approach to helping Member States prepare for this transition. Results : This presentation will outline WHO plans on ageing including: -building and strengthening research networks and communities of practice, -developing models of evidence informed policy development on ageing in low and middle income countries - developing norms and standards that can guide good practice. Keywords : Capacity building, international, networks

SS24 213-S-3

MEETING THE CHALLENGE OF GLOBAL AGEING THROUGH CAPACITY BUILDING: THE ROLE OF HELPAGE INTERNATIONAL

Mark Robert GORMAN (*Strategic Development Director, HelpAge International, United Kingdom*)

Introduction : For 30 years HelpAge International has been enabling and supporting older people to form organisations addressing their challenges. We have gone through a number of phases in building and supporting the capacity of our network. The first ten years could be characterised as building foundations, the second decade as developing outreach and delivery of services, and the last decade has been about leveraging the models of experience and building stronger movements of older people. Looking ahead we have a vision of continuing to build an open and inclusive network. We have learnt much from our work, and I will share these experiences and implications for policy and practice in ageing and development. Method : presentation and discussion. Results : A greater understanding of the opportunities and challenges of building networks of organisations, both formal and informal, which enable older people to have a voice. Conclusion : Overall this presentation aims to complement the other presentations to give a rounded picture of both the challenges and the opportunities of capacity building with older people in developing countries. Keywords : network capacity building

SS24 213-S-4

CAPACITY BUILDING AND MANPOWER TRAINING IN THE FIELD OF AGEING: THE INTERNATIONAL INSTITUTE ON AGEING, UNITED NATIONS-MALTA (INIA)

Joseph TROISI (*European Center for Gerontology, University of Malta, Malta*)

Introduction : Although 31 years have passed since the First World Assembly on Ageing, the implementation of the recommendations of the Vienna International Plan of Action on Aging, has not often met the expected results. As was emphasised in the Madrid International Plan of Action on Ageing twenty years later and in various UN General Assemblies, the very implementation of the Plan fundamentally requires two essential facets which though distinct are intrinsically related. These are: national capacity building and the mainstreaming of ageing into national development policies and programmes on ageing. Results : When referring to training in the various aspects of ageing, there is the danger of restricting it to high levels of specialisation given at universities. While not minimising this need, it is important to emphasise that training should be made available at all levels and for different functions. This includes all those who work with older persons at home, in the community or in institutions, be they volunteers or family members as well as the older persons themselves. Education in the field of ageing needs to be multi-sectoral in nature covering 1) the professionals; 2) those who directly work with older persons; and 3) the older persons themselves. Conclusion : This presentation aims at reviewing and analysing the work being carried out by the International Institute on Ageing (INIA), to meet this need emphasising the fact that a new orientation in capacity building and new skills among all those involved is required. Keywords : Population ageing, Capacity building, International perspectives.

SS24 214-S

GERIATRIC MENTAL HEALTH AND POSITIVE AGEING IN THE ASIA-PACIFIC REGION

SS24 214-S-1

LIVING WITH 'HWA-BYUNG': THE PSYCHO-SOCIAL IMPACT OF ELDER MISTREATMENT ON OLDER MIGRANTS IN NEW ZEALAND

Hong-jae PARK (*School of Counselling, Human Services and Social Work, The University of Auckland, New Zealand*)

Introduction : Elder abuse and neglect is an issue that adversely affects the health and well-being of older people in most societies. The purpose of this paper is to describe the psycho-social experiences of older migrants who are involved in elder abuse and neglect in New Zealand. Method : Data were collected from in-depth interviews with older Korean people in New Zealand. The lived experiences of elder abuse and neglect were investigated with older people who were, or had been, mistreated in their transnational family setting. Data were analysed using a concept mapping technique, with a focus on the broader cultural and social context of the information collected. Results : Elder mistreatment can cause both emotional and physical health problems. The findings of the study show that the older persons who were mistreated in family settings experienced a range of psychological distress and physical symptoms. Many of them identified Hwa-byung (literally, anger disease) as a health issue associated with suppressed emotions of anger, demoralisation, heat sensation, and other somatised symptoms. This culture-related anger syndrome often contributed to low rates of help-seeking among those people who were involved in elder mistreatment. Conclusion : Elder

abuse and neglect in the migrant setting is a traumatic event that has an adverse impact on the health and well-being of older migrants. It is important to address the issue in the social and cultural context within which older migrants and their families are embedded. Keywords : Older migrants, Elder abuse and neglect, Hwa-byung

SS24 214-S-2

MENTAL HEALTH CARE NEEDS OF AGEING POPULATIONS - A SITUATIONAL ANALYSIS OF POLICIES AND SERVICES IN DEVELOPING NATIONS

Ilango PONNUSWAM (*Department of Social Work, Bharathidasan University, India*)

Introduction : Geriatric Mental Health (GMH) refers to a sub-domain within the main domain of mental health. It is a multidisciplinary approach to assessment and treatment of mental illness or impairment of the older persons from a bio-psycho-social perspective. It primarily encompasses functional disorders or organic disorders among the elderly. It focuses primarily on persons who experience their first onset of mental illness around the age of 65 or over. Individuals under 65 whose cognitive impairment is related to a disease associated with aging may also be more appropriately served by GMH care. Method : This paper attempts to document the psychiatric morbidity rates among the elderly in developing nations and the extent of geriatric mental health services and the enormous mental health manpower needs in the developing world. Results : Three-quarters of those afflicted with mental disorders live in developing countries. Mental disorders are a leading cause of disability globally and represent 14 per cent of the global burden of disease. Despite the enormous health burden, it remains one of the most neglected diseases. Geriatric mental health is an area which is almost totally neglected in the mental health care policy framework and programming in the developing nations. Conclusion : the author argues for due attention by healthcare planners to the growing needs among older persons for mental health services, proper assessment of psychiatric morbidity rates among the elderly, training of geriatric mental health manpower and development of appropriate geriatric mental health services in the developing countries. Keywords : Geriatric Mental Health, developing country, bio-psycho-social perspective

SS24 214-S-3

MENTAL WEALTH IN OLD AGE: AGEING WELL IN AUSTRALIA

Wendy Wen LI, Daniel MILLER (*Department of Psychology, James Cook University, Australia*)

Introduction : This paper employs the model of mental wealth to investigate protective factors against mental disorders in older population using an Australian sample. The model of mental wealth captures two aspects of mental development: mental capital and mental well-being. Mental capital encompasses both cognitive and emotional resources. It includes people's cognitive ability, their flexibility and efficiency at learning, and their 'emotional intelligence' which can also be described as social skills and resilience in the face of stress. Mental well-being is a dynamic state that refers to individuals' ability to develop their potential, work productively and creatively, and build strong and positive relationships with others and contribute to one's community. This paper focuses on the role certain aspects of mental capital, such as resilience and proactive coping strategies, play in enhancing mental well-being among older Australians. Method : Using the Clinical Assessment Scale for the Elderly, this study examined mental health among 250 Australian

older adults. Particular attention was paid to the effects of resilience and proactive coping strategies on the participants' mental health. Results : Results reveal that high resilience scores and high proactive coping scores are negatively correlated with mental health indicators. Participants with a high resilience score and a high proactive coping score generally displayed better mental well-being. Conclusion : Resilience and proactive coping appear to act as psychological buffers. Both seem to be protective factors against mental disorders. Keywords: Resilience, proactive coping, mental health

SS24 215-S

CROSS-CULTURAL PERSPECTIVES ON PSYCHOSOCIAL SYMPTOMS AT THE END OF LIFE

SS24 215-S-1

CONTEMPORARY PERSPECTIVES ON THE ASSESSMENT AND TREATMENT OF DEPRESSION AT THE END OF LIFE IN THE UNITED STATES

Brian D CARPENTER (*Psychology, Washington University, USA*)

Introduction : While symptoms of depression are common among individuals with serious, life-limiting illness, they are also variable over time, within individuals, and across individuals. Adding to this complexity, cultural and contextual factors can influence the experience and presentation of depression at the end of life. Method : This presentation reviews several different perspectives, methods, and instruments to assess depression, each with their own strengths and weaknesses and cultural sensitivity. The presentation also summarizes the theoretical foundation of treatments for depression, empirical evaluation of their efficacy and effectiveness, and the extent to which they integrate cultural variations. Results : Traditional instruments to assess depressive symptoms have limitations among patients with life-limiting illness, often because the phenomenology of depression near the end of life is so variable. Several more recently developed instruments are more sensitive to the issues of patients at the end of life. Similarly, traditional psychological treatments may be effective with seriously ill patients, and treatments recently developed for this population may have more substantial benefits. To date, assessments instruments and treatments have not yet integrated cultural variability to any great extent. Conclusion : The phenomenology of depression at the end of life is complicated by biopsychosocial factors and variations. More research is needed to clarify the experience of disrupted mood near the end of life, and more research is needed to develop and evaluate assessment tools and treatments. Throughout this process, cultural issues deserve close attention. Keywords : End of Life Care, Depression

SS24 215-S-2

BEREAVEMENT AMONG CHINESE PEOPLE IN HONG KONG

Amy Yin Man CHOW (*Department of Social Work & Social Administration, The University of Hong Kong, Hong Kong*)

Introduction : Bereavement care is an integral part of palliative care. The care extends from the patient to the entire family holistically even after the death of the patient. Studies of effectiveness of bereavement care are found to have diversified result, thus there is a call for robust development and examination of bereavement care. Based on the Dual Process Model, the team of Utah University developed a bereavement group work intervention model. Method : Adopting a focus group method, information was collected from a group of Chinese professionals in Hong Kong to translate the Utah model into a Chinese Hong Kong model. Four pilot groups were carried out and data was

collected at pre-group and post group. Areas of assessment include emotional reactions, grief reactions, loneliness, dual process coping and social support. Results : The Utah model was converted from a 14-session group to an 8-session one. Cultural relevant content was added to the new model as well. A manual was produced. Forty-six widowed older adults joined the four pilot groups. They had statistically significant increase in coping ability and decrease in emotional loneliness after having the intervention. Conclusion : When adopting bereavement intervention model from another culture, modulations have to be made to fit in the contextual environment. The Dual Process Intervention Model for bereaved older adults is promising and found to have positive results in both United States and Hong Kong. Keywords: Bereavement Care, Dual Process Model, Chinese

SS24 215-S-3

END-OF-LIFE CARE AND EXISTENTIAL NEEDS IN INSTITUTIONS FOR OLDER PEOPLE IN SWEDEN AND JAPAN

Els-marie ANBACKEN (*Social and Welfare Studies, Social Work, Linköping University, Sweden*)

Introduction : Existential needs are often neglected in end of life care - also at care homes for older persons. Why is this so? How are such needs expressed and encountered in institutions which should provide opportunities for a good everyday life as well as a good end of life? The Japanese and Swedish empirical cases further question in what ways care cultures, settings and systems influence the care. Method : The study has three parts: a previous study in Sweden (2008), a pilot study (2012) and a new study in Japan (2013). While qualitative interviews were carried out in the previous and the pilot studies, participant observations in combination with interview talks will be central in the new study. Secondary data and policy documents will also be used. Results : The result from the Swedish study showed that existential needs were expressed in various ways, including themes of faith, hope, love and relations. The Japanese pilot study showed that more time was needed to observe the residents in their natural environment in order to better understand the existential nuances embedded in their accounts. Expected findings of the new study is that verbal and nonverbal expressions will show that older persons, with or without dementia, are able to express existential needs if the environment allows and supports it. Conclusion : In order to carry out existential care, staff needs opportunities to reflect on the value and sense of such care in the end of life, and be given tools to be able to accomplish it. Keywords : existential care

SS24 216-C

THE DIGITAL REVOLUTION AND THE PRACTICE OF GERIATRIC MEDICINE

SS24 216-C-1

USING ELECTRONIC RECORDS TO AID PATIENT TRACKING FOR HEALTH CARE IN RURAL AREAS IN A DEVELOPING COUNTRY

Shelley Ann DE LA VEGA (*Institute of Health Policy and Development Studies, National Institutes of Health University of the Philippines Manila, Philippines*)

Introduction : Telemedicine is a digital /electronic method of providing healthcare to patients in remote, hard to reach areas. Telehealth programs in the Philippines were established and strengthened thru the National Telehealth Center, National Institutes of Health, University of the Philippines Manila. The Community Health Information Tracking System (CHITS), is an electronic medical record

(EMR) for Rural Health Units also developed by the University of the Philippines. This customizable, user friendly software is free, thus lowering costs for the Local Government Units. It is now available in MMS form, where data is saved in the health worker's cellphone, making it useful for patient tracking in rural and remote areas. Method: Descriptive overview of program. Results : Doctors and selected nurses have been trained on how to present patients through videoconferencing and are referred to the Philippine General Hospital in Manila. Other avenues that have been utilized include SMS, and MMS. Sessions include diagnosis and management of stroke, poisoning, skin disease, etc. Conclusion : CHITS integrates health data from the ground level and organizes it in a manner that health workers, city/municipal health officers, and even the Department of Health (DOH) could use it for decision making and governance. Keywords : telemedicine , electronic records, governance

SS24 216-C-2

SUPPORTING CAREGIVERS VIA THE INTERNET: ISSUES AND EFFICACY

Philip Jun Hua POI (*Department of Medicine, University of Malaya, Malaysia*)

Introduction : The world is increasingly connected via the internet, and its usage in the practice of geriatric medicine is still at a rudimentary stage. Caregivers are provided with the versatility and accessibility of the internet to access information and medical opinion. Asian values of filial piety can be supported via the internet, by providing appropriate information, the caregiver is able to raise their threshold of providing care instead of institutionalising their parents. Method : Access to make enquiries via the internet to the doctor was provided to all caregivers attending a clinic and this mode of communication was evaluated. Results : Results of this pilot study will be discussed. Conclusion : The access to medical opinion and help is a useful tool for many caregivers who are internet savvy, allowing for ready access to medical information. However, this benefit is mitigated by the demands on the doctor's time, the increasing risk of medicolegal implications and a general preoccupation of the technology available. Keywords : internet, geriatrics, malaysia

SS24 216-C-3

USING TECHNOLOGY TO AID EDUCATION FOR UNDERGRADUATE AND POSTGRADUATE STUDENTS IN GERIATRIC MEDICINE

Roger Y WONG (*Faculty of Medicine, University of British Columbia, Canada*)

Introduction : Increasing the geriatric medicine exposure and learning experience in undergraduate medical education (UGME), postgraduate medical education (PGME), and continuing professional development (CPD) is essential when addressing the growing healthcare needs of the aging population. Method : Technology enabled learning (TEL) programs in geriatric medicine can promote the dissemination and translation of knowledge in a distributed medical education (DME) model within and across geographic regions. Results : Many TEL opportunities exist in the Asia-Pacific region for UGME, PGME, and CPD audiences. Live broadcast technologies of medical lectures and presentations via video-conferencing and webinar are commonly used, and can be archived by video recording and podcast for future retrieval. Interactive discussion can be made possible by simultaneous webcast technology. Live patient encounters especially in remote and rural areas can be broadcasted across geographic regions using tele-health, which also allows inter-professional health practices to flourish. Internet-based educational modules can be developed to

address both perceived and non-perceived learning needs of health professionals from different disciplines. Simulation technology can be used to promote geriatrics education, including both low fidelity (e.g. standardized patient) and high fidelity models (e.g. critically ill simulator with multi-system failure). Finally, communication and collaboration competencies can be taught by innovative technologic methods such as cinemeducation. Conclusion : Technology can be helpful in enhancing the learning experience in geriatric medicine across the educational continuum of UGME, PGME and CPD. Keywords : technology, education, geriatric

SS24 216-C-4

USING TECHNOLOGY TO ASSIST COMMUNITY GERIATRIC PRACTICE

Bernard Ming-hei KONG (*President, The Hong Kong Geriatrics Society, Hong Kong*)

Introduction : One of the most powerful clinical digital systems is the Hong Kong Hospital Authority Clinical Management System (CMS). This system is accessible by 29,000 clinical users at 43 hospitals and 120 clinics across the whole of Hong Kong. There are 8 millions patient records, image volume and patient data in terabytes, and half billion of lab records installed covering more than 93% of the population's health data. Method : This presentation covers the development of clinical information in the community and how geriatrician is able to link up health data between hospital and community settings especially in old age homes and patients' home . The use of tele-medicine, remote CMS, telephone nursing consultation service, call center and the use of HARPPE (Hospital Admission Risk Reduction Program for the Elderly) marked the revolutionary steps in management elderly medicine in a new digital world. Results : The Integrated Care Model (ICM) is the latest attempt to improve the care of older patients discharge from the hospital back to the community. IPAD2 are used to facilitate ICM nurses for documentation during hospitalization while case managers follow up high risk elderly patients with remote CMS. Conclusion : The present system is not perfect and there are still gaps to be filled up. The digital revolutionary will definitely benefit not just the clinicians but the overall quality of care of our elders. Keywords : digital, geriatric medicine

SS24 217-C

SARCOPENIC OBESITY: THE LINK BETWEEN SKELETAL MUSCLE AND ADIPOSE TISSUE

SS24 217-C-1

CHANGES IN MUSCLE STRENGTH AND MUSCLE FAT INFILTRATION WITH AGING

Seok Won PARK (*Department of Medicine, CHA Bundang Medical Center, School of Medicine, CHA University, Korea*)

Introduction : In modern societies, the prevalence of obesity in the elderly has dramatically increased. On the other hand, ageing results in a progressive loss of skeletal muscle mass and strength. Consequently, we are now encountering an epidemic of the combination of excess body fat and reduced skeletal muscle mass and/or strength with ageing which is often called as "sarcopenic obesity". Method : We have examined longitudinal changes in skeletal muscle mass and strength as well as regional fat mass, particularly inter-muscular fat infiltration with aging. We also explored the effect of type 2 diabetes on the changes in muscle mass and strength in community dwelling well functioning older adults aged 70 to 79 yrs at baseline who were enrolled in the Health Aging, and Body Composition Study. Whole body and regional lean and fat mass were assessed by dual-energy X-

ray absorptiometry and computed tomography. Results : The annualized rates of leg strength decline (2.6~4.1% depending on race and gender) were about 3 times greater than the rate of loss of leg muscle mass (~1% per year). High intermuscular fat (IMT) mass increased in older adults regardless of changes in weight or subcutaneous fat. Older adults with type 2 diabetes showed greater declines in leg muscle mass and strength than non-diabetic counterpart. Conclusion : In older adults, decline in muscle strength is greater than loss of muscle mass, which suggests a decline in muscle quality. Type 2 diabetes is associated with excessive loss of skeletal muscle mass and strength, resulting in even poorer muscle quality. Keywords : sarcopenic obesity, aging, type 2 diabetes

SS24 217-C-2

SARCOPENIC OBESITY: THE LINK BETWEEN SKELETAL MUSCLE AND ADIPOSE TISSUE

Kyung Mook CHOI (*Endocrinology and Metabolism, Korea University, Korea*)

Introduction : Recently, the prevalence of obesity in the elderly has dramatically increased. Aging results in a progressive loss of muscle mass and strength called 'sarcopenia', which is Greek for 'poverty of flesh'. A combination of excess body fat and reduced muscle mass and/or strength with aging is defined as 'sarcopenic obesity'. Since older persons with sarcopenic obesity are at special risk for adverse health outcome, a rapidly increasing obese elderly population may impose a growing financial burden in the health care system in Korea. Method : Muscle and fat mass are strongly inter-connected from a patho-physiological mechanism. Accordingly, a better understanding of these mechanisms which lead from gain of fat mass to loss of muscle mass or vice versa seems to be critical. Excess energy intake, physical inactivity, insulin resistance, changes in hormonal environment and low-grade inflammation may result in the development of sarcopenic obesity. Obesity and sarcopenia in the elderly people potentiate each other and amplify their impact on disability, morbidity and mortality. Consequently, identifying elderly patients with sarcopenic obesity might be important for attenuating its clinical impact. Results : Despite the growing importance of sarcopenic obesity, only a few studies evaluating the definition and prevalence of sarcopenic obesity was performed in Caucasian populations and studies in non-Caucasian populations were very limited. Therefore, we have been performed a prospective cohort study named 'Korean Sarcopenic Obesity Study (KSOS)' in Korean population. Conclusion : In this lecture, I will summarize previous studies about sarcopenic obesity and its relationship with metabolic disorders including metabolic syndrome and diabetes. Keywords : sarcopenic obesity

SS24 217-C-3

SARCOPENIC OBESITY: PREVALENCE AND ASSOCIATION WITH METABOLIC SYNDROME IN THE KOREAN LONGITUDINAL STUDY ON HEALTH AND AGING

Soo LIM (*Internal Medicine, Seoul National University Bundang Hospital, Korea*)

Introduction : This sarcopenic obesity (SO) is associated with deteriorations in physical disability, morbidity, and mortality. Therefore, sarcopenia and obesity might act synergistically on metabolic and functional impairments in the elderly. However, there have been few reports investigating the association of SO with metabolic syndrome, particularly in Asian ethnic groups. Method : We investigated the prevalence of SO and its relationship with metabolic syndrome in a community-based elderly cohort in Korea. In this study,

287 men and 278 women aged 65 or older were recruited. Sarcopenia was defined as the appendicular skeletal muscle mass (ASM) divided by height squared (Ht²) (kg/m²) or by weight (Wt) (%) of < 1 SD below the sex-specific mean for young adults. Obesity was defined as a visceral fat area \geq 100 cm². Results : The prevalence of SO was 16.7% in men and 5.7% in women with sarcopenia defined by ASM/Ht²; however, it was 35.1% in men and 48.1% in women by ASM/Wt. Using ASM/Wt, the homeostasis model assessment of insulin resistance of subjects with SO was higher and they were at higher risk for metabolic syndrome (odds ratio [OR] 8.28 [95% CI 4.45-15.40]) than the obese (5.51 [2.81-10.80]) or sarcopenic group (2.64 [1.08-6.44]). Conclusion : In conclusion, SO defined by ASM/Wt was more closely associated with metabolic syndrome than either sarcopenia or obesity alone. Keywords : Sarcopenic obesity, metabolic syndrome, Korea

SS24 217-C-4

INTERVENTIONS TO OVERCOME SARCOPENIC OBESITY

Anne B. NEWMAN (*Epidemiology, University of Pittsburgh, Graduate School of Public Health, USA*)

Introduction : Obesity in old age can be accompanied by a level of muscle mass and function that is inadequate for maintaining function and mobility. However, weight loss recommendations for older adults remain controversial as some excess weight seems to protect against mortality and some muscle mass is lost when weight is lost. Method : Review of the literature and presentation of results from two clinical trials of physical activity and weight loss. Results : The literature to date shows that older adults can safely lose weight and maintain muscle function. Aerobic physical activity seems to promote selective loss of visceral and muscle fat. Strength and power training may also be important in this subset of older people. Conclusion : Sarcopenic obesity is modifiable. Additional studies are needed to better define the optimal methods to successfully remodel body composition for maximal function. Keywords : Epidemiology; Sarcopenia; Obesity

SS24 218-S

PSYCHOLOGICAL WELL-BEING IN THE OLDEST OLD

SS24 218-S-1

NEW SUCCESSFUL AGING MODEL IN THE LONGEVITY SOCIETY

Yasuyuki GONDO¹, Yukie MASUI², Takeshi NAKAGAWA¹, Kazunori IKEBE³, Kei KAMIDE⁴, Yasumichi ARAI⁵, Ryutaro TAKAHASHI⁶ (*1. Graduate School of Human Sciences, Osaka University, Japan; 2. Human Care Research Team, Tokyo metropolitan institute of gerontology, Japan; 3. Graduate School of Dentistry, Osaka University, Japan; 4. Graduate School of Medicine, Osaka University, Japan; 5. School of Medicine, Keio University, Japan; 6. Research on Social and Human Sciences, Tokyo Metropolitan Institute of Gerontology, Japan*)

Introduction : In developed countries, the issue of aging and the elderly has recently been spotlighted in various academic disciplines. However, only a few studies have focused particularly on centenarians and the oldest-old, whose health status tends to be in decline, in contrast to that of individuals in early and middle old age. Successful aging is an important concept for the elderly, and sociologists, medical physiologists and psychologists have proposed their own theories of how this can be achieved. However, since it is difficult to apply these theories to centenarians and the oldest-old, new theories for successful aging are required. Method : Empirical findings related to successful aging were introduced and applied in the context of centenarians and

the oldest-old, and a new framework for successful aging emphasizing psychological development in old age is proposed. We conducted invitation survey for community dwelling septuagenarians (age ranged 69-71, men=477, women=523), and octogenarians (age ranged 79-81, men=457, women=516) recruited from four regions in Japan. They were 23 percent and 18 percent out of eligible individuals in septuagenarians and octogenarians cohorts respectively. Results : None of the previous models for successful aging were shown to be appropriate for adaptation to the long and unstable period of extreme old age. New model of successful aging fitted surveyed sample. Conclusion : To evolving new model for successful aging that considers age-related differences in functional status, new framework based on the findings investigated oldest-old and centenarian is proposed. Keywords : well-being, successful aging

SS24 218-S-2

IS SELF-RATED HEALTH STILL SENSITIVE FOR CHANGES IN DISEASE AND FUNCTIONING AMONG NONAGENARIANS?

Henrike GALENKAMP¹, Dorly J.H. DEEG¹, Martijn HUISMAN¹, Antti HERVONEN², Arjan W. BRAAM³, Marja JYLHA² (1. Department of Epidemiology and Biostatistics and the EMGO Institute for Health and Care Research, VU University Medical Center, Netherlands; 2. Gerontology Research Center and Tampere School of Health Sciences, University of Tampere, Finland; 3. Department of Emergency Psychiatry, Altrecht Mental Health Care, Netherlands)

Introduction : With age, there is an increasing gap between relatively stable levels of self-rated health (SRH) and actual health status. This study investigates if SRH among nonagenarians still changes over time, and examines its sensitivity for changes in measures of disease and functioning. Method : In the Vitality 90+ Study, questionnaires were sent to all people aged 90 years and over living in Tampere, Finland. Included were respondents who provided data on the 2001 measurement and at least one follow-up measurement in 2003, 2007 or 2010 (N=334). Generalized Estimating Equations (GEE) analyses examined longitudinal change in SRH and the predictive value of number of chronic conditions and a functioning score, based on five activities. Results : Within two years, most people (56.3%) had unchanged SRH, but declined SRH (22.3%) was associated with worse baseline functioning and declined functioning. Clear declines in SRH after six and nine years were associated with increased diseases (OR=1.23) and decreased functioning (OR=1.28). The impact of diseases and functioning was smaller among institutionalized people (diseases OR=0.90; functioning OR=1.18) than among people living independently (diseases OR=1.30; functioning OR=1.44). Conclusion : SRH among nonagenarians was sensitive to changes in number of diseases and functioning, although more pronounced on the longer than on the shorter term. Keywords : Self-rated health, Oldest olds

SS24 218-S-3

AGE DIFFERENCES IN POSITIVE AND NEGATIVE AFFECT AMONG OLDEST-OLD ADULTS

Peter MARTIN¹, Jinmyoung CHO², Leonard W POON³ (1. Human Development & Family Studies, Iowa State University, USA; 2. Health Science Center, Texas A&M, USA; 3. Gerontology Center, University of Georgia, USA)

Introduction : The purpose of this study was to compare self- and proxy reports of positive and negative affect among two age groups: centenarians and octogenarians. Method : Data from 201 octogenarians and centenarians and 162 proxy informants who

participated in Phase III of the Georgia Centenarian Study were used. Factor analyses were computed to compare the factor structure of positive and negative affect. Independent samples t-tests were computed to assess age differences, and bivariate correlations and paired t-tests were computed to assess similarities and differences among self- and proxy reports. Results : A two factor solution was obtained for self- and proxy reports, dividing affect into positive and negative components. Self reports indicated mean age differences in positive but not negative affect. Centenarians showed significantly lower levels of positive affect. Proxy informants did not entirely replicate these differences. A direct comparison of self- and proxy reports indicated that for the whole sample proxies rated positive and negative affect higher than self reports. This was confirmed for centenarians, however, for octogenarians, only positive affect levels were rated significantly higher by proxy reporters. Conclusion : The results indicate that proxies may view affect levels somewhat differently than very old adults, particularly centenarians. Keywords : centenarians, mental health, proxy reports

SS24 219-S

GERONTOLOGY TRAINING IN LATIN AMERICA

SS24 219-S-1

GRADUATE PROGRAMS OF GERONTOLOGY IN BRAZIL

Anita Liberalesso NERI (Gerontology, State University of Campinas, Brazil)

Introduction : Graduate programs of Gerontology are a relatively new investment in Brazil. The first medical residency in Geriatrics was founded in 1976, at the Catholic University of Rio Grande do Sul, under the auspices of the Japanese Government. The first master and doctoral program was founded in 1997 at the State University of Campinas. Today, there are 7 master and 2 doctoral programs, whose establishment was influenced by the process of internationalization of Gerontology and by the actions of the Brazilian Society of Geriatrics and Gerontology, with the purpose of preparing human resources and enhancing research. Method : Aim and method. Identifying the main trends of the Brazilian Graduate Programs in Gerontology, supported by a content analysis of its documents. Results : All programs are identified as interdisciplinary and so are recognized by the research funding agencies. All them recognize that interdisciplinarity is the product of gradual construction made by teams engaged in the generation of new languages, methodologies and models, with a increasing blurring of the boundaries of traditional disciplines. Along time, the struggle for hierarchical and professional boundaries becomes increasingly weak, in favour of creativity and pragmatism. The influence of Geriatrics and other fields of Medicine, Biology and Psychology is greater than that exerted by the Social Sciences and Education. The dominant trend is to conduct population and epidemiological surveying and after, quasi-experimental studies. Conclusion : The paths of interdisciplinarity require great commitment. Among the challenges to be faced is the establishment of the professional and academic field of Gerontology. Keywords : Interdisciplinarity; Gerontological Education.

SS24 219-S-2

INTERDISCIPLINARITY AND RESEARCH IN MASTER'S PROGRAMS IN GERONTOLOGY IN COLOMBIA

Carmen-Lucia CURCIO (Gerontology and Geriatrics, University of Caldas, Colombia)

Introduction : Gerontology is inherently multidisciplinary field, incorporating a variety of perspectives, yet little systematic thought

has been devoted to exploring the implications of this diversity for research programs that are interdisciplinary in nature. Over the past several decades, gerontology has been in a search for self-definition. A variety of studies have been conducted in order to establish the focus of gerontology. These studies illustrate the evolution of gerontological knowledge is explained by continuity and progression in the study of biomedical, behavioral, and social aging. It is now critical to develop conceptual clarity about how interdisciplinary educational programs and research programs should be designed and implemented. Method : This presentation outlines a framework developed in Master's programs in gerontology in Colombia. Results : We are working an integrative model: The research approach and educational programs based in the disciplines related to gerontology with a life course perspective and interdisciplinary emphasis. First, the epistemology of interdisciplinary learning and research is analyzed. Then, the central role played by values in interprofessional and interdisciplinary relationships. Finally, specific techniques to stimulate skill and knowledge acquisition essential to the interdisciplinary team are suggested. Conclusion : Interdisciplinarity is a matter of disciplines, therefore the research. Interprofessionality is a matter of professions and occupations. Master degree training should be to prepare for both. Keywords : Interdisciplinary, Research, Colombia

SS24 219-S-3 GERONTOLOGY TRAINING IN ARGENTINA

Jose Ricardo JAUREGUI (*Internal Medicine, Italian Hospital of Buenos Aires, Argentina*)

Introduction : Gerontology development in Argentina is a challenge till today. Method : Intensive search in Universities and others sets where Gerontological education take place in the whole country. Analysis of programs, topics and certifications Clasification of them in categories State of the Art of Gerontological Educations in XXIst Century in Argentina. Results : 6 full courses in Public Universities 5 full courses in Privates Universities 1 full virtual course in a 'Distance Education Model' many little courses with no official support, or under ONG's supervision. Conclusion : Gerontological education in Argentina needs more development, official support and possibly more social visibility to stimulates community understanding about its importance. Keywords : Gerontology Education Argentina

SS24 219-S-4 INTERDISCIPLINARY COLLABORATION IN GERONTOLOGY IN LATIN AMERICA

Fernando GOMEZ (*Research Group on Geriatrics and Gerontology, Faculty of Health Sciences,, University of Caldas, Colombia*)

Introduction : Interdisciplinary collaboration and interdisciplinary care are terms used interchangeably to refer to a philosophy and process of care that brings together two or more individuals, often from different professional disciplines, who work to achieve shared aims and objectives. Method : The purpose of this study was to identify quantitative and qualitative studies about interdisciplinary collaboration in Gerontology in Latin America (LA). Results : A few studies on health interdisciplinary collaboration have been conducted in Latin America. All of them used qualitative approaches and emphasized aspects of health care teams, such as structuring, functioning and training. All of them highlighted the subjective component of teams. The provision of health care services in the region has been based for decades on a traditional organizational model grounded in individual practice. Each professional focused on a given object used to develop a task aimed at assessing, evaluating, and treating elderly people. However, there was no awareness about the

roles of other disciplines and as consequence mutual recognition is not common. Conclusion : The most important characteristic about interdisciplinary collaboration in gerontology in LA is their subjective-basis framework, who core consists in taking into account the internal and emotional dimensions of the team to solve "complex" problems of the elderly. This framework became necessary to hold a more holistic approach, not only incorporating biological and health aspects but also taking into account social resources and cultural and economic factors. Interdisciplinary collaboration facilitate the interaction between interdisciplinary health care team members and permit more comprehensive evaluation and support for older people. Keywords : Interdisciplinary collaboration, Latin America, health care team, gerontology

SS24 221-S INTERNATIONAL PERSPECTIVES ON THE MEASUREMENT OF HEALTH

SS24 221-S-1 MEDICAL ASPECTS OF SOCIETY 2030

Jeffrey HALTER (*Geriatrics Center, University of Michigan, USA*)

Introduction : Medical care in 2030 must address needs of the post-World War Two baby boom generation in their 80's. This cohort of octogenarians will likely be actively engaged in their own health care needs, but in many communities smaller numbers of younger people will be available to provide needed services and support for this rapidly aging population. Where rates of reproduction have become very low such as China and Europe, family caregiving support will rapidly be overwhelmed unless alternatives are developed. While future octogenarians may have less chronic disease and comorbidity than previous generations, various chronic conditions will likely accumulate leading to disability over time. Method : We apply a lifespan conceptual model in which the individual is one component of a much larger continuum that reflects its own biology at the cellular level but extends well beyond the individual to include the role of family and community, corporations, country, and overall culture. Results : Adaptations at the community, corporate, and country level will be needed to ensure that the medical care needs of a very different demographic mix in 2030 can be met. Prevention must be a key component. Culture and country through corporations and community can establish standards in which healthy diets, physical activity and preventive aspects of medicine are emphasized to a much greater degree than they are today. Conclusion : Such developments can help Society 2030 achieve a new balance in which a large aging population can be more functional while needing less help and support at the immediate family level. Keywords : caregiving, disability, prevention

SS24 221-S-2 SOCIAL AND BEHAVIORAL CONSIDERATIONS IN PLANNING FOR SOCIETY 2030

James JACKSON (*Institute for Social Research, University of Michigan, USA*)

Introduction : The aging of United States society is a reality, based upon the size of the unprecedented baby-boom generation, dramatic reductions in fertility rates at or near the replacement level, and increases in life expectancy. By 2030 or so, the United States population will consist of more people over the age of 65 than under 15 years of age. Political debates and public policies are often premised. Method : This paper addresses myths and facts about our coming aging society using a life-course framework with considerations of institutional changes, including intergenerational

family synergies, with special attention to the growing gap in opportunities and health between rich and poor in America. Results : Data are drawn from a variety of sources focused on existing and projected cleavages and disparities among those who are well-off and those who are less fortunate. Data focus on how the coming age transition may exaggerate differences that now exist in health and health care among social, racial and ethnic groups in this society. Conclusion : Social and behavioral science has an important role to play in helping the United States adapt to the challenges of the coming dramatic demographic transition and emerge with resilient and responsive institutions, including education, government, family and business. While the aging society will provide opportunities to harness the intellectual and experience-base of longevity gains, it also has the potential to fracture along existing lines of social, economic and racial and ethnic status disparities. Keywords : aging society, disparities, health

SS24 221-S-3

RESEARCH AGENDA FOR SOCIETY 2030

Marie A BERNARD (*National Institute on Aging, National Institutes of Health, USA*)

Introduction : It is difficult to predict accurately what a research agenda is likely to be in 2030. However, there are areas of current research that could lead to significant developments by 2030. Some of those areas are 1) Alzheimer's disease (AD), 2) basic biology of aging, 3) behavioral health, and 4) complex clinical issues. Method : Highlights of research in each of the following areas will be presented: 1) AD - In the USA, as in many other countries, a plan has been developed for the approach to AD, with a US goal to prevent or cure AD by 2025. Research is ongoing to better characterize, prevent and treat AD. 2) There are significant advances in understanding the basic biology of aging, which may underlay the predisposition to chronic illness with aging. Research is ongoing to remove senescent cells and extend lifespan. 3) A better sense of how to enhance healthful behavioral choices is being gained through the science of behavior change. 4) Research is pursuing answers to perplexing clinical issues ? e.g., how to prevent disability, prevent or ameliorate illness. Results : AD biomarkers and genetics are influencing ongoing clinical studies for prevention and treatment; senescent cell removal and pharmaceuticals lengthen life-span; exercise, built environments, facilitate healthful lifestyle choices; ongoing trials examine the role of vitamin D, aspirin, and testosterone in prevention/amelioration of illness. Conclusion : There are ongoing studies in aging that may lead to significant findings by 2030. The results of those studies will guide the direction of future research. Keywords : aging, society, measurement, health, behavior change

SS24 221-S-4

REDESIGNING COMMUNITIES FOR AGED SOCIETY

Hiroko AKIYAMA (*Gerontology, University of Tokyo, Japan*)

Introduction : Currently 24% of the Japanese population is age 65+. In 2030 it is predicted that one third of the population will be 65+ and one fifth will be 75+. The existing infrastructure of communities in Japan was built when the population was much younger. We need to redesign both hard and soft infrastructure of communities to meet the needs of the highly aged society. We want to build communities where people stay healthy and active and live with a sense of security. Method : One example is a project organized by Institute of Gerontology, the University of Tokyo aimed at turning the concept of "ageing-in-place" into reality in Kashiwa, which is a typical bed town 30 km away from Tokyo. Results : One of the major projects in

Kashiwa, is "Work places for the second life". A huge number of baby boomers who are working in Tokyo will soon retire and come back to the community. The project is creating age friendly work places and flexible scheme of employment that will allow the residents the options to work even up to the age over 80. The emerging evidence indicates that working after age 65 helps maintaining physical and cognitive functions and enhance social activities. We are also testing products which provide older workers with safe and productive work environment. Conclusion : This kind of social experiment requires not only the collaboration among researchers in different disciplines, but also full collaboration with local governments, business community, NPOs, and residents. Keywords : Housing, Communities, Japan

SS24 222-S

INTERGENERATIONAL SUPPORT AND NETWORK BETWEEN KOREA AND JAPAN: CROSS CULTURAL IMPLICATION

SS24 222-S-1

HOW SHALL WE 'HANDLE' OUR POPULATION AGING IN JAPAN?

Ryutaro TAKAHASHI (*Vice Director, Tokyo Metropolitan Institute of Gerontology, Japan*)

Introduction : By the end of 20th century, population aging in Japan had come out as a major social issue, not only in the country side but also in the urban cities. As many baby boomers had grown up in Tokyo, Osaka or other metropolitan areas, these cities are urgent for handling changes in society. Method : In this symposium, Japanese socio-demographic aspects and the need for inter- or intra-generational mutual support will be overviewed. In addition, mutual social support after the Great East Japan Earthquake (March 11, 2011) will be introduced based on the post-disaster support activities of Tokyo Metropolitan Institute of Gerontology. Results : Due to the health survey at the Tsunami-affected areas, trust in community and relation to neighbors are strong indicators of mental health conditions. Conclusion : Principles of our support activities are focusing on promoting self-motivation and independence through provision of educational program for health professionals and physical/mental health check of elderly and young people living there. Keywords : mutual support, community, disaster

SS24 222-S-2

RECIPROCAL EFFECTS ON SENIOR VOLUNTEERS AND ELEMENTARY SCHOOL CHILDREN THROUGH AN INTERGENERATIONAL HEALTH PROMOTION PROGRAM BY OLDER ADULTS "REPRINTS"

Yoshinori FUJIWARA (*RT for Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology, Japan*)

Introduction : We have promoted an intervention study, called "REPRINTS" (Research of productivity by intergenerational sympathy) in which senior volunteers aged 60 years and over engage in reading picture books to school children since 2004. The purpose of this study was to examine reciprocal effects on senior volunteers and elementary school children. Method : Sixty nine volunteers and 72 participants in a control group aged 60 years and over participated in a baseline health check-up in June 2004. After a 3-month training seminar, volunteers visited public elementary schools in groups of 6-10 for an 18 month period. Baseline survey for 600 children of 2 schools was conducted one month after launching volunteer activity. First and second follow-up surveys were conducted every 6 months after baseline survey. Main measurements were emotional-like image scale of older adults by SD (Semantic Differential) method: subscales

of "evaluation" and "activity". Results : At follow-up, social network scores (frequency of contact with grandchildren and others around the neighborhood) and self-rated health improved or was maintained significantly among the 37 individuals volunteering most intensively. Students were divided into two groups in terms of frequency of interchange with volunteers (low and high-frequency groups) through three surveys. In the subscale of "evaluation", general linear model demonstrated significant interaction between the group and number of surveys adjusted for compounding factors. Conclusion : "REPRINTS" demonstrated reciprocal effects on senior volunteers and elementary school children through regularly intensive intergenerational relationships. Keywords : Senior volunteers, Elementary school children, Intergenerational relationship

SS24 222-S-3

A LONGITUDINAL STUDY OF CHANGE IN THE INFORMAL SOCIAL SUPPORT OF OLDER ADULTS IN KOREA

Hyunsook YOON¹, Jiyoung YOON² (1. Department of Social Welfare, Hallym University, Korea; 2. Hallym Aging Research Institute, Hallym University, Korea)

Introduction : This study examines the extent of change in informal social support and predictors associated with individual change in informal social support at baseline and overtime. Method : Data came from a four-wave panel study of Hallym Aging Study. The first wave was conducted in 2003, and each successive wave occurred exactly 2 years after. A self-weighted, two-stage stratified probability sampling design was used. The baseline data for this study was Wave 2 (2005) which consisted of the 1, respondents over the age of 65. Wave 2 (2007) became 942 and then 850 for Wave 4 (2009). The data of Wave 1 (2003) was excluded because of lack of information on received social support and depression. Social support consisted of perceived social support, received social support, and social contact with adult children and friends. Latent Growth Curve Model was used to analyze trajectories of social support and predictors of variability. Results : Age-related changes in informal social support varied across sources and types of support. Perceived social support from adult children declined with advancing age, whereas perceived social support from friends increased. Received emotional and instrumental support from adult children and friends, and social contacts with adult children and friends declined with age. Age, education, income, cognitive and physical functioning, and depression were more consistent predictors of variability in support at baseline and over time. Conclusion : The findings of this study highlight the declined social support from adult children in late life in Korea, reflecting decreased traditional family value regarding children's obligations to support their parents. Keywords : informal social support, longitudinal study

SS24 222-S-4

INTERGENERATIONAL SUPPORT EXCHANGE, FILIAL RESPONSIBILITY AND SUBJECTIVE WELLBEING OF KOREAN ELDERLY

Young Bum KIM (Hallym University Institute of Aging, Korea)

Introduction : Equity theory or social exchange theory insists that the supports from the children may have negative effect on the life of the elderly. Because of traditional ethic, hyo [filial piety], it is considered as ethical duty for children to take care of their old parents in South Korea. Thus supports from children to old parents may have positive effects on happiness of old parents in South Korea. Method : This work used Hallym Aging Panel Data which consist of 4wave survey. In the analysis, the data for 3 waves is included (2005, 2007, and 2009). The sample in the analysis includes persons older than 55 years

old. The dependent Variable is PGCMS. For the convenience of explanation, author recoded the score to mean high score to high morale. The Control Variables includes socio-economic and demographic variables. The independent variables include sum of giving support to children and sum of receiving support from children. Results : First, like other researches in this field, income, health, schooling and social activity show statistically significant relationship with morale in old age. However the cohabitation with children shows no relationship with morale in old age. Second, unlike researches in Western world, support from children had positive effect on morale of elderly in South Korea. Third, the giving support from children shows different effects according to cohort. In the industrial generation it shows stronger effects than in the colonial generation. Conclusion : In accessing the quality of life in old age, the culture is one of the most important considerations. Keywords : filial piety intergenerational support exchange South Korea cohort

SS24 223-S

PHYSICAL, MENTAL AND SOCIAL ASPECTS OF HEALTHY AGING - RESULTS FROM STUDIES IN RAPIDLY AGING ASIAN COUNTRIES

SS24 223-S-1

GLOBAL PHYSICAL ACTIVITY TRANSITIONS: EMERGING MEASUREMENT AND THERAPEUTIC OPPORTUNITY

Shuichi P. OBUCHI (Human Care Sciences, Tokyo Metropolitan Institute of Gerontology, Japan)

Introduction : Super aged society means increasing physically disabled person in some extent. To greater of less, old people experience pain in their joints, weakness of muscle, and/or lack of control. The functional disabilities then gradually affect to their daily living with advancing age. It, however, is also true that stimulus makes change in their body even in the older age. To minimize physical frailty in the ageing societies, we have to promote older people start anything new to stimuli their life. In this symposium, I would like to share our experience that promoting physical activities in Japan. Method : In 2005, Japan renewed the Long-term care insurance policy to the preventive way called "Kaigo Yobou". More than 7 % of older person with frailty participated physical conditioning program, oral health program, or nutritional program with assist of obligation from care-manager. Results : About twenty percent of usage of the long term care insurance was suppressed after. Introduction of Kaigo Yobou. The person who received Kaigo Yobou service significantly increased physical and mental functioning as well as general health status. Conclusion : Countries in Asia now are young and vital but we also facing rapid progress of aging. We cannot avoid this fact and we cannot lose vitality of society. To keep, our society vital as much as possible, we have to spread movement to start physical and mental activity in older age without agiesm. Japan proved the effects of the activity, and we would like to happy if all countries share our experience. Keywords : Physical Disability, Prevention, Rehabilitation

SS24 223-S-2

DEPRESSIVE SYMPTOMS, PHYSICAL FUNCTION AND MORTALITY WITH AND WITHOUT DIABETES

Chih-cheng HSU (Division of Geriatrics and Gerontology, National Health Research Institutes, Taiwan)

Introduction : Diabetes is a prevalent disease among older adults. Depression is also a key contributing to functional disability. However, it remains unclear whether depression predicts functional decline and mortality after controlling for diabetes. The objective of

this study was to examine the relationship between depression and adverse health outcomes for the elderly with and without diabetes. Method : Data on 958 adults aged ≥ 54 years from the Social Environment and Biomarkers of Aging Study (SEBAS) 2000 were analyzed. Depressive symptoms were measured using the Center for Epidemiological Studies-Depression Scale (CES-D). Diabetes was defined by self-report or fasting glucose ≥ 126 mg/dl. The primary outcome was composite of mortality or functional decline over 6 years. A decline in function was defined as difficulty in more ADL or lower extremities tasks in 2007 compared with 2000. Multivariate analyses adjusted for sociodemographic variables, lifestyle factors and various medical conditions. Results : The mean age of subjects was 69 years. Forty-two percent were women. Nineteen percent of participants had depression, and twenty percent had diabetes. Among 958 participants, 561 (59%) died or had functional decline during the follow-up period. Adjusting for diabetes and potential confounders, subjects with depression were more likely to die or have functional decline. Depression independently predicted the composite event among older adults with diabetes (adjusted hazard ratio (HR), 2.89; 95% CI, 1.07-7.85) and among those without diabetes (adjusted HR, 1.59; 95% CI, 1.05- 2.41). Conclusion : Depression was an independent predictor of poor outcomes, including death and functional decline among older adults with and without diabetes. Keywords : depression, diabetes

SS24 223-S-3

SENSE OF CONTROL AND PHYSICAL FUNCTION IN OLDER ADULTS

I-chien WU, Chao A. HSIUNG, Ming-shiang WU, Chih-cheng HSU
(Institute of Population Health Sciences, National Health Research Institutes, Taiwan)

Introduction : Psychological well-being has large impacts on the course of chronic diseases. However, it remains unclear whether positive emotions have independent effects on the disablement process associated with chronic diseases such as diabetes. This study aimed at examining the relationship between sense of personal mastery and functional decline in persons with and without diabetes. Method : Data on 758 adults aged ≥ 54 years (mean age = 68 years) from the Social Environment and Biomarkers of Aging Study (SEBAS) 2000 were analyzed. Sense of personal mastery was measured using the Pearlin's mastery scale. Diabetes was defined by self-report or fasting glucose ≥ 126 mg/dl. The primary outcome was functional decline over 7 years. A decline in function was defined as difficulty in more ADL tasks in 2007 compared with 2000. Multivariate analyses adjusted for sociodemographic variables, lifestyle factors and various medical conditions. Results : Of all participants, 102 (13%) had diabetes. Adjusting for diabetes and potential confounders, subjects with a higher sense of mastery at base line were significantly less likely to have functional decline. Among older adults with diabetes, low sense of mastery strongly predicted the primary outcome. Conclusion : Low sense of mastery was an independent predictor of functional decline among older adults with and without diabetes. Keywords : Personal mastery, Disability, Diabetes Mellitus

SS24 223-S-4

PHYSICAL, NUTRITIONAL AND SOCIAL ASPECTS OF HEALTHY AGING IN JAPAN: FINDINGS FROM THE TMIG-LISA 1991-2010.

Shoji SHINKAI (Research Team for Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology, Japan)

Introduction : TMIG-LISA is the Longitudinal Interdisciplinary Study on Aging, which Tokyo Metropolitan Institute of Gerontology has conducted since 1991. Variables collected in this study covered all medical, physical, psychological and social aspects. It provides us with important messages regarding healthy aging in Japan. Method : The project comprised two study sites: Koganei City, a suburb of Tokyo, and Nangai Village, a rural area of Akita Prefecture. In Koganei City, about a thousand older persons were originally selected as one-tenth random sample ranging in age from 65 through 84 years. In Nangai Village, all residents aged 65 years and over were eligible to participate in the survey. The questionnaire of the interview survey consisted of comprehensive assessment of health status including psychological and social variables. The medical examinations at health-checkups included physical performance and blood measures. Variables administered to baseline surveys were repeatedly measured in follow-up surveys. Outcome measures were the onsets of death and ADL disability, and changes in higher-order functional capacity. Results : To date the project has identified significant predictors for respective outcome measure. The results demonstrate that body-built and physical performance, nutritional state assessed by biomarkers, lifestyles, mental and social functions such as social participation, and socio-economic status help predict longevity, independence and competence, and also that older persons lose their function with either of three major patterns: early- and late-onset decline, and successful aging. Conclusion : Good physical, mental and social functioning is a crucial component for healthy aging in Japanese elderly, which is largely compatible with evidences from Western countries. Keywords: healthy aging, community-dwelling elderly, longitudinal study.

SS24 224-S

A COMPARISON OF AGING PROCESS OF TWO COUNTRIES: USA AND SOUTH KOREA

SS24 224-S-1

THE DESIGN AND PRELIMINARY RESULTS OF KOREAN SOCIAL LIFE, HEALTH, AND AGING PROJECT (KSHAP)

Yoonsik YOUM (Sociology, Yonsei University, Korea)

Introduction : The Korean Social Life, Health, and Aging Project (KSHAP) has four distinct features that are believed to be essential for the examination of aging process based on inter-disciplinary approach. Method : First, it is designed to be compatible with the National Social Life, Health, and Aging Project (NSHAP) in the US. Many survey items are identical so that we can compare aging processes in the US and Korea. Second, unlike the NSHAP that is a representative sample of the US, the KSHAP only collected the data of one entire village. This allows it to collect a global social network data of an entire village. Third, in addition to detailed social network information, it also collects diverse biological data including blood sample. This enables us to examine aging process from a well-integrated approach of sociology and medical science. Fourth, it is designed to be a panel data so that we can solve many reverse causation issues to some extent by design. Results : The first wave was conducted in 2011. The size of the population that was the person who were 60 or older at the time of interview and their spouses was 860. Out of 860, 814 were interviewed for the survey that lasted 75 minutes on average: 95.65% response rate. Also 711 respondents took physical exam that produced many bio-markers including bp, BUN, albumin, Triglyceride, insulin, CRP: 82.7% response rate. Conclusion : We believe the KSHAP provides good opportunity to examine the relationship between social networks and physical health. Keywords : KSHAP, NSHAP, aging, network, social

SS24 224-S-2

THE NATIONAL SOCIAL LIFE, HEALTH AND AGING PROJECT

Linda WAITE¹, Edward LAUMANN² (1. *Sociology, University of Chicago and NORC, USA*; 2. *Sociology, University of Chicago, USA*)

Introduction : The National Social Life, Health and Aging Project (NSHAP) focuses on the link between social connections and health at older ages. **Method :** The 2005 wave of NSHAP included an in-home interview with 3005 community-dwelling adults ages 57 to 85 in the United States. These people and their spouses or co-resident partners were reinterviewed in 2010 (N=3372). NSHAP includes detailed information on each person's social networks, their formal and informal social participation, social support and social demands, social relationships, relationship quality, and sexuality. Biological, physical and physiological measures were collected for each person, including blood spots, saliva, urine, vaginal swabs, height, weight, waist circumference, blood pressure, walking speed, vision, taste, touch and smell. NSHAP also obtained a complete log of all medications. **Results:** These biomeasures provide researchers with indicators of prodromal disease processes, helping us understand how the social world 'gets under the skin' to produce disease and poor health. The second wave of NSHAP repeated the measures of social networks and social connections, added measures of personality and health, including a detailed measure of cognitive function, and expanded measures of frailty. **Conclusion :** Thus, NSHAP now provides detailed information on a population of older adults in the US as they age. It allows researchers to examine health disparities among social groups, to trace changes in health and social relationships over time, and to assess health and relationships in dyads. NSHAP data are publicly available through the National Computerized Data on Aging repository at ICPSR at the University of Michigan. **Keywords :** Relationships Health Survey

SS24 224-S-3

THE DESIGN AND CHARACTERISTICS OF KOREAN URBAN AND RURAL ELDERLY (KURE) STUDY

Hyeon Chang KIM (*Dept. of Preventive Medicine, Yonsei University, Korea*)

Introduction : With an exceptionally rapid population aging, geriatric diseases and disabilities cause an increasing burden on the Korean population. Therefore, the Korea National Institute of Health planned a cohort study to investigate etiologic and contributing factors of major health problems in the Korean elderly population. We designed the Korean Urban and Rural Elderly (KURE) study in 2011 and started recruitment and baseline examinations in 2012. **Method :** The KURE study is a community-based cohort study recruiting 5,000 Koreans aged 65+ years. The study includes one baseline examination and two follow-up examinations over 10 years. Baseline examinations include questionnaire interview, social network survey, anthropometry, blood pressure, electrocardiogram, carotid ultrasonography, bioimpedance analysis, bone densitometry, depression score, mini-mental state examination, fasting blood chemistry, urinalysis, and selected physical function tests. The questionnaires include personal and family medical history, health-related habits, daily activity, disability index, and stressful life events. Major outcomes include cardiovascular diseases, osteoporosis, depression, cognitive impairments, urinary dysfunction, and mobility impairments. **Results :** In 2012, a total of 927 participants living in urban (northwestern part of Seoul) and rural (Yangsa-myeon, Kangwha) areas completed health baseline examinations. The participants were 72.1 years old on average and female dominant (67.4%). Common prevalent disorders were hypertension (61.9%),

cataract (39.2%), osteoporosis (30.6%), dyslipidemia (29.5%), and diabetes (20.9%). Additional characteristics of the participants will be presented. **Conclusion :** This study will improve our understanding of the current health status of Korean urban and rural elderly populations. The KURE study will also identify genetic, environmental, and social determinants of elderly's health and their interactions. **Keywords :** Cohort study, Population, Prevention

SS24 225-C

TOWARDS OPTIMAL PRESCRIBING OF OLDER PATIENTS IN ASIAN COUNTRIES

SS24 225-C-1

TOWARDS APPROPRIATE PRESCRIBING TO OLDER PEOPLE IN TAIWAN

Ming-yueh CHOU (*Geriatric Medicine Center, Kaohsiung Veterans General Hospital, Taiwan*)

Taiwan, as one of the fastest aging countries in the world, is facing a huge challenge of health care system, as well as geriatric pharmacotherapy. In previous researches, in Taiwan, potentially inappropriate medications (PIMs) are common to the elderly in Taiwan. The prevalence of PIMs reached 60% in outpatient services, which may be the highest on the world. The most common PIMs included antihistamine, muscle relaxants, and longer-acting benzodiazepines. Situations are similar in the emergency department or in rural countries. In inpatient setting, by using STOPP/START criteria, both PIMs and potential prescribing omissions (PPOs) were common, but less than outpatient basis. The most common PPOs included statin in diabetic patients, aspirin in diabetic patients, and Calcium blocker use in constipated patients. Moreover, it has been reported that anticholinergic burden was high in people with dementia, and the anticholinergic load can be successfully reduced without adverse outcome. Through non-pharmacological approach, antipsychotics can be successfully reduced with improved behavioral and psychotic symptoms. In conclusion, the inappropriate prescribing for older people was common in Taiwan and more intervention trials should be done. **Keywords :** potentially inappropriate medications, potential prescribing omissions, prescription

SS24 225-C-2

POTENTIALLY INAPPROPRIATE MEDICATION PRESCRIBING FOR ELDERLY OUTPATIENTS IN ASIA

Aulia RIZKA (*Internal Medicine, Faculty of Medicine University of Indonesia, Indonesia*)

Introduction : Potentially inappropriate medication (PIM) prescribing for elderly outpatients have been widely documented in US and Europe but only limited information exist in Asia. Besides causing adverse drug events that linked to higher hospitalization rate, morbidity and mortality in elderly, PIM is also responsible for high healthcare cost and increased falls, confusion and depression. Since prescribing practice is influenced by socioeconomic, cultural and specific pharmaceutical policies, studies exploring the prevalence of PIM in different regional setting is important. The objective of this study is to assess the prevalence of PIM and its associated factors in Asian elderly outpatients. **Method :** A cross sectional study involving patients from 4 Asian countries (Japan, Indonesia, Korea, Taiwan) using outpatients database from July to December 2012 is performed to assess the prevalence of potentially inappropriate medication (PIM) and potentially prescribing omission (PPO) defined by the START/STOPP list. Associated factors with PIM and PPO, as well as anticholinergic burden, will also be analyzed. **Results :** The result will

be presented at the symposia. Conclusion : To our knowledge, this is the first multi-centered study comparing PIM in four Asian countries. The result of the study will be presented at the symposia. Keywords : inappropriate medication, outpatient, STOPP-START

SS24 225-C-3
INAPPROPRIATE PRESCRIBING IN ASIAN LONG-TERM CARE SETTINGS

Hyuk GA (*Dept. of Geriatric Medicine, Incheon Eun-Hye Hospital, Korea*)

Introduction : STOPP(Screening Tool of Older Person's Prescriptions) and START(Screening Tool to Alert doctors to Right Treatment) criteria can be used as a measurement tool for potentially inappropriate medicines(PIMs) and potential prescribing omissions(PPOs), respectively, among older patients who take prescribed medicines. This criteria has been proved to be a useful tool in estimating the prevalence of inappropriate prescription(IP) among inpatients and outpatients from many countries. However, we could not find any study to have analyzed IP status of residents in long-term care settings yet. In this session, we will present the results of our research of analyzing and comparing prescription status of nursing home residents from three Asian countries. Method : Case records of at least six hundred patients aged 65 years or older residing in nursing homes from Korea, Japan, and Taiwan will be reviewed based on STOPP and START criteria and compared each other. Results : We will present the results at the symposium. Conclusion : This survey would be the first comparison study analyzing PIMs and PPOs status with STOPP and START criteria applied on long-term care settings located in three Asian countries. Keywords : nursing home, STOPP-START, inappropriate prescription

SS24 225-C-4
INAPPROPRIATE PRESCRIBING IN ASIAN GERIATRIC INPATIENTS

Taro KOJIMA (*Department of Geriatric Medicine, The University of Tokyo, Japan*)

Introduction : Adverse drug reaction (ADR) is a significant cause of hospitalization and it is associated with prolonged hospital stay in elderly people. Hospitalized elderly adults are present with acute diseases and tend to be physically or functionally impaired, which may increase their vulnerability to ADRs or intensify the severity of them, and accordingly lead to serious clinical and economic consequences in elderly inpatients. Meanwhile, inappropriate prescribing (IP) of medicines is a major risk factor for ADRs, and evaluating IP in elderly could potentially lead to both clinical outcomes improvement and medical expenditure reduction by preventing ADRs. Recently, screening tools for detecting IP have been developed in Europe and North America, although they are not still prevalent in most of the Asian countries. Method : The purpose of the present study was to assess the clinical conditions and their current management for elderly inpatients in 4 Asian countries (Indonesia, Japan, Korea, and Taiwan), and also to analyze the problems within them. In each country, comorbid conditions, drugs, frequency of potentially inappropriate medication (PIM) and potentially prescribing omission (PPO) defined by the START/STOPP list, and anticholinergic burden were assessed for elderly inpatients in a tertiary hospital. This ongoing cross-sectional research is expected to be completed by 2013. Conclusion : This presentation will discuss the result of an inpatients study of the cross-national comparison studies in 4 Asian countries. Keywords : Inappropriate prescribing, Polypharmacy

SS24 226-C
LATE LIFE OBSTRUCTIVE SLEEP APNEA SYNDROME (OSAS): UPDATE 2013

SS24 226-C-1
CLINICAL ASPECTS OF OSAS IN OLDER ADULTS

Fannie ONEN (*Geriatrics, University of Paris, Bichat Hospital, APHP, France*)

Introduction : Obstructive sleep apnea syndrome (OSAS) is a highly prevalent condition in older adults. Despite its high prevalence, OSAS is significantly under diagnosed and under treated in this population. Method : Several factors underlie the lack of recognition of OSAS in older adults. One important factor may be the atypical clinical presentation of the disorder. Age-related physiological changes, multiple comorbidities with possible disease-disease interactions, and the effects of multiple medication may be responsible for atypical manifestations of OSAS. Older individuals with sleep apnea are often unaware of the night-time symptoms of this condition and rarely complain of daytime sleepiness. However, falls, cognitive impairment, stroke, glaucoma, and impaired quality of life are unspecific but frequently associated conditions in the elderly with OSAS. Results : Screening the OSAS is possible with simple tools such as observation based nocturnal sleep inventory (ONSI) and a targeted interview with the patient and his/her family. A detailed geriatric assessment is required for polysomnography and continuous positive airway pressure (CPAP). Conclusion : Tolerance to continuous positive air pressure in elderly symptomatic OSAS patients is similar to that of younger patients. Older patients with untreated OSAS have high healthcare utilization because of cardiovascular disease morbidity and use of cardiovascular and psychotropic medication. In this presentation the importance of individualized management approach OSAS will be discussed. Keywords : aging, sleep apnea, cognitive impairment

SS24 226-C-2
ASSESSMENT TOOLS TO USE IN OLDER ADULTS WITH OSA SYNDROME

S.-hakki ONEN (*Geriatric Sleep Medicine, University of Lyon, Hospices Civils de Lyon, Hoipital Geriatrique A. Charial, France*)

Introduction : Obstructive sleep apnea (OSA) syndrome is a common disorder in older adults. However, it is still underdiagnosed and not always appropriately assessed in geriatric settings. Method : Polysomnogram (PSG) is the gold standard for diagnosing OSA. However, it is unavailable to many older patients. Furthermore, this test is costly, time consuming, labor intensive and cannot be applied as a screening tool on a mass level for large populations. The Epworth sleepiness scale widely used to assess excessive daytime sleepiness is not validated in geriatric settings and inappropriate for many frail older adults as it relies on cognitive status and memory to answer the questions. Results : New simple clinical tools to screen OSA and assess OSA-related excessive daytime sleepiness in older adults are now available. Thus, two main tools designed for geriatricians and gerontologists will be presented. 1) The Observation-based Nocturnal Sleep Inventory (ONSI). The ONSI requires the nursing observations in 5 standardized hourly visits in one night. 2) The Observation and interview based Diurnal Sleepiness Inventory (ODSI). Conclusion : As the numbers of the older adults increase worldwide, the prevalence and significance of OSA will also increase, demanding greater attention and allocation of the financial resources. The ONSI and the ODSI are both important for managing patients with OSA and controlling health care cost. References: 1) Onen et al. J Am Geriatr Soc. 2008; 56(10):1920-5. 2) Onen et al. Sleep Breath. 2012 Apr 1 [Epub ahead

of print]. Keywords : sleep apnea, ONSI, ODSI

SS24 226-C-3

OSAS AND COGNITIVE IMPAIRMENT IN OLDER ADULTS

Donald BLIWISE (*Neurology, Emory University School of Medicine, USA*)

Introduction : This presentation will focus on the complex array of data that speak to cognitive impairments associated with OSAS. Method : Literature Review. Results : First we will provide an overview of cross-sectional studies in middle aged adults that suggest neuropsychological impairments in conjunction with OSAS and the potential reversibility of those deficits with nasal CPAP. Next we will briefly review neuroimaging studies that suggest that higher order brain structure and function may be compromised with sleep apnea. We will then move into the more equivocal area of impaired cognition in the elderly, including dementia syndromes such as Alzheimer's Disease, Parkinsonism, as well as Mild Cognitive Impairment, and review new longitudinal data, as well as some recently published randomized clinical trials that speak to issues of potential reversibility of cognitive impairment associated with OSA. Special attention will be placed on comorbidities, such as cardiovascular disease and impaired glucose control, that can be associated both with OSAS and impaired cognition. Finally, we explore the possibility that sleep may be an important mediator of memory consolidation on a short-term (i.e., an hour-to-hour) basis and review the newest findings on this exciting topic. Conclusion : Studies will be synthesized. Keywords : Obstructive sleep apnea, cognitive impairment

SS24 227-C

THE WAR AGAINST POLYHARMACY (1) - LET US TREAT THE PATIENTS, NOT THE NUMBERS

SS24 227-C-1

THE TSUNAMI IN 21ST. CENTURY HEALTH CARE: THE AGE-ASSOCIATED VICIOUS CIRCLE OF CO-MORBIDITY MULTIPLE SYMPTOMS ? OVERDIAGNOSIS-OVER TREATMENT-POLYPHARMACY

Doron GARFINKEL (*Palliative Geriatric, Shoham Geriatric Medical Center, Pardes Hana, Israel 37000, Israel*)

Introduction : Paradoxically, modern medicine may harm healthy people as a result of over-diagnosis (OD). Improved medical technology is associated with an alarming increase in the number of potentially unnecessary tests. OD occurs when people are diagnosed with diseases that ultimately will not cause them to experience symptoms, morbidity or mortality. Results : The main reasons for the increase in OD: Improved screening technologies detect early pathological processes enabling identification of less severe forms of diseases in people with or even without symptoms; these earlier "abnormalities" may never progress to cause symptoms, morbidity or death. OD may also result from excessively widened disease definitions that, at least in part, is highly fuelled by the drug & diagnostics Industries. Changing diagnostic criteria for many conditions increase the numbers of people defined as sick and, with increasingly lower risks, receive medical labels as being sick. Conclusion : Then, based on Clinical Practice Guidelines (CPGs) for each 'disease' many more are being treated by preventive/curative therapies sometimes until death. The benefit/risk ratio of these CPGs is decreasing and becomes negative as age increases and particularly as life expectancy shortens. Apart from negative psychological, social and economic effects of erroneous labeling, OD results in over medicalization, overtreatment and subsequently inappropriate

medication use (IMU) and polypharmacy. These in turn, may cause adverse effects, new symptoms, more medications, hospitalizations due to IMU with the associated unnecessary substantial costs for both. In three symposia, members of the International Group for Reducing IMU/Polypharmacy (IGRIMUP) will discuss the ways or improving IMU/Polypharmacy. Keywords : Over-diagnosis, overtreatment, Polypharmacy

SS24 227-C-2

STOP MEDICATING BEYOND THE EVIDENCE ? GUIDELINES FOR GUIDELINES ON PREVENTIVE TREATMENTS

Marcella Angelina EVANS (*School of Medicine, University of California Irvine School of Medicine, USA*)

Introduction : All tests and treatments bear risks as well as benefits. Historically, many widely used or recommended preventive measures were later found not to confer benefit, or even to produce harm, overall or in subgroups. Known instances could have been prevented, by adopting Guidelines for Guidelines on Preventive Measures. Method : 1.Consider All-Cause Mortality: The patient must be the unit of interest for preventive measures. Benefit to one system or outcome is inadequate, and may be offset (or worse) by distributed harms to other outcomes. Emphasize all-cause mortality, which objectively and equitably balances major risk and benefit. All-cause serious morbidity commonly tracks mortality. 2. Consider Effect Modifiers: If a group reflecting the sex, age, and health status of that patient has not been separately studied, that patient group must not be included in recommendations. Further factors like age (within a group), frailty, comorbidities, polypharmacy, affect (typically adversely) risk-benefit and merit formal consideration in clinical decisions. 3.Require Consistent, Nontrivial Benefit from Non-industry Sources. Publication and presentation bias make published findings likely favorable relative to reality; and self-selection for participation renders study participants, even those who appear similar, generally healthier with better risk-benefit balance than typical "similar" patients. If apparent benefits aren't consistent and sizeable (for that group), real benefits cannot be presumed. 4.Reject Authority of Guidelines Involving Participation by Industry-Conflicted Individuals. Conclusion : Adoption of these Guidelines for Guidelines will help protect from current and future instances in which recommended measures harm, rather than benefit, patients. Keywords : Guidelines for Guidelines, Prevention, Polypharmacy

SS24 227-C-3

THE MANNER OF OUR DYING: PREVENTION AND POLYPHARMACY

Dee MANGIN (*Dept of Public Health and General Practice, University of Otago, New Zealand*)

Introduction : Preventive health care aims to delay the onset of illness and disease and to prevent premature deaths. But the theory and rhetoric of prevention do not address the problem of how such health care applies to people who have already exceeded an average lifespan. Current systems of research and clinical guidelines where preventive treatments are encouraged regardless of age mean the 'Good Doctor' may end up providing care that is meaningfully worse for the person, with polypharmacy almost inevitable. This situation is fuelled by several factors; single disease perspectives, sensitivity about age discrimination and financial gains for pharmaceutical companies from expanding markets. Method : Recommendations for statin use in the elderly are examined to illustrate these issues: While there is a clear effect on mortality and morbidity from cardiovascular disease, all

cause mortality remains the same, and rates of cancer diagnosis and death are higher in the statin treatment group than in the placebo group. Conclusion : Treatments to prevent particular diseases in older people may simply be selecting for other causes of death and increased morbidity, without improving health or longevity. A more sophisticated way of assessing the benefits and harms of prevention and treatment of risk factors is required that takes a wider perspective. Overdiagnosis and overtreatment are real threats to health older age. Providing good care in the future will be defined by a new approach to prevention ? one that values and supports decisions not to investigate, label and treat, and where comparative safety is as valued as comparative efficacy. Keywords : Polypharmacy, Prevention, Statins

SS24 227-C-4

ACKNOWLEDGING FRAILTY WITH GUIDELINES: A FRAILTY SPECIFIC APPROACH TO THE TREATMENT OF DIABETES, HYPERTENSION, AND DYSLIPIDEMIA

Laurie MALLERY¹, Paige MOORHOUSE¹, Michael ALLEN², Isobel FLEMING², Kim KELLY³, Brian STEEVES⁴, Brenda COOK⁵, Peggy DUNBAR⁵, Tom RANSOM¹, Pam MCLEAN-VEYSEY³ (1. Department of Medicine, QEII Health Sciences Centre, Dalhousie University, Canada; 2. Continuing Medical Education, Dalhousie Academic Detailing Service, Dalhousie University, Canada; 3. Drug Evaluation Unit, Department of Pharmacy, Capital Health, QEII Health Sciences Centre, Canada; 4. Continuing Care Nova Scotia, Guysborough Antigonish Strait Health Authority, RK MacDonald Nursing Home, Canada; 5. Diabetes Care Program of Nova Scotia, Canada)

Introduction : Frailty is a common condition that results in vulnerability, decreased life expectancy, and functional decline. As such, medical therapies that work well for healthier patients might not be applicable for the frail. For this reason, those with multiple chronic health conditions and frailty deserve frailty-specific treatment protocols that carefully consider the harms and benefits of treatment on the background of frailty. Method : In response to this need the Palliative and Therapeutic Harmonization (PATH) program, the Dalhousie Academic Detailing Service, and the Diabetes Care Program of Nova Scotia developed and disseminated guidelines for the treatment of frail older adults with hypertension, hyperlipidemia and type II diabetes. Conclusion : This presentation describes these guidelines and reviews the evidence that was used to justify liberalizing targets for these conditions. Keywords : Frailty, Clinical-Guidelines, Palliative

SS24 227-C-5

PALLIATIVE AND THERAPEUTIC HARMONIZATION: SHINING A LIGHT ON PHARMACOTHERAPY

Laurie MALLERY, Paige MOORHOUSE (Division of Geriatric Medicine/Department of Medicine, QEII Health Sciences Centre, Dalhousie University, Canada)

Introduction : The intricate web of complex issues associated with frailty can find traction in custom-built processes that consider the vulnerability and prognosis of frailty. Method : Palliative and Therapeutic Harmonization (PATH) is a set of services and protocols that improves the organization of health services and guides health professionals, frail older adults, and families towards appropriate decision-making with frailty using a standardized process. This presentation describes the PATH framework and how it can be used to address polypharmacy. We review the need to develop and popularize frailty-specific treatment guidelines to offset the influential messaging of conventional clinical practice guidelines, which often overshadows

more sensible approaches that would be pertinent for the frail. Conclusion : By juxtaposing the properties of frailty against available evidence for benefit and harm from drug treatment, we review an evidence-informed approach for creating new treatment guidelines that fit the special circumstances of frailty. Keywords : polypharmacy, frailty, guidelines

SS24 306-R

AGEING AND THE POST-2015 GLOBAL FRAMEWORK

SS24 306-R-1

STRENGTHENING THE EVIDENCE BASE ON AGEING AND HEALTH IN LOW AND MIDDLE INCOME COUNTRIES

John BEARD (Department of Ageing and Life Course, World Health Organization, Switzerland)

Introduction : Population ageing is an almost inevitable consequence of socioeconomic development. In its early stages, development leads to falls in childhood mortality and these have typically been followed by falling fertility. This results in a population bubble that temporarily boosts the proportion of the population of traditional working age and reinforces economic growth. But this bubble eventually ages. Countries have the brief period between falling fertility and population ageing to put in place the infrastructure and policies that can meet the needs of these older populations. This period is getting briefer as these transitions are taking place much more rapidly than in the past. Planning for these predictable population dynamics needs to be a central component of the global strategies that will replace the Millennium Development Goals. Method : Review of evidence on ageing and health in less developed countries. Results : Current knowledge of the health and needs of older people in low and middle income countries is very limited and monitoring frameworks that can guide this process have rarely been designed to consider the key challenges for older populations. Conclusion : This presentation will examine the opportunities and challenges for strengthening evidence gathering, data collection and analysis at a global level. Particular attention will be paid to new evidence emerging from low and middle income countries and to the development of a more appropriate monitoring and surveillance frameworks. Keywords : development, socioeconomic

SS24 306-R-2

TOOLS FOR STRENGTHENING GLOBAL AGEING-RELATED STATISTICS IN THE POST-2015 DEVELOPMENT AGENDA

Asghar ZAIDI (Social Sciences, University of Southampton, United Kingdom)

Introduction : Rising life expectancy has been observed across the globe, in poorer and wealthier countries alike. The emphasis in many policy agendas is increasingly about ensuring that the potential of older people is fully realised, not just in employment but also in their social activities (such as volunteering and care provision) and in their abilities to ensure healthy, independent and self-reliant living. The global development framework that is set to replace the Millennium Development Goals at the end of 2015 must take this emerging policy agenda into account. Method : In this context, there is a clear need for a high-quality and independent evidence base in all countries to understand better the experience of ageing at individual and societal levels and improve the well-being of older people. The better the evidence, the easier it is to formulate policy responses and persuade the policymakers as well as the public about the benefits of more effective policies and interventions targeting the needs of people in

later life. Results : This presentation will focus on two specific tools that will help facilitate better data and evidence gathering and its analysis: the Global AgeWatch Index project of HelpAge International provides national and international quantitative evidence, data and analysis on population ageing and will advance the global call for key datasets to be disaggregated by age and sex. The Active Ageing Index project's core endeavour is to operationalize the multidimensional concept of active ageing and present evidence that rising longevity can become an asset for the societal progress. Keywords : evidence-based policymaking, ageing

SS24 306-R-3

AGEING IN SUB-SAHARAN AFRICA'S POST-2015 AGENDA? THE ROLE OF EVIDENCE AND GERONTOLOGICAL PERSPECTIVES

Isabella ABODERIN (*African Population and Health Research Center (APHRC), Kenya*)

Introduction : Being among the world's poorest and least 'developed' nations, sub-Saharan Africa (SSA) countries have, over the last decade, oriented their health and social sector action primarily toward the priorities set by the Millennium Development Goals (MDG). The goals focus on enhancing the survival and human capital of children and young adults and have been seen as compatible with core socio-economic development objectives in SSA. In contrast, concerns of older persons, omitted in the MDGs, are typically viewed as marginal, at worst a distraction from these interests. A key challenge is to promote the inclusion of ageing issues in the UN framework that will succeed the MDGs after 2015 and whose content will be determined - much more than were the MDGs - by UN member states themselves. Method : A critical review of recent international and Africa-regional and national development policy agendas and debates. Results : Convincing SSA governments of the need for an ageing-responsive post-MDG agenda, will hinge on the building of incisive, evidence-based arguments, which illuminate the relevance of ageing to central SSA development interests, and which provide directions on policy responses and measurable targets. Conclusion : A spectrum of evidence on four key areas of older people's circumstances in SSA is required. Drawing on gerontological concepts and perspectives is vital in this regard - both to fashion sound 'understandings' of empirical realities in SSA and, in the process, to advance and refine theoretical debates on global ageing. Keywords : sub-Saharan Africa, development, local ageing

SS24 307-S

LONG TERM CARE INSURANCE FROM A COMPARATIVE PERSPECTIVE: GERMANY, JAPAN AND KOREA

SS24 307-S-1

LONG-TERM CARE INSURANCE AND 'WELFARE MIX' IN GERMANY (AND WESTERN EUROPE)

Thomas KLIE (*Institut für angewandte Sozialforschung, Germany*)

No abstract

SS24 307-S-2

LONG-TERM CARE, SOCIAL WELFARE AND SOCIAL LAW: KOREA AND GERMANY

Wolfgang SCHUETTE (*Economics and Social Affairs, HAW-Hamburg, University of Applied Sciences, Germany*)

Introduction : Security systems which function well in one country, will not necessarily gain acceptance in another. In this vein I would

like to look at Korea and Germany, where long-term insurances have been introduced some years ago. What are the effects, what is similar, what is different? Method : For this reason I would present some details about the complex constraints surrounding the long-term care insurance Germany introduced in the mid-1990's and our experience with it, and also about some impressions from interviews and researches in Korea during this summer semester. The theoretical approach is grounded on the legal sciences and their way to compare law-institutions in different countries. But further I would explain my results in a socio-cultural view, asking questions like these: Long-term care: The relevance of families in traditional and modern settings? Legislation and social policy: Why people trust in law? Financing: Contributions for social security and the willingness to share personal incomes? Implementation of health care services for the elderly: Based on public services, civil society or private assistance? Results : Comparing social law may content the reconstruction of the social and political context, when government and parliament decided about long term care insurances. Also it means analyzing the experiences in the following years, the organizational conditions of implementation, and the cultural and social context for providing assistance for elderly people. Keywords : Social Law, Long-Term Care Insurances, Korea and Germany

SS24 307-S-3

DEVELOPMENT AND CHANGES IN THE SYSTEM OF QUALITY ASSURANCE IN THE JAPANESE LONG-TERM CARE

Koichi HIRAOKA (*Department of Sociology, Ochanomizu University, Japan*)

Introduction : The Purpose of this study is to describe the development and changes of the system of quality assurance in the Japanese long-term care, to analyze the challenges that this system is faced with and to raise some issues for discussion as to its future direction of development. Method : Review of academic literature; examination of documents published by the central and local governments, research institutions and care agencies; analysis of statistics on long-term care in Japan. Results : After the description of the development and changes of the system of quality assurance in the Japanese long-term care, the achievements and the limitations of each of the following measures for assuring the quality of care in the long-term services were examined; regulation and inspection, third-party evaluation, mandatory disclosure of information, training and certification of care workers, care management, complaints procedures and economic incentives. Conclusion : The measures adopted by the government for the improvement of the quality of care have been diversified since the time of the launch of the LTCI scheme. Traditional types of regulatory mechanisms still play an important role. Major improvements are needed in the new innovative measures for the quality assurance. The importance of introducing program evaluation needs to be stressed. Keywords : Long-Term Care Insurance, quality assurance, evaluation

SS24 307-S-4

A STUDY ON TWO DIFFERENT WELFARE STATES' CARE-GIVING POLICIES FOR THE INFORMAL CAREGIVERS AND ITS IMPLICATION ON KOREA'S LONG TERM CARE INSURANCE SCHEME

Keun-hong KIM¹, Youngjun CHOP² (*1. Graduate School of Social Welfare, Kangnam University, Korea; 2. National Institute of Dementia, Korea*)

Introduction : In 2008, Korea established its National long-term care insurance for the aged. For the last years, the insurance has shown

some defects to be improved, especially regarding to providing benefits for informal caregiving. This study aims to suggest policy alternatives by analyzing two countries which have developed and modified their long-term care policies for decades. Method : Policy analysis with literature review. Results : The means test welfare state, which typified by the U.K, provides benefits for informal caregivers with the benefit program named 'Carer's Allowance', while the subsidiarity welfare state, typified by Germany has integrated informal caregiving into policy area along with the history of Pflegeversicherung. Conclusion : The result showed that the two different countries have developed their own policies to assist informal caregivers in long-term care schemes, being affected by unique factors, such as; cultural backgrounds, political ideologies, and the way how they treat the demand of caregivers. Those differences are full of policy suggestions for Korea's long term care policy, which has to find a way to deal with informal caregivers' demand and difficulties. Especially, considering the Germany's Bismarck's scheme of social safety net with Pflegeversicherung allowing informal caregiving, has a positive impact on caregiving issues, Korea, which traditionally have emphasized family role on caregiving, might consider policy options of embracing informal caregiving into the scheme of its long-term care insurance compensation mechanism. Keywords : Informal caregiving, Welfare states, Comparative study

SS24 308-R
CRITICAL ISSUES OF EQUITY AND WELLBEING FOR OLDER PEOPLE

SS24 308-R-1
WEALTH, RETIREMENT AND WELLBEING: AN EXAMINATION OF THE PATTERNING OF INEQUALITY IN THE US AND ENGLAND

James NAZROO, Stephen JIVRAJ, Alan MARSHALL, Bram VANHOUTTE (CCSR, University of Manchester, United Kingdom)

Introduction : There is a strong suggestion of a U-shaped relationship between age and wellbeing in later life, with wellbeing improving in the years around retirement age. However, this evidence is not uniform across subgroups of the population. An examination of the relationship between retirement and wellbeing needs careful consideration of the heterogeneous nature of the retirement process and how it relates to employment circumstances, socioeconomic position and institutional factors, including at a national level. Method : These issues will be examined using panel data from the English Longitudinal Study of Ageing and the US-based Health and Retirement Study. Both are nationally representative studies of the population aged 50 and over, designed in parallel to enable comparative analysis, and will provide five waves of data covering the period 2002-2010. In addition, because of their multidisciplinary design, both studies contain detailed information on health, economic and social circumstances, allowing an in-depth investigation of the correlates of changes in wellbeing around the retirement transition. Results : Findings focus on the relationship between retirement and wellbeing in relation to: -Transitions from both employment and from non-employment into retirement; -The quality of work pre-retirement (eg, the balance between effort/reward and control/demand at work); -The nature of the retirement transition (eg, voluntary, involuntary, routine); -Post-retirement economic circumstances, and change in economic circumstances around retirement; -Differences in the distribution of these factors and their relationship with wellbeing in the contrasting welfare systems of the UK and US. Conclusion : The impact of retirement on wellbeing relates to strongly inequality, but sometimes in unexpected ways. Keywords : Retirement, Wellbeing, Inequality

SS24 308-R-2
IDENTITY AND WORK VULNERABILITY IN LATER MIDLIFE, BALANCING AGE, WORK AND LIFE-PRIORITIES
Simon BIGGS¹, Helen KIMBERLEY², Dina BOWMAN² (1. School of Social and Political Sciences, University of Melbourne, Australia; 2. Research and Policy Centre, Brotherhood of St Laurence, Australia)

Introduction : The dynamics, lived experience and outcomes of involuntary non-participation and under-participation in the labour market by Australians in midlife are becoming a critical social and economic issue. A project, funded by the ARC Linkage program, focuses on understanding pathways undertaken by people in later midlife which are often is not of their own choosing. The relationship between attitudes to work, ageing and life-priorities will be examined. The research involves inter-agency collaboration between Universities of Melbourne, Canberra NATCEM, Brotherhood of St Laurence & Jobs Australia. Preliminary findings will be discussed. Method : Integrated quantitative and qualitative findings from this project will be used to inform policy and practice developments to better target interventions and support for this group of vulnerable baby-boomers. Results : A number of research questions will be addressed during the study: 1. What are the trajectories of workforce participation and non-participation across the course of mid and later life? 2. What factors best predict pathways into or out of involuntary non-participation and under-participation in the labour market? 3. How does the experience of non-participation or under-participation in paid work affect mature age. Conclusion : Preliminary results will be described from the first phase of the project. These will examine the relationship between lifecourse experience, attitudes to ageing, work and work-life balance. Keywords : underemployment, lifecourse, attitudes

SS24 308-R-3
THE VIEWS OF OLDER PEOPLE AND CARERS ON EXCLUSION FROM PARTICIPATION IN CLINICAL TRIALS: RESULTS FROM THE PREDICT STUDY

Bernadette BARTLAM¹, Peter CROME², Lally FRANK³, Andrew BESWICK⁴, Antonio CHERUBINI⁵, Mark CLARFIELD⁶, Albert FARRE⁷, Cees HERTOOGH⁸, Vita LESKAUSKAITE⁹, Mills GARY¹⁰, Martin MULLER¹¹, Joaquim ORISTRELL¹², Gabriel PRADA¹³, Carmelinda RUGGIERO³, Judith SINCLAIR-COHEN¹⁴, Katarzyna Szczerbinska¹⁵, Eva TOPINKOVA¹⁶, Zbigniew ZALEWSKI¹⁵ (1. Primary Care & Health Sciences, Keele University, United Kingdom; 2. Department of Primary Care and Population Health, University College London, United Kingdom; 3. Postgraduate Medicine, Keele University, United Kingdom; 4. Musculoskeletal Research Unit, University of Bristol, United Kingdom; 5. Department of Clinical & Experimental Medicine, University of Perugia Medical School, Italy; 6. Department of Geriatrics, Soroka Hospital & Ben-Gurion University of the Negev, Israel; 7. Department de Psicologia Social, Universitat Autònoma de Barcelona, Spain; 8. Department of Nursing Home Medicine, VU University Medical Center, Netherlands; 9. Geriatric Clinic, Kaunas University of Medicine, Lithuania; 10. Anaesthesia and Intensive Care Medicine, Sheffield Teaching Hospitals, United Kingdom; 11. Nursing Home Medicine, VU University Medical Center, Netherlands; 12. Internal Medicine & Geriatrics, Universitat Autònoma de Barcelona, Spain; 13. Medical Directorate, Ana Aslan National Institute of Geriatrics & Gerontology, Romania; 14. Senior Management, Evidents Consulting, United Kingdom; 15. Institute of Public Health, Jagiellonian University Medical College, Poland; 16. Department of Geriatrics, Charles University, Czech)

Introduction : Concern over the inappropriate exclusion of older

people from clinical trials is longstanding. The PREDICT study used mixed methods to investigate the extent of this exclusion and to explore the views of those directly involved. This paper reports findings from that aspect of the study investigating the views of older people and carers. Method : Focus groups were held across nine countries: the Czech Republic, Israel, Italy, Lithuania, Holland, Poland, Romania, Spain and the United Kingdom (n=42) using a structured interview schedule. Discussants were those living with conditions commonly affecting older people: hypertension, cancer, dementia, heart failure, stroke and depression (n=285). Data were analysed using a thematic approach based on questions in the interview schedule. Issues raised fell into four themes: ageism; advantages and disadvantages to participation; the relationship between the participant and their research team; practical features to support participation. Results : Findings confirm that older people and carers see chronological age as insufficient reason for exclusion from trials. They highlight the complex relationship between healthcare professionals and trial participants, the need for cultural and generational sensitivity in trial design and the importance of including quality of life as an outcome measure. Conclusion : Exclusion of older people from trials leads to inappropriate prescribing, a common and serious global healthcare problem among older populations. Transparent and appropriate methods for obtaining and maintaining consent among diverse populations need to be developed. Older people have the right to evidence based treatments and exclusion from trials on the basis of age alone is an infringement of human rights. Keywords : Clinical trials, Exclusion, Older people

SS24 308-R-4

DIFFERENCES IN INCOME, ASSETS AND HOUSING AND THEIR POLICY IMPLICATIONS FOR HEALTH AND WELLBEING AMONG OLDER CITIZENS

Charles WALDEGRAVE (*Family Centre social Policy Research Unit, Family Centre, New Zealand*)

Introduction : The aim of this research is to identify the drivers of wellbeing and quality of life among the older population from the theoretical perspective of Amartya Sen's capabilities approach. The objective of the research reported here has been to analyse the statistical associations between income poverty and non-poverty, asset accumulation and housing tenure on the one hand and wellbeing, health and depression on the other. Method : The results of the first wave of the New Zealand Longitudinal Study of Ageing (NZLSA) will be reported. The study has a national random sample of 3,317 New Zealand citizens aged between 50 and 84 years. Objective measures of income, wealth and housing tenure are compared with 2 measures of wellbeing WHOQoL-8 and CASP-12, 2 measures of health SF-12 Physical and Mental Health and a measure of depression CES-D-10. Results : The results demonstrate consistently significant relationships between income, asset accumulation, housing tenure when compared with measures of quality of life and health status. Income above the poverty thresholds, greater asset accumulation and home ownership were consistently associated with greater wellbeing, better health and less depression. Conclusion : These results demonstrate the serious policy challenges if large numbers of older people drop below the poverty thresholds, have few assets to fall back on and/or have to rely on the market for rental accommodation. Given the worldwide demographic shift in ageing that is currently taking place, these challenges centre around ongoing income adequacy, education about and opportunities for savings and asset accumulation and adequate social housing provision. Keywords : poverty, housing, health

SS24 309-C

APPROACH TO THE FRAIL ELDERLY PATIENTS

SS24 309-C-1

EPIDEMIOLOGY AND IMPACT OF FRAIL ELDERLY IN THE AGING AND AGED SOCIETY

Yong Kyun ROH (*College of Medicine, Department of Family Medicine, Hallym University, Korea*)

Frailty is a common clinical syndrome in the elderly that carries an increased risk for poor health outcomes including falls, incident disability, hospitalization, and mortality. Frailty is theoretically defined as a clinically recognizable state of increased vulnerability resulting from aging-associated decline in reserve and function across multiple physiologic systems such that the ability to cope with everyday or acute stressors is comprised. Based on frailty criteria developed in CHS, the overall prevalence of frailty in community-dwelling older adults aged 65 or older in the United States ranges 7-12%. The prevalence of frailty in Korea is 11.7% in the Cardiovascular Health Study (CHS) and 13.4% in the Study of Osteoporotic Fractures (SOF). In this symposium, I will introduce the Questionnaire assessments such as Vulnerable Elders Survey, Frailty Wheel, Korean frailty index, and The 15 item Kaigo-Yobo Check-List (Japan) for evaluation of frailty. And I will describe the prevalence of frailty in the aging and aged society and how it affects the health of the elderly.

SS24 309-C-2

CLINICAL MANAGEMENT OF FRAILTY

Belong CHO (*College of Medicine, Department of Family Medicine, Seoul National University, Korea*)

Clinical management of frail older individual is challenging because there is no firm consensus how to assess and manage it. Therefore, Functional Research Group of Korean Geriatric Society made manual and tool for management of Geriatric Functions. We will introduce the manual and tool to update current clinical management of frailty. This tool approached frailty with index and component of frailty to detect and manage because frailty consists of many kinds of different health problems. It focused on identification and management of the underlying cause of frailty. Even though much clinical management couldn't reverse the frail status per se, some interventions such as nutrition and exercise have shown good results in some clinical trials. There are more to prevent and delay frailty because we have many clinical interventions and tools which showed delay of frailty. Keywords : Frailty, Comprehensive geriatric assessment, frailty management

SS24 309-C-3

FRAILY IN THE LONG-TERM CARE FACILITY

Hyuk GA (*Institute of Geriatric Meidicine, Incheon Eun-Hye Hospital, Korea*)

Introduction : Korea is one of the most rapidly aging countries in the world. Between 1990 and 2010, the percent of Koreans aged 65 years or older rose from 5.1% to 11.0%, and is estimated to reach 24.3% by 2030. In a study among Korean elderly people aged 65 years or older, 86.7% had at least one chronic disease, 5.3% were dependent in all activities of daily living(ADL). Accordingly, the number of elderly people who are frail and need institutionalized care has also increased abruptly. Method : I will search for the recent studies about Korean elderly people's status of frailty and the long-term care facilities providing services for them. Results : I will describe and summarize above research concerning the epidemics of Korean elderly people's

frailty. Conclusion : I will conclude my talk suggesting comprehensive care of frail elderly patients who need long-term care in facilities. Keywords : long-term care, nursing home, long-term care hospital, frail

SS24 310-R

ACTIVITY ENGAGEMENT AND HEALTHY AGING

SS24 310-R-1

PATTERNS OF ACTIVITY INSIDE AND OUTSIDE THE HOME BY CHRONIC HEALTH CONDITIONS AND AGES

Carolyn BAUM (*Program in Occupational Therapy, Washington University School of Medicine, USA*)

Introduction : Biological changes may limit older adult's participation in activity. In addition they are increasingly challenged with chronic diseases. Older adults may eventually lose the ability to perform activities as they used to, but their capacity to engage in activities and derive a sense of wellbeing from them still exists. This paper introduces a simple valid measure of activity participation that can be used to document changes in activity participation as people age and experience chronic health conditions. Method : Common data elements in approved studies provided 460 people age 55-100 living in the community. Sixty four percent were female, 86% Caucasian, 14% African American, and 36% lived alone. The Activity Card Sort (ACS) is a validated and culturally appropriate tool that measures instrumental leisure, fitness and social activities. For the purpose of this study, the activities were coded as those performed at home and those performed in the community. Results : Older adults under 65 spend less time in home and community activities than those 75-80. Between 65-75 years, they increase activities in both. The number of chronic diseases does not impact home and community activities, but their perception of health does. Older adults with more education are more active in community and home activities. There no differences in male and female home activities, but men engage in more community activities. Conclusion : The data demonstrate the usefulness of the ACS for clinical and research purposes. There are 8 culturally valid versions of the ACS that can be used in global studies. Keywords : Participation, home, community

SS24 310-R-2

CROSS-CULTURAL DESCRIPTION OF ACTIVITY PARTICIPATION AMONG ADULTS AND OLDER ADULTS

Gunilla Margareta ERIKSSON (*Neurobiology, Care Sciences and Society, Karolinska Institutet, Stockholm, Sweden*)

Introduction : Activity Card Sort is developed into culturally relevant versions in 8 countries. Inspired by the ACS the Occupational Gaps Questionnaire (OGQ) was developed, measuring to which extent people do what they want to do. The ACS and the OGQ have been used to describe participation in everyday activities. The ACS identified central activities across cultures and central activities for older adults in Asian and Western cultures. Occupational gaps were identified in persons with stroke in Sweden and Iran. Comparison was made to a Swedish reference sample. Method : Samples of older adults responded to culturally relevant versions of the ACS (n=558; aged 60-104). The OGQ-samples were Swedes with stroke (n=200; mean age 69) Iranians with stroke (n=102; mean age 58) and a Swedish reference sample (n=170; aged 65-86). The ACS and the OGQ are validated and culturally appropriate tools. The OGQ assesses perceived gaps in instrumental ADLs, leisure and social activities and work. Results : Older adults shared 10 central activities; shop in a store, do grocery shopping, do dishes and laundry, read books or

magazines, sit and think, watch television, listen to radio or music, visit with friends and relatives, and talk on the telephone. People with stroke in Iran predominantly perceived gaps in instrumental ADLs; in Sweden people with stroke perceived most gaps in leisure and social activities. The Swedish reference sample reported gaps in instrumental ADLs and social activities. Conclusion : These descriptions provide a starting point for further exploration of everyday activities among older adults and persons with disabilities across cultures. Keywords : activity engagement, disability,

SS24 310-R-3

ANTECEDENTS AND HEALTH OUTCOMES OF ACTIVITY PATTERNS OF OLDER ADULTS IN THE U.S.

Nancy MORROW-HOWELL¹, Michelle PUTNAM², Yungsoo LEE³ (*1. Friedman Center for Aging, Washington University, USA; 2. Social Work, Simmons College, USA; 3. Brown School of Social Work, Washington University, USA*)

Introduction : The current literature has been limited by focusing on one or two activities at a time to explain health outcomes among older adults. In this study, we advance knowledge about activity engagement by considering many activities simultaneously to identify patterns of activity among older adults. Further, we use cross-sectional data to explore factors associated with activity patterns and prospective data to explore activity patterns and well-being outcomes. Method : We used the core survey data from the years 2008 and 2010 as well as the 2009 Health and Retirement Study Consumption and Activities Mail Survey (HRS CAMS). The HRS CAMS includes questionnaires assessing individual activities, measured by hours per week or hours per month. We used factor analysis and cluster analysis to identify activity patterns and structural equation modeling to assess antecedents and outcomes associated with activity patterns. Results : We identified five activity patterns: Low-Activity, Moderate Activity, High Activity, Retired, Working and Physically Active. These patterns varied in amount and type of activities. Demographic and health factors are related to patterns. For example, lower SES older adults are more likely to be in the Low-Activity group. Activity patterns were associated with self-rated health, depression symptoms, and functioning but not life satisfaction. Conclusion : The use of a five-level categorical activity pattern variable allows more complex analyses of activity that capture the "whole person." Older adults adapt different patterns of activities and identifying the most optimal patterns for well-being outcomes can guide program and policy development. Keywords : activity patterns; activity engagement

SS24 313-S

SOCIAL CLASS AND INEQUALITIES IN RETIREMENT

SS24 313-S-1

CLASS, CARE AND CARING IN LATER LIFE

Christina VICTOR (*School of Health Sciences and Social Care, Brunel University, United Kingdom*)

Introduction : Older people, those aged 65 years and older, experience a range of age-related conditions such as arthritis, respiratory disease, circulatory disease and mental health problems such as depression and dementia. The prevalence of these conditions increases with age as does multiple pathology. One consequence of this age-related increase in morbidity is that older peoples' ability to remain living independently in the community may be compromised as they experience difficulties with essential activities of daily living. Method: Only a minority of older people, 5-10% receive formal community services provided by statutory, voluntary or private sector

organisations and informal carers provide 90% of help provided with activities of daily living and health care tasks. Results : Informal or family care is fundamental to any community care policy for older people and the contribution of the family generally in providing care is well established both qualitatively and quantitatively. Approximately 12% of adults self-define themselves as 'informal carers' whilst 56% of adults expect their family to provide care and support in old age. Conclusion : In this paper we examine how health care needs are differentially distributed within the older population and the importance of class (and gender and ethnicity) in the distribution of both longevity and morbidity. We then examine how the typology of caring about, taking care, care giving and care receiving extends our understanding of the formal and informal care sectors and how these dimensions of caring are linked to the key socio-structural factors of class, gender and ethnicity. Keywords : Class Caring

SS24 313-S-2

CLASS, COMMUNITY AND INEQUALITY IN LATER LIFE

Ian Rees JONES (*Social Sciences, Cardiff University, United Kingdom*)

Introduction : The roles, social relations and material circumstances of older people have been focal points for many community studies in the past. In the new contexts that have accompanied the economic and technological changes of second modernity older communities of propinquity and attachments to locale and place remain, but in different circumstances. At the same time communities of interest become increasingly important. It is here also that our understandings of the relationship between class and later life are being challenged empirically and theoretically. Method : This paper reviews the literatures on community and class in later life and addresses the scope for exploring concepts of class and community together within the complex interplay of locality and identity as a means of understanding the construction of inequalities and exclusion in later life. Results : Research on community and later life has produced ambiguous results reflecting how, for older people, the profound social changes that have accompanied nascent globalization throw up contradictions and tensions. For example, being linked to local communities may have beneficial aspects and be desired but may also be associated with being stuck, unchanging and old. For some, who have financial, social and cultural capital, community may involve active choices; for others it may be part of an experience of isolation and exclusion. Conclusion: The paper will argue that considerations of the implications of the emergence of a relatively lengthy post-working life are not yet fully incorporated into studies of community and social cohesion. Keywords: Class, Community, Inequality

SS24 313-S-3

SOCIAL CLASS DYNAMICS IN LATER LIFE: A MALTESE CASE-STUDY

Marvin FORMOSA (*European Centre for Gerontology, University of Malta, Malta*)

Introduction : The purpose of this presentation is to address the evanescent character of social class in social gerontology. Following a discussion of the travails of the class concept in ageing studies, this article reports upon an empirical study on class structures and identities in later life carried out in Malta. Drawing inspiration from Pierre Bourdieu's sociology of class, results indicate that although in second modernity it is not longer possible to regard retirement as a residual component of the class structure, class structures and identities in later life have not melted in thin air. Method : The method consisted of a case-study of class structuring amongst older persons in

Malta. Definitions of case studies vary but, in essence, all promote the notion that the researcher aims at knowing a single entity or phenomenon - that is, the case - through the collection of data through various procedures. Results : Qualitative data highlight three key classes inhabited by older people in Malta - namely the working class, the middle class, and the dominant class. Subjects also held distinct class identities which arose in 'cultural' and 'implicit' ways. This article demonstrates that although older persons no longer spontaneously and unambiguously use the language of class as obvious, elders do not constitute thoroughly individualised beings who fly completely free of class relations. Conclusion : This article confirms that modern conceptualisations of class, especially those championed by the political economy standpoint, are no longer relevant on their own to understand diversity and inequality in later life. Keywords : class, inequality, retirement

SS24 314-S

USING TECHNOLOGY FOR THE CARE OF OLDER ADULTS

SS24 314-S-1

INTERNET VIDEO CONFERENCING SUPPORT GROUPS OLDER ADULTS WITH CHRONIC DISEASE AND THEIR CAREGIVERS

Elsa MARZIALI (*Rotman Research Institute, Baycrest, Canada*)

Purpose: At Baycrest we have developed and evaluated two web-based video conferencing intervention programs; Caring for Other (CFO)©; Caring for Me (CFM)©. Objectives of the programs include, a) helping family caregivers manage more effectively the care of persons with neurodegenerative diseases, b) help patients with chronic diseases e.g. cardiovascular, Type II diabetes maintain adherence to prescribed rehabilitation regimes, and c) improve health outcomes and quality of life for caregivers and chronically ill patients. Programs: Participants in each program access a password protected web site that is user-friendly with a structure and functionality that includes, a) peer group e-mail link; b) threaded discussion forum; c) videoconferencing link for one-on-one and group meetings, and d) posted educational materials and links to disease-specific websites. A simplified computer training manual is used to train participants to negotiate the web site. Each intervention program consists of ten weekly online group meetings facilitated by a professional clinician. Intervention training manuals are used to insure reliable adherence to protocol for each intervention program. Results : Caregiver and Patient Response: For all groups, participants responded positively to using technology to communicate with health care professionals and peer-group members. Analysis of group process extracted key issues of concern. Participants reported reduction in stress, reduction in feelings of isolation, improved self-efficacy for caregiving and for self-care, and an improved quality of life. Conclusion : Practical Implications: Our Internet-based, video conferencing intervention programs for caregivers and for patients with chronic disease are evidence-based, easily accessible for clinicians, patients and informal caregivers regardless of geographic location. Keywords : internet video conferencing intervention chronic disease

SS24 314-S-2

DEVELOPMENT AND EVALUATION OF AN E-LEARNING PROGRAM FOCUSED ON NURSING ASSISTANTS' MANAGEMENT OF WORKPLACE STRESS

Anthony LOMBARDO¹, Elsa MARZIALI², Corey MACKENZIE³, Illia TCHERNIKOV⁴ (1. *Research, National Initiative for the Care of the Elderly (Nice), Canada*; 2. *Faculty of Social Work & Department of Psychiatry, Faculty of Medicine, University of Toronto, Canada*;

3. *Department of Psychology, University of Manitoba, Canada;*
4. *Research, Baycrest, Canada)*

Introduction : An e-learning program for nursing assistants (NAs) with a focus on management of stress arising from relationship conflicts with residents, families and co-workers was evaluated in a national survey of participant responses to the content, e-format, and applicability of the program to care practices. **Method :** NAs and their nursing supervisors were recruited from 17 long term care institutions across Canada (N=117). The e-learning program in DVD format could be viewed on computers or TVs at times convenient for NAs. Modules focused on NAs' management of work-related relationship conflict and self-care, nursing supervisor's support of NAs' management of work-related stress, and animations of NAs management of conflict situations. At each institution an educator recruited participants, arranged time and equipment for viewing DVDs, and arranged conference call follow up focus groups that were audio recorded and analyzed qualitatively. **Results :** Overall the NAs viewed the e-learning content and format as useful and relevant to their work situations. NAs reported greater confidence in managing conflicts with residents and less comfort dealing with families, co-workers and supervisors. Many NAs felt that their input to care planning was ignored and/or rarely solicited. Due to resident care demands, team meetings did not exist in many institutions and were infrequent in most others. **Conclusion :** This readily accessible e-learning program is useful as an initiation tool for new hires and a refresher course for more experienced NAs. The program will be revised to reflect gaps in institutional support of NAs management of work-related stress. **Keywords :** stress, technology, nursing

**SS24 314-S-3
DEVELOPMENT AND EVALUATION OF DEMENTIA
PATIENTS' RESPONSE TO PERSONAL MULTIMEDIA
BIOGRAPHIES**

Elsa MARZIALI (*Rotman Research Institute, Baycrest, Canada*)

Introduction : The purpose of this feasibility pilot project was to observe Alzheimer's disease (AD) and mild cognitive impairment (MCI) patients' responses to personalized multimedia biographies (MBs). We developed a procedure for using digital video technology to construct DVD-based reflective histories of persons with AD or MCI, documented their responses to observing their MBs, and evaluated the psychosocial benefits. **Method :** An interdisciplinary team consisting of multimedia biographers and social workers interviewed 12 family members of persons with AD and MCI and collected archival materials to best capture the families' and patients' life histories. We filmed patients' responses to watching the MBs and conducted follow-up interviews with the families and patients at 3 and 6 months following the initial viewing. Qualitative analytic strategies were used for extracting themes and key issues identified in both the filmed and the interview response data. **Results :** Analysis of the interview and video data showed that viewing the DVDs evoked long-term memories and stimulated reminiscing, brought mostly joy but occasionally moments of sadness to the persons with cognitive impairments, aided family members in remembering and better understanding their loved ones, and stimulated social interactions with family members and with formal caregivers. **Conclusion :** This study demonstrates the feasibility of using readily available digital video technology to produce MBs that hold special meaning for individuals experiencing AD or MCI and their families. **Keywords :** Alzheimer's disease

SS24 314-S-4

**ONLINE EVIDENCE-BASED INFORMATION TOOLS FOR
OLDER ADULTS**

Lynn MCDONALD (*Institute of Life Course and Aging, University of Toronto, Canada*)

Introduction : The purpose of this paper is to report on the development of digital evidence-based pocket tools for older adults, their families, professionals and students. The tools were created by an international knowledge exchange network established in 2005 by the National Centres of Excellence, Canada to improve the care of older adults in light of lagging professional education, research and community participation. The aim of NICE is to develop evidence-based knowledge in the form of pocket tools in both paper and digital formats. **Method :** The development of over 200 tools by eight knowledge teams (mental health, dementia, elder abuse, financial literacy, ethnicity, end-of-life, law and aging, and care giving) according to the guiding conceptual and the goal, targets, end users and outcomes and their evaluation is presented. **Results :** Tracking mechanisms using Google Analytics, shows that the tools page has had over 300 visitors in the first month of operation, with 32% of this total being return visitors. The average visit has been 4.5 minutes. The top 5 pages are the 1) landing page; 2) the paper ordering form 3) the elder abuse digital tools page; 4) the caregiving digital tools page; and 5) the end of life issues digital tools page. **Conclusion :** This is a promising start of digital knowledge dissemination and it is expected that the demand will be equivalent to surpass the paper tool demand of an average 6,000 tools per month. **Keywords :** Digital pocket tools, Knowledge exchange

**SS24 316-C
TREATMENT OF FRAILTY: PRACTICAL ASPECTS**

**SS24 316-C-1
TREATMENT OF FRAILTY: DEFINITIONS AND CONCEPTS**
Ian CAMERON (*Rehabilitation Studies Unit, University of Sydney, Australia*)

Introduction : Frailty is now well accepted as a concept relevant to older people. This term is widely used clinically and there is a substantial body of scientific literature available. Viewing this syndrome from a clinical perspective, the question of ability to "treat", or at least ameliorate, frailty readily arises. **Method :** Over the past decade, frailty has been clearly conceptualised and studied using systematic literature review and observational cohort studies. Intervention studies with the goal of "treating" frailty are infrequent but increasing in number. **Results :** Two main types of frailty model are available. These are an accumulated deficit approach and a phenotypic approach. Using either model it is established that frailty has a substantial incidence and prevalence in older people. Limited numbers of intervention studies have been performed in which frailty is specifically defined and very few studies have had frailty (specifically defined) as an outcome. There are also some studies investigating whether intervention is feasible in "pre frail" older people. Some studies suggest that "treatment" of frail and pre frail older people is beneficial. **Conclusion :** While frailty is well recognised and accepted clinically, treatment studies of frailty are at an early stage. **Keywords :** frailty, intervention study, exercise

**SS24 316-C-2
EFFECTS OF STRENGTH TRAINING IN PRE-FRAIL OLDER
ADULTS**
Susan KURRLE (*University of Sydney, Australia*)

Introduction : Aging is often paralleled by sarcopenia and loss of muscle mass and makes up a cornerstone of the (physical) frailty syndrome. Using the definition of frailty by Fried et al (2001), frailty can be scored in non-frail, pre-frail and frail. Whereas physical activity programs may serve in younger ages as a primary prevention for sarcopenia and therefore frailty, such programs ? often in conjunction with nutritional interventions to help to prevent aggravation of pre-frail older adults to suffer from the full blown frailty syndrome. **Method :** See above. **Results :** See above. **Conclusion :** There is good evidence that strength training has significant positive effects to achieve the goals stated above. Open research questions nevertheless still include several areas such as: When should strength training be started? How often and to what extent has it to be applied? What is the impact of strength training alone or in conjunction with nutritional interventional therapies? Are there specific populations achieving better versus worse results? How can strength training programs be implemented in selected patient groups (e.g. neurodegenerative disorders like Parkinsonism or dementia)? These questions will be discussed within the talk with a special focus on pre-frail older adults, meaning those entering clinically the frailty spiral. **Keywords :** frailty, intervention study, exercise

SS24 316-C-3

EFFECTS OF A HOME-BASED EXERCISE PROGRAM ON FRAILTY AND MOBILITY DISABILITY IN PEOPLE WHO HAVE BEEN IN HOSPITAL

Monica PERRACINI¹, Cathie SHERRINGTON² (1. *George Institute for Global Health, Australia*; 2. *The George Institute for Global Health, Musculoskeletal Division, Sydney Medical School, University of Sydney, Australia*)

Introduction : There is evidence that disability severity and frailty can be reduced by interventions including exercise. However, the potential for exercise to reduce frailty or mobility disability in older people who have spent time in hospital has not been established yet. The aim of this presentation is to discuss the potential effects of home exercise on frailty and report the results of a trial testing the impact of a home exercise program on frailty and mobility disability in older people recently discharged from hospital. **Method :** This is a secondary analysis of data from a randomized controlled trial of home exercise conducted among older adults recently discharged from hospitals in Sydney, Australia, aiming to reduce falls and disability. Participants were aged 60 years and had been admitted to and subsequently discharged from hospital wards. Participants in the intervention group were submitted to a program consisted of 10 home visits from an experienced physiotherapist in the 12-month study period. Participants were asked to undertake a 20 – 30 minute program of lower limb balance and strengthening exercises up to 6 times per week at home for 12 months. The exercise intervention program was based on the Weight-bearing Exercise for Better Balance (WEBB) program. The control group received usual care. **Results :** The study sample was composed of 340 patients with a mean age of 81.2 (7.9 SD) years. The distribution of participants according to frailty status in baseline was 63 (19%) non-frail, 171 (52%) pre-frail and 97 (29%) frail. Frailty and mobility disability status after 3 and 12 months of exercise will be presented. **Conclusion :** Frailty and mobility disability are important concepts and can potentially be treated with exercise. **Keywords :** frailty, exercise, disability

SS24 316-C-4

THE FRAILTY INTERVENTION TRIAL: A MULTIFACTORIAL INTERDISCIPLINARY INTERVENTION REDUCES FRAILTY

Susan KURRLE (*Northern Clinical School, University of Sydney, Australia*)

Introduction We hypothesized that frailty, defined using the Cardiovascular Health Study (CHS) criteria (three or more of weight loss, self-reported exhaustion, slow walking speed, limited energy expenditure and limited strength), can be treated and ameliorated in many patients. We have conducted a randomized controlled trial utilizing a multifactorial interdisciplinary intervention targeting CHS frailty components, and including goal setting and improving functioning. **Method :** 241 people aged 70 years and over, living in the community in Northern Sydney, Australia, who were frail using the CHS study criteria, were recruited and followed for 12 months. Their mean age was 83.3 years and two thirds were women. Participants were randomized to receive either the multidimensional frailty intervention, or usual care. The CHS classification of frailty in older people was compared at baseline, three months, and 12 months in both groups. Other outcome measures included functioning and health related quality of life. **Results :** Ninety percent of the sample completed the study. The mean CHS study frailty score was significantly improved at 12 months in the intervention group and improvements in the intervention group were also seen in the co-primary outcome which was mobility as assessed by the Short Physical Performance Battery. **Conclusion :** This study demonstrates, for the first time to the knowledge of the authors, that frailty as specifically defined using recognized criteria can be treated and reversed. These findings should be replicated. Efforts should be made to apply the techniques utilized to frail people in other countries and also to 'pre-frail' people. **Keywords :** frailty, disability, randomized trial

SS24 317-B

INTERVENTIONS FOR PROMOTING HEALTHY AGING

SS24 317-B-1

HEALTHY AGING WITH BOTANICAL EXTRACTS: THE IDENTIFICATION AND MECHANISTIC EVALUATION OF OF ANTI-AGING BOTANICALS

Mahtab JAFARI (*Pharmaceutical Sciences, University of California, Irvine, USA*)

Introduction : The focus of our research team is to screen and identify compounds and botanicals that can extend lifespan and improve health. We use the fruit fly, *Drosophila melanogaster*, as our main model system. **Method :** We then use cell culture, fly, and mouse models to evaluate potential molecular mechanisms. **Results :** To date, we have tested over 75 candidates and identified 5 botanicals capable of extending lifespan in the fly: green tea, cinnamon, curcumin, *Rosa damascena*, and *Rhodiola rosea*. In this presentation, data on the impact of these botanicals on lifespan, healthspan and pathways that may modulate aging such as the sirtuins, the target of rapamycin, and insulin signaling will be presented. **Conclusion :** Our results suggest these extracts may present novel therapeutic for aging and age-related diseases. While the precise mechanism through which these botanicals extend lifespan in flies is not yet clear, our findings with *Rhodiola rosea* largely rule out an elevated general resistance to stress and DR-related pathways as candidates. The latter conclusion is especially relevant given the limited potential for DR to improve human health and lifespan, and presents *R. rosea* as a potential viable candidate to treat aging and age-related diseases in humans. **Keywords :** lifespan, healthspan, dietary restriction, plant extracts

SS24 317-B-2

CRANBERRY SUPPLEMENTATION AS AN INTERVENTION

FOR PROMOTING HEALTHY AGING

Sige ZOU (*Translational Gerontology Branch, National Institute on Aging, USA*)

Introduction : Diet composition plays a critical role in modulating health and lifespan. Dietary custom varies among humans in different geographic regions. Nutraceuticals, such fruit extracts, contain high antioxidant and other bioactivities, and are ideal for promoting healthy aging. Whether and how diet composition, such as macronutrient composition, influences any potential longevity properties of nutraceuticals or pharmaceuticals are largely unknown. In the symposium, we will discuss our studies on investigating the effects of a cranberry-containing nutraceutical on health and lifespan in multiple model organisms, including flies and rodents. **Method :** We fed animals 2% cranberry extract and measured lifespan and gene expression changes in flies, morphological changes in pancreatic cells of rats and immune and morphological change in the brains of a mouse model of Alzheimer's disease (AD). **Results :** We found that cranberry can extend lifespan in flies. This lifespan extension, however, depended on dietary macronutrient composition since cranberry only extended lifespan in flies fed a high sugar-low protein diet but not a low sugar-high protein diet. In rats, cranberry supplementation delayed age-related loss of pancreatic beta-cells and improve insulin secretion in beta-cells. In the AD mouse model, cranberry supplementation reduced expression of some immune response proteins and delayed age-related accumulation of Abeta aggregates in the brain. **Conclusion:** Our findings suggest that cranberry can be used as an efficient and cost-effective intervention for promoting healthy aging. Our studies also point out the challenges and importance to consider diet composition or dietary customs in developing effective interventions for humans. This study was supported by IRP of NIA. **Keywords :** Nutraceutical; Diet composition; Oxidative stress

SS24 317-B-3

THE GEOMETRIC FRAMEWORK, MACRONUTRIENTS AND AGEING IN MICE

David LE COUTEUR¹, Samantha SOLON², Aisling MCMAHON², Kari RUOHONEN³, J. William BALLARD⁴, David RAUBENHEIMER⁵, Stephen SIMPSON⁶ (*1. Centre for Education and Research on Ageing, University of Sydney, Australia; 2. ANZAC Research Institute, University of Sydney, Australia; 3. EWOS Innovation, Norway; 4. School of Biotechnology and Biomolecular Sciences, University of NSW, Australia; 5. Institute of Natural Sciences, Massey University, New Zealand; 6. Charles Perkins Centre, University of Sydney, Australia*)

Introduction : Diet influences ageing yet its complexity has impeded the development of an overarching schema that reconciles the diverse and contradictory observations about the effects of dietary macronutrients and caloric intake on ageing. Here the Geometric Framework was used to interpret the influence of diets differing in energy, protein, fat and carbohydrate content on food intake, cardiometabolic phenotype and longevity in ad libitum-fed mice. **Method :** 858 mice were ad libitum-fed over a lifetime on one of 25 diets differing in content of protein (5-60%), fat (16-75%), carbohydrate (16-75%) and energy (8, 13 or 17 kJ g⁻¹ of food). These dietary compositions were chosen to sample a representative number of nutritional vectors and nutrient concentrations within protein-carbohydrate-fat diet space. One third of the mice were culled at 15 months of age and the remainder continued until they died naturally. **Results :** Longevity and late-life health were optimized by diets low in protein and high in carbohydrate. These diets were associated with lower activation of mTOR in the liver, lower insulin levels, improved

mitochondrial function and favorable lipid and blood pressure profiles. A clear association between diet, appetite and health outcomes was the circulating level of branched chain amino acids. **Conclusion :** The influence of dietary energy and macronutrients longevity can be reconciled by considering how the entire dietary landscape titrates food intake and regulatory pathways. **Keywords :** macronutrients, geometric framework, ageing

SS24 317-B-4

SYRINGARESINOL, A LIGNAN ISOLATED FROM PANAX GINSENG BERRY PULP DELAYED ENDOTHELIAL CELLULAR SENEESCENCE VIA UPREGULATION OF SIRT1 GENE

Si Young CHO (*Health Science Research Institute, R&D center, Amorepacific corporation, Korea*)

Increased SIRT1 expression exerts beneficial effects in transgenic animal models, ameliorating the onset and progression of aging-related disease phenotypes in various organs including the heart. The potential beneficial effects of SIRT1 have made SIRT1 a prime therapeutic target for age-related diseases and considerable efforts led to the identification of small molecule activator of SIRT1 protein. Thus far, however, a small molecule activator of SIRT1 gene expression has not been reported. Here, we report that syringaresinol, isolated from Panax ginseng berry pulp, is an activator of SIRT1 gene expression. Using human umbilical endothelial cells (HUVECs), we show that syringaresinol treatment induced binding of FOXO3 to the SIRT1 promoter in a sequence-specific manner, leading to induction of SIRT1 expression. Increased SIRT1 expression in HUVECs by syringaresinol treatment delayed cellular senescence and improved various markers of endothelial functions in a FOXO3 dependent manner. Collectively, these findings bring to light a new transcription activator of SIRT1 that may have therapeutic potential. **Keywords :** SIRT1, Small Molecule Activator, Senescence

SS24 318-B

AGEING INTERVENTIONS AND MECHANISMS

SS24 318-B-1

MOLECULAR MECHANISMS OF ANTI-AGING ACTIVITY IN ASHWAGANDHA LEAF EXTRACT

Sunil KAUL, Renu WADHWA (*Biomedical Research Institute, National Institute of Advanced Industrial Science & Technology (AIST), Japan*)

Introduction : Ashwagandha (*Withania somnifera*) is a tropic herb that is extensively used in Indian traditional home medicine to promote health and quality of life. Though sustained through experience and history, there are only a limited laboratory studies and experimental evidence to its effects. **Method :** We prepared alcoholic extract (i-Extract) of Ashwagandha leaves and investigated its anti-cancer and anti-aging activities in the cultured normal and cancer cells. Methoxyacetic acid (MAA) was used to induce premature senescence. **Results :** We found that the lifespan of normal cells got extended in the presence of low dose of i-Extract in the culture medium. This effect was mediated by protection of cells against oxidative damage and induction of proteasomal degradation pathway resulting in decreased accumulation of molecular damage. Furthermore, the effect was mostly reproduced using a pure phytochemical, withanone, but not withaferin A, from the extract. In a stress model, human fibroblasts were induced to undergo premature senescence by exposure to an industrial toxin, methoxyacetic acid (MAA), known as a major metabolite of ester phthalates that are commonly used in industry as

gelling, viscosity and stabilizer reagents. We have found that the cells were protected against MAA-induced premature senescence that involve ROS generation, DNA and mitochondrial damage. Furthermore, in vivo models of old-age pathologies such as Parkinson's and Alzheimer's disease, i-Extract showed prophylactic and therapeutic activities providing evidence to its anti-aging potentials. Conclusion : Alcoholic extract of Ashwagandha leaves and its component, withanone, are good candidates for anti-aging interventions. Keywords : Ashwagandha, leaf extract, anti-aging

SS24 318-B-2

MOLECULAR CHARACTERIZATION OF ANTI-METASTASIS AND ANTI-ANGIOGENESIS ACTIVITY IN THE LEAF EXTRACT OF ASHWAGANDHA

Chaek YUN (*Department of Bioengineering, College of Engineering, Hanyang University, Korea*)

Introduction : Ashwagandha is a plant-derive compound used as an important source of several useful anti-cancer agents in the Indian. We undertook a study to investigate the anti-metastasis and anti-angiogenesis activity in the extract of Ashwagandha leaves. Results : Endothelial cell chemotactic migration assay and tube formation assay were significantly inhibited by Ashwagandha extract, demonstrating the antiangiogenic effect. In addition, expression level of VEGF protein was down-regulated, and the anti-invasion and anti-migration activities which were assessed by transwell was also markedly reduced by Ashwagandha extract. Moreover, Ashwagandha extract elicited potent cytotoxic effect in several cancer cells lines, implying the therapeutic potential of an Ashwagandha as an anti-cancer drug. Furthermore, Ashwagandha up-regulated expression of epithelial marker genes, while it down-regulated mesenchymal marker genes. Conclusion : In sum, these data support the existence of anti-proliferative, differentiation-inducing, and anti-migratory/anti-metastasis activities in Ashwagandha that could be used as potentially safe and complimentary therapy for solid tumors. Keywords : Ashwagandha, VEGF, mesenchymal marker genes

SS24 318-B-3

ASHWAGANDHA LEAF EXTRACT RECOVERS SCOPOLAMINE INDUCED MEMORY LOSS: BIOCHEMICAL, CELLULAR AND MOLECULAR INSIGHTS

Mahendra THAKUR (*Department of Zoology, Banaras Hindu University, India*)

Introduction : Brain aging and associated neurodegenerative pathologies are accompanied with drastic decline in memory and cognition. However, the underlying mechanisms and appropriate remediation strategies are still elusive. Animal models of memory impairment have been widely used to understand these mechanistic aspects and screen therapeutic agents. Over this background, the present study was designed to investigate the therapeutic potential of a well known herb in the Indian traditional system of medicine, Ashwagandha (*Withania somnifera*) in scopolamine induced mouse model of memory loss. Method : We have investigated the effect of alcoholic extract of Ashwagandha leaves (i-Extract) on scopolamine induced alterations in (i) brain acetylcholinesterase activity, (ii) spatial memory by Morris water maze task (iii) expression of neuroplasticity genes in male Swiss albino amnesic mice, and (iv) cytotoxicity of brain derived cell lines. Results : We found that scopolamine increased AChE activity, impaired spatial memory, and drastically downregulated the expression of neuroplasticity genes including BDNF, Arc, Neuropsin and these effects were markedly attenuated in response to i-Extract treatment. Scopolamine also induced cytotoxicity

in IMR32 neuronal and C6 glioma cells. It was associated with downregulation of neuronal cell markers NF-H, MAP2, PSD-95, GAP-43 and glial cell marker GFAP. Furthermore, these molecules showed recovery when cells were treated with i-Extract or its purified component, withanone. Conclusion : Our study provides insight into the biochemical , cellular and molecular basis of recovery potential of i-Extract in scopolamine-induced memory loss and warrants its further exploration in age related memory dysfunctions. Keywords : Memory, Scopolamine, i-Extract

SS24 319-S

ACTIVE SENIOR'S PLACE AND ROLE IN SUPER AGING SOCIETY

SS24 319-S-1

ACTIVE SENIOR'S PLACE AND ROLE IN JAPAN

Yuji WADA (*Institute for Future Technology, Japan*)

Introduction : Japan is already super aging society (population aging rate is over 23%). Active senior will be a majority in the near future. I focus on the active senior's social roles and places in the various fields. Method : I have made fifty case studies through interviewing the each player, senior citizen, NPO, local governmental staff and so on. Results : Among them I introduce the following cases; transfer of the urban retired people's knowledge and skill to the younger generation, community business by senior citizen via ICT, and care volunteer activities by active elderly citizen. Conclusion : In Japan, active senior's social participation is a very important key factor toward super aging society. Keywords : active senior, super aging society

SS24 319-S-2

URBAN RETIRED PERSONS AND INTERGENERATIONAL EXCHANGE

Shino SAWAOKA (*Research Planning, The DIA Foundation for Research on Aging Societies, Japan*)

Introduction : Since many Japanese people, often called "working bees," have lives centered around work, they tend to become isolated from a society after the retirement. There is an urgent need for measures to find new places for them to play a role that could replace work. Method : The author conducted interviews with members of "Kanagawa Kids' Class (K Club)" which consists mainly of corporate retirees and is engaged in science education for children at elementary schools and other places. Results : In K Club, roles are divided while considering each member's previous career. For example, members with science backgrounds prepare materials for and teach at science classes, and others with PR experiences advertise the program. K Club is also developing new programs recently: members with liberal arts backgrounds now provide classes on social systems, such as lives, money, and the world. During the interviews, K Club members identified the sources of energy they gain from this activity, including: challenges in teaching science and social systems to children while keeping the subjects interesting, sense of achievement and joy when children understand what they teach, as well as new stimulation they receive from children. Conclusion : The activities where retirees provide educational assistance for children are expected not only to improve academic achievement of children but also to create meanings of lives (Ikigai) through intergenerational exchange. Keywords : Retired Person, Intergenerational Exchange

SS24 319-S-3

COMMUNITY BUSINESS BY SENIORS IN JAPAN

Kiichiro HORIIKE¹, Yuji WADA² (1. Ex-representative of Senior SOHO Salon Mitaka, Japan; 2. Institute for Future Technology, Japan)

Introduction : Recently, Japanese government had started 'promotion community/social business' and in 2010 provided 12 social worker training project with citizen and NPO, spending 7 thousand million yen. Now cooperation networks among promoting citizens, industries, schools and local government in especially 3.11 disaster area are created know-how shared. It is worthwhile to notice that several unique local business by participated seniors took place and successfully continued. Against their hope, seniors didn't have opportunity to fulfil the social role. So, active seniors were borne up by success of these activities. Method : We have visited to following cases several times. (1) Irodori (elderly women's leaf business); (2) Ageo ABCEC (retiree's job matching to local company); (3) Senior SOHO Mitaka (Senior ICT assisting business and so on); (4) BABALabo (grandmother's workshop for grandchild raising goods); and (5) Chofu Island Club (isolated island food supply) will be introduced. We have studied the key for success from our next points of view. a) Independent business model; b) Leader's management and character; c) Using ICT and visualization; d) Human Network; e) Making use of senior's role. Results : The tips for those successes are to have purpose in life and worthwhile works. Those systems are called community business promotion and has the following five characteristics: 1) change of mind from centralized, big corporate society to realization of personal quality; 2) share community information by learning ICT; 3) paid work system with shouldering responsibility; 4) group activities combining producers, players and supporters; and 5) tackling with problems in the community in cooperation with local government. Conclusion : The good schema for using senior's wits is important in super aging society. These tips will be transferred to all over the country and the social capital increase by active seniors. Keywords : Community Business, ICT visualization, Senior's Traditional Wit

SS24 319-S-4 YOKOHAMA'S CHALLENGE FOR AGING SOCIETY- VOLUNTEER OPPORTUNITIES FOR SENIOR CITIZENS

Shiro SEKIGUCHI (Kanagawa Welfare Association, Kanagawa Welfare Association, Japan)

Introduction : Japan has one of the fastest aging populations and lowest birthrates in the world. The segment of the population over 65 is expected to be over 40 percent by 2045, which is currently a little over 23 percent. Preparing for upcoming super aging society is one of the most important issues that have to be solved in Japan. Let me introduce a local program for seniors that have been implemented since 2009. Method : City of Yokohama, in which over 3.6 million people live, has offered its own volunteer program for local senior citizens since October 2009. The ultimate goal of the program is to restrain social security spending that has been increasing. Results : Over 6,700 local senior citizens have registered for the program (as of Nov. 2012). Conclusion : Offering social participation for seniors may be one of the best solutions that have to be considered in order to cope with upcoming aging society in Japan. Keywords : Aging society, senior citizens, volunteer, social participation

SS24 321-S PAIN ASSESSMENT AND PAIN MANAGEMENT AMONGST THE OLDER POPULATION

SS24 321-S-1 MANAGEMENT OF PAIN: BEST PRACTICE AND AREAS

FOR FUTURE RESEARCH

Pat SCHOFIELD (Health & Social Care, University of Greenwich, United Kingdom)

Introduction : We are expecting to see a huge increase in the numbers of older adults within society by 2050 and it is anticipated that the numbers of those over the age of 85 will increase dramatically. We already know that pain is under-reported in this group (Yates et al 1995, Schofield 2005). Estimates of persistent pain in this group range from 7-54% of those living in the community and this number increases to 45-83% amongst the institutionalised population. Furthermore, persistent pain is associated with more pain sites, usage of greater number of pain descriptors, less response to interventions, more sleep disturbance and greater emotional distress including anxiety and depressive symptoms compared with acute pain. Coupled with the potential for social isolation that can occur in the older age group in the presence of pain and as mentioned previously, the potential for under-reporting pain, it is essential that we begin to assess pain more appropriately in this group to ensure more effective management. Method : This presentation will highlight the latest evidence regarding the management of pain in the older population based upon recent systematic reviews of the evidence. Alongside this, some of the latest technological approaches that have been developed in the UK and are currently being evaluated will be discussed. Results: The presentation will highlight the results of systematic reviews of the literature and evaluation of technology such as the iPhone Application for pain assessment in dementia and the dementia carers website. Conclusion : Recommendations will be made for future research. Keywords : management, guidelines, Application, Dementia

SS24 321-S-2 MANAGEMENT OF CHRONIC PAIN FOR OLDER PERSONS: MULTISENSORY STIMULATION AND EXERCISE PROGRAMME

Mimi TSE (School of Nursing, The Hong Kong Polytechnic University, Hong Kong)

Introduction : The prevalence of chronic pain among the elderly is high and reduces their quality of life; effective non-pharmacological pain management should be promoted. Method : The purpose of this quasi-experimental pretest and posttest control design was to enhance pain management via an 8-week multisensory stimulation and exercise programme (MSE). Residents from two nursing homes were randomised into an experimental group with MSE and a control group with regular care but without MSE. Relevant data were collected from both groups before and after the MSE. The MSE consisted of an 8-week programme, with one session per week consisting of exercise programme and practising multisensory stimulation therapy. Results : There were 59 and 82 older people in the experimental and control groups respectively. No significant differences were found in their demographic characteristics, pain parameters, number of non-pharmacological strategies for pain relief, effectiveness scores on the non-pharmacological therapies, and psychological wellbeing at the baseline. Upon completion of the MSE, there was a significant decrease in pain scores and in the use of non-drug methods to control pain; also, a significant improvement was observed in all psychological parameters in the experimental group, but not for the control group. Conclusion : The MSE proved to be effective in reducing pain, enhancing psychological wellbeing and increasing the use of non-pharmacological therapies for the elderly. Keywords : Multisensory stimulation, exercise

SS24 321-S-3

ASSESSMENT OF PAIN

Sandra ZWAKHALEN (*Health Services Research, Maastricht University, Netherlands*)

Introduction : The last decade pain in older persons with dementia predominantly focused on the development of behavioral pain tools. The aim of this study was to critically appraise all systematic review and evaluate the evidence available on pain assessment scales for elderly people with severe dementia. **Method :** Relevant publications in English, German, French or Dutch, were identified by means of an extensive literature search. The search period focused on January 2002 to July 2012 and included 3 electronic databases (Medline, Psychinfo and CINAHL), supplemented by screening citations and references. Reviews were defined as systematic if they had explicitly defined their search strategy and clear inclusion and exclusion criteria for studies. **Results :** Eight systematic reviews were finally included in the synthesis. Reviews varied in recommendations of most preferable tools. However, PACSLAC, PAINAD, Abbey, DOLOPLUS-2 and DS-DAT were frequently mentioned. All concluded that no single scale was recommendable and further psychometric testing was needed. **Conclusion :** The progression we made last decade is the development of behavioral tools is limited. Meanwhile pain in dementia remains a problem. **Keywords :** BAHAVIORAL ASSESSMENT, PAIN, DEMENTIA

SS24 322-S

QUALITY OF LIFE OF KOREAN OLDER CANCER PATIENTS

SS24 322-S-1

QUALITY OF LIFE IN ELDERLY CANCER PATIENTS IN KOREA

Dae Ro CHOI¹, Hyunsook YOON², Dae Young ZANG¹, Yeon Ok LIM², Yojin KIM², Hoon-sik BAE³, Jaejung LEE⁴, Young Suk PARK⁵, Seok Yun KANG⁶ (*1. Department of Internal Medicine, Hallym University College of Medicine, Korea; 2. Department of Social Welfare, Hallym University, Korea; 3. Dept of Radiation Oncology, Hallym University College of Medicine, Korea; 4. Department of Surgery, Hallym University College of Medicine, Korea; 5. Department of Hematology and Oncology, Samsung Medical Center, Korea; 6. Department of Hematology-Oncology, Ajou University School of Medicine, Korea*)

Introduction : There are lots of studies about quality of life in cancer patients. While most of the studies focused on a specific disease group, we designed to study characteristics of quality of life (QoL) in diverse elderly cancer patients. **Method :** We interviewed a diverse group of elderly cancer patients from Jan 2012 to Jul 2012. The patients were enrolled at 5 university hospitals in 3 areas of Korea (Seoul, Gyeonggi, Gangwon). Quality of life was evaluated by the quality of life questionnaire QLQ-C30, version 3.0 of EORTC. We designed to evaluate QoL serially every 6 months. **Results :** About 600 patients participated. We planned to evaluate the change in QoL during treatment course. We interviewed some colorectal cancer & gastric cancer group at short-term interval. We will search for the impact of chemotherapy on patients' QoL. Through the cross-sectional analysis, patients in stage IV, of old age (≥ 60), who have poor performance status (ECOG PS ≥ 2) have low QoL score (physical, cognitive, social functioning). Patients who survived for over 36 months from the initial diagnosis were lower on cognitive function than patients who survived < 36 months from the initial diagnosis. **Conclusion :** QoL of cancer patients was affected by stage, age, and performance status regardless of the primary cancer origin. The impact of chemotherapy on colorectal & gastric cancer patients' QoL will be discussed at the

seminar. **Keywords :** quality of life, elderly cancer patient

SS24 322-S-2

CHANGES OF THE QUALITY OF LIFE OF OLDER KOREAN CANCER PATIENTS: A PRELIMINARY ANALYSIS

Yojin KIM¹, Hyunsook YOON¹, Yeon Ok LIM², Hyen Joo LEE³, Kyoungwon CHOI¹ (*1. Dept. of Social Welfare, Hallym University, Korea; 2. Hallym University Institute of Aging, Hallym University, Korea; 3. Dept. of Social Welfare, Hallym Polytechnic University, Korea*)

Introduction : The purpose of this study is to understand the quality of life older Korean cancer patients based on cross-sectional and longitudinal data. Korea became an aging society and even with fast increase of older cancer patients in Korea, few studies have looked into their quality of life. **Method :** The data is from the Longitudinal and Multidisciplinary Study on the Quality of Life of the Older Cancer Patient Project (collaboration of social work, medical discipline, and statistics) at Hallym University funded by Korean Foundation Institute. Since January 2012, wave 1 (600) and wave 2 data have been collected from cancer patients (55 years old and older). Quality of life (QoL) was measured with EORTC-QLQ30. Independent variables include medical (e.g. stage of cancer), social (e.g. social support), psychological factors (e.g. optimism, depression) and SES. Descriptive statistical analysis, t-test, ANOVA, and Multiple Regression Analysis are main analytic tools. **Results :** At wave 1, the regression analysis suggested that satisfaction with the process of the treatment, the burden of medical costs, the worries on the cancer, and optimism were statistically associated with QoL. The social support from friend was found to be positively correlated with QoL and support from the medical staff is related with general quality of life of the older cancer patients. Some changes are observed where QoL of physical and social function decreased and support from friends increased. **Conclusion :** The results indicated that various factors, such as social, psychological, medical factors are to be examined to better understand the quality of life of the Korean elder cancer patients. Also, important is to understand the changes. **Keywords :** Older Cancer Patients, Quality of Life

SS24 322-S-3

THE THERAPY EXPERIENCE OF OLDER KOREAN PATIENTS WITH STOMACH CANCER

Hyenjoon LEE¹, Hyunsook YOON², Yeonok LIM³, Yojin KIM², Kyoungwon CHOI² (*1. Social Welfare Department, Hallym Polytechnic University, Korea; 2. Dept. of Social Welfare, Hallym University, Korea; 3. Hallym University Institute of Aging, Hallym University, Korea*)

Introduction : The purpose of this study is to extensively understand the diversity of experience related to the older patients' quality of life, the subjective recognition and the needs in therapeutic process in the context of Korean socio-cultural context. **Method :** The 14 research participants were all diagnosed as stomach cancer after the age of 65. They are all in the middle class and all under chemotherapy or in the process of passage observation after the therapy. The research has been carried out for 4 months and by one to one in-depth interview once or twice. Also, the data analysis depends on the Colaizzi's phenomenological methodology. **Results :** The outcome of this study is 'a painful life by the operation and chemotherapy', 'a stifling and lethargic life,' 'a tied life by medical examination and treatment schedule,' 'change to a health-centered life,' 'a buttress of struggling life' and 'a new understanding on life and the ambivalence.' **Conclusion :** On the basis of that above, this study proposes an idea of

the service construction for the elderly with stomach cancer and a data base for further quantitative research. Keywords : Older Korean Patients with Stomach Cancer), Therapy Experience, Phenomenological Methodology

SS24 322-S-4

STATISTICAL IMPUTATION METHOD OF MISSING DATA ON ESTIMATION OF MORTALITY RATES FOR KOREAN OLDER CANCER PANEL

Hyun Suk PARK¹, Yoon Tae KIM¹, Hyunsook YOON² (1. Dept. of Statistics, Hallym University, Korea; 2. Dept. of Social Welfare, Hallym University, Korea)

The aim of this talk is to address the danger of exclusion of cases with missing data, and to highlight the importance of imputation of missing data. Multiple imputation is a well-estimated technique for analysing panel data sets where some units have incomplete observations. Provided that the imputation model is correct, the resulting estimates are consistent. An alternative, weighting by the inverse probability of observing complete data on a unit, is conceptually simple and involves fewer modelling assumptions, but it is known to be both inefficient and sensitive to the choice of weighting model. Over the last decade, there was been a considerable body of theoretical work to improve the performance of inverse probability weighting, leading to the development of 'doubly robust' estimators. Although Robins and colleagues have proposed improved inverse-probability-weighted estimates which are theoretically more efficient under the assumption of data missing at random, its use in the analysis of the older cancer patients panel sets with incomplete observations is far less well-estimated. This is partly because the estimates may be unstable because certain subsets of the sample have low response probabilities. Therefore we consider multiple regression model to estimate mortality rate of patients across risk groups. The mortality rate and multiple regression imputations depend on the doubly robust model of the older cancer patients panel. We present an intuitive review of these developments and contrast these estimators with the proposed multiple imputation by using mortality rate from both a theoretical and a practical viewpoint. Keywords : Missing data; Multiple imputation; Mortality rate; Doubly robust model; Older cancer patients panel

SS24 322-S-5

IMPACT OF CANCER ON QUALITY OF LIFE AMONG VERY OLD JAPANESE: PRELIMINARY RESULTS FROM THE SONIC STUDY

Michiyo TAKAYAMA¹, Yasumichi ARAI¹, Ryutarō TAKAHASHI¹ (1. Center for Preventive Medicine, Keio University School of Medicine, Japan; 2. Geriatric Medicine, Keio University School of Medicine, Japan; 3. Vice Director, Tokyo Metropolitan Institute of Gerontology, Japan)

Introduction : To clarify the multidimensional structure of health and QOL of the older adults in relation with chronic conditions including cancer, we have conducted the Septuagenarian, Octogenarian, and Nonagenarian Investigation with Centenarian (SONIC) study since 2010. Method : The SONIC study is a longitudinal population-based cohort study, and it involves multidisciplinary fields, such as psychology, geriatric medicine, dentistry, and nutrition. A total of 1000 septuagenarians (479 men and 521 women) and 973 octogenarians (457 men and 516 women) were randomly recruited from the basic registry of residents of four differential regions in Japan, rural area and city area in the western part and in the eastern part, respectively. The participants were completed the baseline examination including demographics, life style, socioeconomic status,

past and present medical history, physical and cognitive function, subjective health, and well-being during 2010 and 2011, and will be followed up by three year interval. Results : We will present our preliminary data regarding subjective well-being and factors associated with quality of life of Japanese community-dwelling elderly. Moreover, we will focus on QOL and subjective well-being of participants suffering from cancer and compare those with other chronic conditions such as diabetes and cardiovascular disease in relation with their chronological age. Conclusion : International comparison of QOL of older cancer patients obtained from multidisciplinary studies will provide important clinical implication, and further our comprehensive understanding of complexity of QOL at old age. Keywords : well-being, the very old, community-based study

SS24 323-S

INTIMACY, ROMANCE AND SEXUALITY IN LATER LIFE

SS24 323-S-1

ATTITUDES, EXPERIENCES AND EXPECTATIONS ON NEW INTIMATE RELATIONSHIPS IN LATER LIFE ? RESULTS FROM A SWEDISH NATIONAL SURVEY

Torbjorn BILDGTGARD¹, Peter OBERG² (1. Department of Social Work, University of Stockholm, Sweden; 2. Department of Health and Occupational Studies, University of Gavle, Sweden)

Introduction : More than a million, or almost half, of the 60+ population (46%) in Sweden today are singles (never married, divorced, widows/widowers), a majority are women and the actual number as well as the proportion of divorcees is increasing. Still, we know very little about the intimate lives of non-married elderly people or about re-partnering in later life. This presentation focuses attitudes to, expectations on, and experiences of new intimate relations in later life. Method : It is based on results from a new representative survey of 3 000 Swedes, 60-90 years old (boosted with regards to non-married people), that was developed from questions generated by a recent qualitative interview study with 28 Swedes who had established a new relationship after the age of 60. Results : We describe attitudes, expectations and experiences in the older population generally, but also in different groups defined on the basis of gender, class, life-course phase, sexual orientation, degree of urbanization and intimacy career. We also focus the importance of intimate relationships for older people's quality of life, and reason about how structures of informal support may look for older people who enter new intimate relationships. Conclusion : As of november 2012 we are still in an early phase of the survey work, thus conclusions are pending. Keywords : Intimacy, Later life, National survey

SS24 323-S-2

TIME AS A STRUCTURING CONDITION FOR NEW INTIMATE RELATIONSHIPS IN LATER LIFE - A QUALITATIVE STUDY OF ELDERLY SWEDES

Peter OBERG¹, Torbjorn BILDGTGARD² (1. Department of health and occupational studies, University of Gavle, Sweden; 2. Department of social work, University of Stockholm, Sweden)

Introduction : Social gerontology about intimacy in old age has almost exclusively focused on institutionalized life-long marriages. However, mobility in and out of intimate relationships has become more common in late modern societies also in later life. In this paper the research questions are: What characterizes the formation of new intimate relationships in later life? Are there any specific, more or less universal, conditions that separate them from relationships in earlier life phases? Method : Qualitative interviews were used with a

strategical sample of 28 63-91 year old Swedes, who have established a new intimate heterosexual relationship after the age of 60 or who are dating. Results : The results showed time as constituting a central structuring condition for new intimate relationships in later life. In the results three aspects of time, Available free time, Lived time and Remaining time, which all have a constituting and formative power on new late in life relationships are discussed in relation to theories of late modernity and the Third Age and in relation to changing demographical conditions. Conclusion : The concluding discussion will be about the time theoretical frame as a model for understanding experiences of ageing. Keywords : intimacy, later life, time

SS24 323-S-3

CHALLENGING NORMATIVE EXPECTATIONS OF INTIMACY: LGB AND CHILDLESS AGEING

Gerardo ZAMORA (*Departamento de Ciencias de la Salud, Universidad Publica de Navarra (UPNA); ETORBIZI, Spain*)

Introduction : Ageing as a childless or childfree individual is an increasing phenomenon in Europe and many other societies. Even though most current elderly childless individuals are heterosexuals, a great part of current self-identified LGB elders are childless because of the widespread oppressive structures they have faced throughout their life trajectories. Method : This paper explores the discourses around intimacy of childfree/childless LGB individuals aged +50 that emerge from twelve qualitative in-depth interviews in Spain and is complemented with the analysis of childless individuals in waves 1 and 2 from SHARE (Survey of Health, Ageing and Retirement in Europe) by looking into their aspirations, caring for a partner or closed one, perceptions of being cared for by a partner or closed one, and engagement in social life for meeting other people. Results : Whether in a couple or as a single person, childlessness is pervasive for each individual's intimacy and social relationships in that it challenges normative ageing assumptions as well as self-image, identity and sexuality issues. Conclusion : Childfree or childless individuals face the heteronormative ageing process, especially if these individuals are self-identified LGB. The strategies developed by current LGB middle-aged and elderly people for self-care from early ages on, for building intimacy relationships outside traditional family structures and for coping against stigma can provide useful examples and information for further analysis of childlessness in our societies. Keywords : LGB ageing; , childlessness-childfree, mixed methods

SS24 324-S

AGEING AND PAID WORK: NEW RESEARCH PERSPECTIVES AND THEORIES

SS24 324-S-1

AGEING, PAID WORK, AND THE POLICY-PRACTICE PARADOX

Julie Ann MCMULLIN (*Sociology, Western University, Canada*)

Introduction : Many Western countries are modifying their social welfare regimes by increasing the age at which older adults become eligible to receive age based social security. The logic behind these changes centres on fears of impending labour force shortages and demographic challenges regarding the ability of a smaller working-age population to pay for the health care and pensions of older adults. Although there is little doubt that increasing the eligibility age for age based pensions will save governments money, these changes could also negatively affect the health and well being of older adults. This will be particularly true for those who are unable to find suitable employment either because they lack the necessary skills or other

abilities to actively engage in paid work, or because employers construct old age as a barrier to employment opportunities. Method : This paper draws on policies, data, and reports from Canada to assess whether the country is likely to face a policy-practice paradox when the changes to old-age security policies take effect. Assessments about the kind of jobs that are available now and will be available in the future (labour force shortages) in relation to the chances of older adults holding these jobs will be evaluated. Results : Evidence is presented which suggests that there is and will be a mis-match between available jobs and the likelihood that older adults will hold these jobs. Conclusion : The policy-paradox is that older workers may be ineligible for their public pensions while at the same time being unable to work. Keywords : ageism, work, labour shortages

SS24 324-S-2

WEAK GEEZERS OR EXPERIENCED COLLEAGUES? ON OLDER MEN AND HEGEMONIC MASCULINITIES

Clary KREKULA (*Dept of Social studies, Karlstad University, Sweden*)

Introduction : The Swedish fire service is a workplace where women are especially in younger ages while men can be found in the whole scale of ages. While the political debate has focused on gender equality, age relations within the group of male fire-fighters have not been paid attention. Method : The analyses are based on a focus group interview and on written comments that were provided in conjunction with questions in a survey conducted among 1176 employees at 25 randomly selected fire stations. Results : The results show that age codings are central. They organize activity and are institutionalized in the form of horizontal age segregation. Notions of physical qualities such as strength and agility are further used to construct age groups and to create a normative image of what a fire-fighter is like. Older fire fire-fighters are made out to be deviants due to their physique, although they do gain advantages in situations where experience is south. The group that emerges as the norm in this context is men at some "average age". Conclusion : Old ages and ageing can mean different things depending on how the actual workplace is age and gender coded. The results discussed provide insight into those age patterns that can be expected in a similar place of employment. They illustrate the importance of scrutinizing, not only the situation for different age groups, but also how notions of age categories are used to organize work places. Keywords : ageing and masculinity

SS24 324-S-3

'ALL THAT CHANGES STAYS..' SUPPORTING THE OCCUPATIONAL TRAJECTORIES AND HUMAN CAPITAL OF OLDER WOMEN WORKERS

Elizabeth BROOKE, Deborah TOWNS (*Business Work and Ageing, Swinburne University of Technology, Australia*)

Introduction : The growth in women's workforce participation has made a major contribution to national labour forces in advanced industrial nations. Yet critical issues exist regarding employers' support for older women's career trajectories whether ascending, descending or stable. Using theories based in Acker (2006), inter-related organisational actions, processes and meanings are identified by stakeholders in three industry sectors including human resources managers, equal opportunity managers, unions and professional organisations. The paper asks: How do stakeholders perceive and explain older women's career trajectories in interaction with organisational policies? How do these perspectives inform discourse on the intersectionality between age, gender and class relations in organisations? Method : Structured key informant interviews were

undertaken with a purposefully selected sample of 95 managers and key external stakeholders in three sectors: tertiary education, public administration and financial services. Interviews were coded and analysed using NVivo. Results : Similarities in processes across sectors included ambiguities between discouraging and encouraging diversity policies, responses to career flexibilisation across the life course including phased retirement and superannuation and support for organisational hierarchies interrelated with gendered and ageist practices. Age and gendered trajectories reproduced cumulative class inequalities. Human resources managers' practices utilised competitive rights discourse to discipline older women's class and equality claims. Conclusion : Unintegrated policy strands containing covert references to human capital values and unconscious biases influenced structured policies. The findings point to policies recognising the intersectionality of gender, age and class processes with human capital reward systems to reinstate the human capital value of older women workers. Keywords : older women workers careers human capital

SS24 325-C

IAGG GLOBAL INITIATIVE IN DIABETES MELLITUS

SS24 325-C-1

KEY ISSUES IN DIABETES AND OLDER PEOPLE

Trisha Trisha DUNNING (*Faculty of Health, Deakin University and Barwon Health, Australia*)

Introduction : Managing diabetes in older people is complex but there is little evidence to guide care. Method : Key management issues concern: service delivery, individual physical, mental and social factors, maintaining independence as long as possible, health professional's knowledge and competence, ageist attitudes, and impeccable and regular assessment. We will discuss key lines of evidence derived from literature review and the results of surveys and focus groups. Results : Significantly, older people are not a homogenous group, this care must be individualised and holistic. Care focuses on quality of life and risk minimisation and encompasses pharmacovigilance to achieve quality use of medicines and reduce polypharmacy, recognising atypical presentations and symptoms including pain, cognitive changes, grief, loss, loneliness and depression. Education strategies must suit the individual's learning style and capabilities. Family and other carers may need to be involved. Conclusion : Panning for key transitions in older age is essential. Common transitions include supported care moving from independent to supported care in the home or an aged care facility, planning to stop driving and planning for end of life care. Keywords : older people, diabetes, frailty

SS24 325-C-2

MANAGING FRAIL OLDER PEOPLE WITH DIABETES

Leocadio RODRIGUEZ-MANAS (*Geriatrics, Hospital Universitario de Getafe Servicio Madrilenio de Salud, Spain*)

Introduction : The forecasted increase in the number of older people for this century will be accompanied by an increase of those with disabilities. Disability is usually preceded by a timely and highly topical condition named frailty, a disorder that encompasses changes associated with ageing, life styles and chronic diseases. Detect frailty and intervene on it is of outstanding importance to prevent disability, as recovery from disability is unlikely. Diabetes Mellitus is one of the chronic conditions leading to both frailty and disability. Method : We will present some issues of concern on the evidence about the distinct profile of these patients, its main consequences and how to proceed in their evaluation and management. Results : The coexistence of frailty

and disability raises several issues in the implications and management of older people suffering from both conditions: as frailty increases the risk of death and limits the life expectancy, it has a direct effect on therapeutic decisions, that need a tiem to exert their beneficial effects. Moreover, frailty, per se, has a high predictive value in people with diabetes. Finally it puts to older patients in risk of other adverse outcomes, including hospitalization, permanent institutionalization and secondary effects of drugs. This is of special concern in older people with Diabetes Mellitus, which are prone to hypoglycemias and other adverse effects of drugs. Conclusion : Frail Older People shows a clinical profile that deserves special considerations in its management. Keywords : Frailty, Diabetes Mellitus, Assessment, Therapeutic Approach

SS24 325-C-3

HOW THE IAGG HAVE TACKLED CONCERNS ABOUT DIABETES THROUGH THEIR GLOBAL INITIATIVE

Alan James SINCLAIR (*IDOP, Beds and Herts Postgraduate Medical School, United Kingdom*)

Introduction : The IAGG Global Initiative in Diabetes Mellitus represents an international effort to enhance the health status and well-being of all older citizens with diabetes by a focused strategy of education and training of health and social care staff. Method : We will create a series of educational materials that increase knowledge and skills of clinicians and demonstrate how these can be implemented in routine clinical practice. This initiative will be informed by latest evidenced-based clinical guidance for older people with diabetes. Results : None as yet. Conclusion : Following implementation of the Initiative, we hope to be able to measure an increase in the knowledge and skills of clinicians and a resulting improvement in the health and well-being of older people with diabetes. Keywords : diabetes, older people, education

SS24 326-C

TREATMENT OF DIABETES MELLITUS IN THE ELDERLY

SS24 326-C-1

SERUM LEVEL OF PLASMALOGEN IS ASSOCIATED WITH COGNITIVE IMPAIRMENT AND IS DECREASED IN ELDERLY DIABETIC PATIENTS

Yoshiaki TAMURA¹, Yoshinori FUJIWARA², Ryouta MAEBA³, Hideki ITO¹, Atsushi ARAKI¹ (*1. Department of Diabetes, Metabolism, and Endocrinology, Tokyo Metropolitan Geriatric Hospital, Japan; 2. Research Team for Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology, Japan; 3. Department of Biochemistry, Teikyo University School of Medicine, Japan*)

Introduction : Although diabetic patients are vulnerable to dementia, there exists no effective diagnostic plasma biomarker for detecting cognitive impairment. Plasmalogen (Pls) is a glycerophospholipid widely distributed in brain. Here we performed a cross-sectional study to investigate whether plasma Pls were associated with cognitive function or cardiovascular risk factors in the elderly. Method : We measured plasma Pls levels in healthy population (H, n=60), outpatients at memory clinic (n=48), and diabetic inpatients (DM, n=19). (All participants > 60 years of age.) Plasma levels of two types of Pls, ethanolamine plasmalogen (EtnPls) and choline plasmalogen (ChoPls) were determined by the HPLC method. Cognitive function was assessed using the MMSE and MoCA-J. Then we investigated correlations of Pls with cognitive function and cardiovascular risk factors by Spearman's correlations. Student's unpaired t-test was used

for the comparison of Pls levels between H and DM. Results : In the whole participants (mean age 76 ± 7 y.o.), EtnPls, but not ChoPls, positively correlated with MMSE and MoCA-J ($p < 0.001$ both). In multivariate analysis using age, sex, education, HbA1c as covariates, EtnPls was independently associated with MOCA-J. (2)DM showed lower MMSE and MoCA-J scores ($p < 0.001$ both), and lower EtnPls than H ($p < 0.001$). (3) EtnPls correlated positively with HDL-C ($p < 0.001$), and negatively with HbA1c ($p < 0.01$), whereas ChoPls positively correlated with HDL-C and LDL-C ($p < 0.01$), but not with HbA1c. Conclusion : Plasma EtnPls are decreased in diabetic patients. Although affected by several vascular risk factors, they were independently correlated with cognitive function. EtnPls could be a useful plasma biomarker for detecting cognitive impairment in the elderly. Keywords : plasmalogen, diabetes mellitus, cognitive impairment

SS24 326-C-2

FACTORS ASSOCIATED WITH COGNITIVE DECLINE IN OLD DIABETICS

Hiroyuki UMEGAKI (*Department of Geriatrics, Nagoya University Hospital, Japan*)

Introduction : Recent evidence has indicated that type 2 diabetes mellitus (T2DM) in the elderly is a risk factor for cognitive dysfunction or dementia. In the current study we attempted to determine the the clinical indices associated with cognitive decline in Japanese Elderly Diabetes Interventional Trial (JEDIT) participants. Method : Analysis 1: The subjects were 261 participants who were administered the Mini-Mental State Examination (MMSE) at baseline and after 6 years. The cognitive decline was determined as a 5 points or greater decline in MMSE scores during the observation period. Logistic regression analysis to find the factors associated with cognitive decline was performed. Analysis2: The subjects were 63 participants who were administered the Mini-Mental State Examination (MMSE) at baseline, at the 3rd year, and at the end of the 6-year follow-up period. We applied pooled logistic analysis method to consider the changes of clinical indices during observation period and tried to identify the associated factors with cognitive decline during 6 years in elderly type 2 diabetics. Results : Analysis 1: We found that the existence of diabetic nephropathy, higher systolic blood pressure, and higher serum triglycerides (or lower HDL cholesterol) at baseline were significantly associated with cognitive declines after 6 years. Analysis 2: High density lipoprotein-cholesterol (HDL-C) and higher diastolic blood pressure (DBP) were significantly associated with cognitive decline by pooled logistic analysis in 6 year observation of older diabetic subjects. Conclusion : We found several factors associated with cognitive decline in old diabetics. Keywords : cognition, HDL-cholesterol, diastolic blood pressure, diabetic nephropathy

SS24 326-C-3

GLYCEMIC VARIABILITY AND NEPHROPATHY IN TYPE 2 DIABETES

Chih-cheng HSU (*Division of Geriatrics and Gerontology, National Health Research Institutes, Taiwan*)

Introduction : HbA1c variability has been shown to be an independent risk factor of nephropathy in type 1 diabetes. We aim to explore the association between HbA1c variability and microalbuminuria development in type 2 diabetes. We also intend to test the applicability of serially measured HbA1c in 2 years for this risk assessment. Method : We recruited 821 middle-aged and older type 2 diabetes patients with normoalbuminuria between 2003 and 2005 and followed

them through the end of 2010. Average follow-up time was 6.2 years. We defined microalbuminuria as a urine albumin-to-creatinine ratio ≥ 30 mg/g (3.4 mg/mmol). HbA1c variability was calculated by the standard deviation (SD) of serially measured HbA1c. The Cox proportional hazards model was used to evaluate association between quartile of HbA1c SD and development of microalbuminuria. Results : The incidence of microalbuminuria for overall subjects was 58.4, 58.6, 60.8, and 91.9 per 1000 person-years for Q1-Q4 adjusted HbA1c SD, respectively (P for trend = 0.042). Compared to those in Q1, the patients in Q4 were about 37% more likely to develop microalbuminuria. The hazard ratio derived from a series of 2-year HbA1c measurements was similar to that from data collection for longer than 4 years. Conclusion : In addition to mean HbA1c values, HbA1c variability, even measured as early as 2 years, is independently associated with development of microalbuminuria in type 2 diabetes. Keywords : nephropathy, microalbuminuria, HbA1c variability

SS24 326-C-4

IMPROVED GLYCEMIC CONTROL WITHOUT HYPOGLYCEMIA IN OLDER ADULTS WITH DIABETES USING U-HEALTHCARE SERVICE

Hak Chul JANG (*Department of Internal Medicine, Seoul National University Bundang Hospital, Korea*)

Introduction : To improve quality and efficiency of care for elderly with type 2 diabetes, we introduced elderly-friendly strategies to the clinical decision support system (CDSS)-based u-healthcare service, which is an individualized health management system employing advanced medical information technology. Method : We conducted a randomized, controlled, clinical trial involving 144 patients aged over 60 years for 6 months. Participants were randomly assigned to receive routine care (control, $n=48$), self monitoring blood glucose (SMBG, $n=47$), or u-healthcare group ($n=49$). The primary endpoint was the proportion of patients achieving A1C $<7\%$ without hypoglycemia at 6 months. U-healthcare system refers to an individualized medical service in which medical instructions are given through patients' mobile phone. Patients receive a glucometer with public switched telephone network-connected cradle that automatically transfers glucose test results to a hospital-based server. Once the data is transferred to the server, an automated system called CDSS engine rule generates and sends patient-specific messages via mobile phone. Results : After 6 months follow-up, mean A1C level was significantly decreased in the u-healthcare and SMBG group ($7.8 \pm 1.3\%$ to $7.4 \pm 1.0\%$, $p < 0.001$, $7.9 \pm 1.0\%$ to $7.7 \pm 1.0\%$, $p = 0.020$, respectively) compared with control group ($7.9 \pm 0.8\%$ to $7.8 \pm 1.0\%$, $p = 0.274$). The proportion of patients with A1C $<7\%$ without hypoglycemia was greater in the u-healthcare group (30.6%) than the SMBG (23.4%) or control groups (14.0%) ($p < 0.05$). Conclusion : CDSS-based u-healthcare service achieved better glycemic control with less hypoglycemia than the SMBG and routine care groups, and may provide effective and safe diabetes management in the elderly diabetic patients. Keywords : Diabetes, Elderly, u-Healthcare.

SS24 327-C

PAIN MANAGEMENT IN GERIATRIC PATIENTS IN GERMANY

SS24 327-C-1

THE PHARMACOKINETICS OF OPIOID ANALGETICS ? MISSING DATA IN THE ELDERLY

Manfred GOGOL (*Geriatric Department Hospital Lindenbrunn, German Society of Gerontology and Geriatrics, Germany*)

Introduction : Pain in elderly patients is common. Due to side effects of different analgetics, e.g. NSAID's. Introduction of opioid analgetics (OAs) are recommended. Method : OAs are effective in pain treatment but data about pharmacokinetics and pharmacodynamics in the elderly (80 years +) are lacking. A Pubmed research revealed only data for oxycodone and fentanyl. Results : In the light of a growing awareness of OAs side effects like increasing numbers of emerging room admissions, hospitalizations, falls and fractures, traffic accidents and mortality it seems essential that the use of OAs in the elderly requires basic data about pharmacokinetics and pharmacodynamics in this patients. Conclusion : First data of a research project to this topic in our department will be provided. Keywords : Pain, opioid analgetics

SS24 327-C-3

PAIN ASSESSMENT IN PEOPLE WITH COGNITIVE IMPAIRMENT- A CHALLENGING TASK IN HOSPITALS

Erika Gisela SIRSCH (*Witten, German Center for Neurodegenerative Diseases (DZNE), Germany*)

Introduction : A sufficient pain therapy for persons with dementia in hospital often fails because their pain is not even recognized. Pain self-assessment should be carried out systematically but because of a restricted ability of verbal expression persons with dementia often do not benefit from this at all or only to a limited extent. It is often unclear which patients are capable of giving self-report and which require an external assessment. Method : Based on an integrative review was participants' observations and focus group interviews are conducted. Aim was to identify how the decision-making on pain assessment in patients with dementia was performed by nurses. Data were analyzed qualitatively. Results : Semi-structured observation protocols were carried out during early, late and night shifts. Three wards in two general hospitals were included (surgery / internal / special ward for people with dementia). The diagnosis of 'dementia' or specification of dementia has almost not been determined systematically. Even in the ward for people with dementia in half of the cases the diagnosis of dementia was unknown by the staff. The analysis of the hand-over communication revealed that nearly no communication took place about pain. (Facial Expressions (e.g. grimacing/groaning) of pain were often misdiagnosed. Focus group interviews had shown that key phenomena, which are known from the literature, often received no consideration during pain assessment. Conclusion : Key phenomena such as co-morbidity and surrogate reporting have to be taken into account. Advanced knowledge about pain and pain symptoms simplifies the pain assessment in persons with dementia; a pathway for nurses dealing with pain assessment is needed for patients with dementia. Keywords : Dementia, Painassessment, Hospital

SS24 407-R

HOME & COMMUNITY SUPPORT FOR OLDER PERSONS IN DEVELOPING COUNTRIES

SS24 407-R-1

A NEW MODEL FOR CONTINUOUS HEALTH CARE IN AGING CHINA SOCIETY

Minglei ZHU, Xiaohong LIU (*Geriatric department, Peking Union Medical College Hospital, China*)

Introduction : The health care system in China is not continuous, with most of the work handled in hospitals. As a geriatric center, we have established several service models in Peking Union Medical College hospital. How to expand the geriatric work, to provide an efficient health care with geriatric interventions for the elderly in communities

is still on the way. There are many health care models for community elder residents, like PACE, House Call in the US. But most of the at-home health care services are not covered in Chinese medical insurance system and Chinese older people has a traditional will of "ageing at home". We need to develop a new model of geriatric health care for community elder people, especially for those disabled, under the present system. Method : A new care model was established in collaboration with community health care organizations (non-public), which can combine geriatric health care with community service, including team call consultation, making and following geriatric interventions, geriatric education for community organization staffs. Results : Carrying out the geriatric interventions in the communities for the disabled elderly may achieve better older patients' satisfaction, function, health status and more efficient usage of medical resources. Conclusion : Providing continuous health care for community elder residents by means of the collaboration of geriatric center and community organizations may offer a new model under the present system. Keywords : geriatric intervention,community health care, care model

SS24 407-R-2

INTEGRATING RESOURCES TO SATISFY OLDER PERSONS' NEED FOR CARE: A POLICY MAKING PERSPECTIVE

Guohong LI (*School of Medicine, Shanghai JiaoTong University, China*)

Introduction : Following the global trend of population aging, China became an aging society at the end of the 20th century. The ever-growing medical demands of the elderly and the late development of aged care services make the present situation of health care for elderly in China worrying. As the first city which enters into aged society in China, Shanghai faces the higher proportion of ageing population, the longer average life expectancy, the higher elderly dependency ratio, and the higher health needs of elderly, the Shanghai municipal government has actively adjusted its development strategies and has been improving the capacity of aged care, but there is still some remaining problems. Method : The study select senior experts related to elderly long-term care services filed for expert consultation and expert interview, and by taking using of Analytic Hierarchy Process (AHP) method chose the priority policy area of long-term care for elder in Shanghai. Results : According to the results of the hieratical analysis, system design, improve long-term care services system and financing and payment system have higher priority for meeting the needs of long-term care of elder, it also needs the support of technical reform on the elder care needs evaluation system and elderly long-term care system. Conclusion : The perfect system does not accomplish at one stroke, is the process of gradual reform; but integrating resource related to long-term care should be highest priority at present, at the same time need elderly care needs assessment system and other technical reforms as the basis. Keywords : long-term care, policy, Integrating Resource

SS24 407-R-3

ENABLING THE LAST-100-METERS WITH COMMUNITY DAY CARE AND IN-HOME LONG-TERM CARE

Ninie Yan WANG (*LTC Research & Training Center, Gerontological Society of China, China*)

Introduction : Rapidly ageing population in China presents great challenge to long-term care. A new model of providing community and home based care was piloted to address the challenge. The team consisted of geriatricians, nurses, rehabilitation doctors, pharmacists,

nutritionists and Chinese therapists. Care was provided based on need/assessment of the elderly. Method : Desktop research, field visits, industry expert interviews, random sampling assessments. Over 10,000 community residents over 80 years of age in Beijing and Shanghai were assessed, among whom the most dependent and frail elderly received seamless integrated restorative care at home. Transition services were provided when needed. Results : Overall physical (ADL) and mental (MMSE) health of the serviced elderly scored better than control group, satisfaction towards life quality and healthcare services improved over 1 year period. Transition care also reduced readmission rate after hospitalization and overall healthcare cost. Conclusion : Integrated care system provides more accessible, affordable services with better outcomes and experience. Keywords : long-term care, home care,

SS24 407-R-4

HOME & COMMUNITY SUPPORT FOR OLDER PERSONS - A RE-IMAGINATION AND REPORT ACROSS 14 COUNTRIES

Wai Chiong LOKE¹, Edwards NIGEL² (1. *Global Healthcare Practice, KPMG, Singapore*; 2. *Global Healthcare Practice, KPMG, United Kingdom*)

Introduction : Many economies are facing an aging society, which has the potential to cripple entire health systems, and new approaches are needed fast. Method : A study was commissioned by Lien Foundation to help inform and stimulate the global dialogue on elder and long term care. Interviews were conducted with 46 thought leaders, professionals and practitioners in the aged care sector from 14 selected countries, during August and September 2012. The individuals chosen to participate in were selected through KPMG's professional network and recommendations from experts in long term care. Interviewees were asked to offer their views on current and emerging demand and supply trends, and to identify innovative approaches and models of long term elderly care delivery. A team of in-house researchers collected supporting background data. Results : Three findings stand out: funding is a critical issue as most governments are cash-strapped and innovative mixes of public and private finance are needed; the medical model has to change and care has to be integrated; new conversations must occur and involve government, private and non-governmental bodies, providers and the public. Conclusion : It is apparent that there is no single, breakthrough idea. However, we have found number of highly innovative approaches that together can form the building blocks of a new era in elderly care. As with all complex interventions, many of these blocks have to be put in place concurrently, which calls for a high level of implementation expertise. Keywords : long term, elderly care, demand, innovation, funding, financing

SS24 408-R

CROSS NATIONAL PERSPECTIVES ON OLDER COUPLE'S FINANCIAL AND HEALTH SECURITY

SS24 408-R-1

BEHIND CLOSED DOORS: OLDER COUPLES AND THE MANAGEMENT OF HOUSEHOLD MONEY IN THE UK AND THE USA

Debora PRICE¹, Kriston T. D'AMURO², Dinah BISDEE¹, Lynne LIVSEY¹, Tom DALY¹ (1. *Social Science, Health and Medicine, King's College London, United Kingdom*; 2. *Sociology, University of Buffalo, USA*)

Introduction : This paper compares the institutional, cultural, social and political structures of two advanced welfare states, the UK and the

USA, to understand how and why older couples manage money in the ways that they do. Method : We combine documentary and policy analysis with qualitative interviews of older couples. Results : Both these countries are considered 'individualistic' family and societal cultures, and cultures of high levels of consumption for pleasure, with an active 'third age' in retirement, yet their welfare states provide very differently for older citizens, particularly in the realms of pensions and health care. Conclusion : We consider what impact these structural issues have on the ways that older couple think about, talk about and manage money, how they interact with cultural and biographical influences, and the different implications for fiscal welfare in old age. Keywords : couples, money, UK/USA

SS24 408-R-2

PERCEPTIONS ON SAVING AND SPENDING BY OLDER COUPLES IN SINGAPORE AND JAPAN

Debra STREET, Yumiko FUJITA (*Department of Sociology, State University of New York at Buffalo, USA*)

Introduction : Using data from an adaptation of the survey for the original Behind Closed Doors study, we compare experiences of older couples in Singapore and Japan, two Asian countries with very different arrangements for health and income security in old age. Method : Survey data are from nonprobability samples of individuals in Singapore and Japan who are members of married couples, where at least one partner is 65 years old. Data are analyzed using multivariate statistics. Results : In both countries, concerns about saving and spending are associated with living arrangements, education, and income. Conclusion : Similarities in perspectives among elders from both Singapore and Japan on some items may be associated with the philosophy of filial piety prominent in Asian countries. Differences may be attributed to two influences distinctive to each country: continuous economic growth in Singapore compared to a period of economic stagnation in Japan; and, differences in the policy mechanisms associated with income support and health care in the two countries. Keywords : older couples, retirement

SS24 408-R-3

FRIENDS AND NEIGHBOUR(HOOD) INFLUENCES ON THE LIVES OF OLDER SINGAPOREANS AND AMERICANS

Debra STREET, Christopher MELE (*Department of Sociology, State University of New York at Buffalo, USA*)

Introduction : Using pilot data from an adaptation of the survey for the original Behind Closed Doors study, we compare experiences of older couples in Singapore and the United States. Realization of the expectation in Singapore that families "take care of their own" elders and in the United States that older Americans "take care of themselves," depends on the social context and a range of other resources for support at older ages. Method : Survey data are from nonprobability samples of individuals in Singapore and the United States who are members of married couples, where at least one partner is 65 years old. Data are analyzed using descriptive and multivariate statistics. Results : In both countries, relationships with family members are associated with similarities in how older people think about saving, spending, and economic adequacy in later life. Broader social networks of friends and neighbors are associated with differences in older American's perceptions of income security associated with saving and spending. Conclusion : Similarities in perspectives among elders from both Singapore and the United States on some items are associated with the importance of family relationships in later life. Differences may be attributed to two influences distinctive to each country: different ideologies associated

with “successful aging” and the relative importance of social networks beyond families in the U.S. context. Keywords : older couples, retirement

SS24 409-C

SMOKING CESSATION IN THE ELDERLY

SS24 409-C-1

CIGARETTE SMOKING MAY NOT BE ASSOCIATED WITH MORTALITY RISK FOR THOSE OLDER THAN 75 YEARS: A 20-YEAR PROSPECTIVE COHORT STUDY

Chih-cheng HSU (*Division of Geriatrics and Gerontology, National Health Research Institutes, Taiwan*)

Introduction : It is well known that smoking is related with mortality risk; however, the health effects of smoking or quitting smoking in those older than 75 remain unclear. We aimed to delineate impacts of smoking status on mortality for the elderly in Taiwan. Method : We selected 1344 males (≥ 65 years) from the TLISA (Taiwan Longitudinal Study in Aging) study. The smoking status was self-reported in the recruitment period in 1989. We followed this cohort through to the end of 2008 and identified 1028 deaths. We used multivariable Cox proportional hazards models to investigate mortality risk for different smoking status. Results : Mortality rate and 95% confidence interval (95% CI) for non-smokers, ex-smokers, and current smokers was 6.27 (5.45-7.18), 7.06 (6.22-7.98), and 7.83 (7.21-8.49) per 100 person-years, respectively. Compared to non-smokers, current smokers had higher all-cause mortality for those in 65-69 and 70-74 years, but not for those older than 75 years (hazard ratio [HR] was 1.67 [1.27-2.21], 1.52 [1.08-2.15], and 1.07 [0.79-1.45], respectively). Similar trend was found for cancer mortality (HR for those in 65-69, 70-74, and ≥ 75 years were 3.52 [1.78-6.97], 3.71 [1.39-9.91], and 1.11 [0.49-2.55], respectively). A significant dose-response relationship between cigarette smoking and mortality risk was observed only in those younger than 75 years. Conclusion : This study shows cigarette smoking is not associated with mortality risk for those older than 75 years. More research is needed to further investigate if cigarette smoking would deteriorate physical or cognitive function for those who are 75 years or above. Keywords : smoking, mortality

SS24 409-C-2

SMOKING AND SMOKING CESSATION AMONG THE ELDERLY IN TAIWAN

Li-chuan CHANG¹, Yi-wen TSAI¹, Shu-ti CHIOU², Liang-kung CHEN³ (*1. Institute of Health Welfare and Policy, National Yang Ming University, Taiwan; 2. Bureau of Health Promotion, Department of Health, Executive Yuan, ROC, Taiwan; 3. Center for Geriatrics and Gerontology, Taipei Veterans General Hospital, Taiwan*)

Introduction : In 2009, the Taiwan government implemented the Tobacco Hazards Prevention Amendment. The main aim was to identify the high risk group of smoking among the elderly and to assess the impact of Taiwan's 2009 Act on smoking behavior of the elderly ? smoking prevalence, cessation and intensity. Method : We analyzed data of 12479 people aged 65 years or above from the 2007-2011 Taiwan Adult Smoking Behavior Surveys. We identified 3206 recent smokers who were either current smokers (N= 1,428) or former smokers who had quit smoking for 2 to 12 months (N= 1,778). Logistic regressions were used to examine the impact of the 2009 Act on (1) current smoking prevalence among all the elderly and (2) smoking cessation among recent smokers. Results : The 2009 Act

showed a significant impact on reducing current smoking prevalence during the post-Act period from 2009 to 2011 compared to the pre-Act period from 2007 to 2008 (OR=0.66, 95%CI=0.57-0.75). Smoking was significantly associated with lower education degree (high-school: OR=1.43, 95%CI=1.03-2.00; elementary school: 1.66, 95%CI=1.23-0.24) compared to the elderly with college degree. Married persons were less likely to smoke than the unmarried (OR=0.77, 95%CI=0.62-0.95). Smoking cessation among recent smokers increased after 2009 (OR=2.78, 95%CI= 1.63-4.73). Conclusion : The multi-policy tobacco control legislation of the 2009 Act significantly decreased smoking prevalence and increased smoking cessation among the elderly in Taiwan. The elderly who were unmarried and had lower education levels were the high risk groups of smoking. Clinical practice or future policy design should take this evidence into consideration to reduce the tobacco harm on health among these elderly. Keywords : smoking, smoking cessation, elderly

SS24 409-C-3

SMOKING CESSATION IN JAPANESE ELDERLY SMOKERS

Yuko TAKAHASHI (*Health Care Center, Nara Women's University, Japan*)

Introduction : Smoking has been considered a major public health issue in Japan. Since 1970's, smoking rate among Japanese adult males has been falling down slowly to 29.8% in 2011 and under 25% in the elderly (over 60 yo). Method : Clinic-based cessation program has been developing since 1994. Now the health insurance covers the clinic based therapy with nicotine patch and varenicline subscription under the guidance of physicians for 12 weeks. Nicotine patches and nicotine gums were also available in pharmacy. 1 year success rate of the clinic based program was reported 29.7% in 2006 and 36.4 % in the elderly (over 70yo). Results : Although the clinic based program had been effective to elderly smokers, there still are many problems. Elderly smokers tend to suffer from the uncomfortable side effects of varenicline and nicotine patch. In addition to that, many elderly smokers feel fear to change their life style and persist smoking. Conclusion : The better program for the elderly smokers should be established. The total smoking ban and the raise of tobacco price should be needed besides of social education and social support. Keywords : smoking cessation, Japan, Clinic-based cessation program

SS24 409-C-4

SMOKING CESSATION INTERVENTIONS IN THE ELDERLY

Seung-kwon MYUNG (*Cancer Information & Education Branch, National Cancer Center, Korea*)

Introduction : It has been well known that smoking causes cancer, cardiovascular diseases, respiratory diseases, and many other diseases. Especially, smoking is the leading cause of premature death among the elderly, primarily due to cardiovascular disease and cancer. Method : The current presentation includes a brief review of smoking cessation interventions in the elderly established or being potentially considered so far and the two major smoking cessation programs operated by the Korean government, i.e., smoking cessation clinics at the community health center and a Quitline service for smoking cessation. Results : In summary, effective interventions smoking cessation include physician's brief advice, behavioral counseling, and pharmacotherapy such as NRT, bupropion, and varenicline. Conclusion : These interventions are being used at the smoking cessation clinics (esp., family medicine clinic) in the private or public hospitals in Korea. Keywords : smoking cessation intervention, elderly

SS24 410-R

AGING IN THE FOREIGN LAND: UNDERSTANDING THE MULTIPLE CONTEXTS OF AGING IMMIGRANTS

SS24 410-R-1

SOCIAL EXCLUSION AND AGING IMMIGRANTS IN CANADA

Daniel LAI, Hongmei TONG (*Faculty of Social Work, University of Calgary, Canada*)

Introduction : The well being of aging immigrants is often forgotten in service delivery system. This paper examines the social exclusion and systemic determinants that challenge the well being of the aging Chinese and will highlight the challenges and determinants of exclusion in different global and socio-cultural contexts. **Method :** Secondary data analysis was used, using data from surveys conducted in Canada, the USA, Mainland China, Hong Kong and Taiwan (n=4,240) to synthesize key themes emerged from social exclusion and related indicators experienced by aging older Chinese in the different social contexts. Exclusion related to finance, wellbeing, attitude toward aging, and social relations were the indicators examined. Data analysis was conducted by comparing the social exclusion variables across the different samples, using bivariate statistics and multivariate regression analysis, depending on the level of measurements of the dependent and independent variables. **Results :** Social exclusion related to social resources, attitude toward aging, financial resources, and service barriers were the significant correlates of various well being outcomes. Attitude toward aging correlated significant with mental health of the aging Chinese. Financial adequacy was significantly related to more negative health outcomes. Social exclusion illustrated through service barriers also correlated with more negative physical and mental health of the aging Chinese. **Conclusion :** Strategies for promoting well being and fulfilling needs of the aging Chinese should be expanded beyond the use of individual interventions and treatments. Elimination of social exclusion and systemic barriers should be the top priority for creating a more positive social and structural environment for this vulnerable minority group. **Keywords :** social exclusion, immigrants, aging, Chinese

SS24 410-R-2

OLDER MIGRANTS AS A CHALLENGE: PERSPECTIVES FROM SWEDISH NEED ASSESSORS IN ELDERLY CARE

Sandra TORRES¹, Anna OLAISON², Emilia FORSSELL³ (*1. Dept. of Sociology, Uppsala University, Sweden; 2. Dept. of Social Welfare, Linköping University, Sweden; 3. Dept. of Social Work, Ersta Sköndal University College, Sweden*)

Introduction : The globalization of international migration has brought about increased ethnic and cultural diversity amongst elderly care recipients around the world. This poses challenges to the formulation and deliverance of high quality and user-friendly care in general, but also to specific welfare practices in particular. In this presentation we will address the way in which need assessors (also called care managers) handle the diversity in question as they go about the business of assessing needs in the older population and deciding if elderly care is to be provided to people or not. **Method :** The project upon which this presentation is based departs from focus group data with 60 need assessors and 200 case management files. Both of these data sets have been analyzed through qualitative content analysis. **Results :** The presentation will address how these welfare representatives (i.e. need assessors or care managers) experience the need assessment process when dealing with older migrants and how their documentation practices are affected by the way in which their understandings of ethnic 'Otherness' intersect with the other

understandings of social positions (such as age and gender) that they uphold. **Conclusion :** The findings suggest that need assessors' understandings of old age differ depending on which other social positions elderly people 'inhabit'. The presentation will contribute to the debate on institutional categorization by focusing on how lack of an awareness of the implications on ethnic/cultural 'Otherness' influence power differentials in old age within the context of the specific welfare practice in focus here (i.e. need assessment). **Keywords :** need assessment, older migrants

SS24 410-R-3

SOCIAL SUPPORT AND QUALITY OF LIFE OF AGING CHINESE IMMIGRANTS IN NEW ZEALAND

Jingjing ZHANG (*Sociology, The University of Auckland, New Zealand*)

Introduction : This study aims to explore the social support obtained by elderly Chinese migrants in New Zealand, and how the support contributes to their perceived quality of life. **Method :** Data is collected from semi-structured in-depth interviews with 35 Chinese migrants who aged 60 years old and over and have been living in New Zealand for at least 3 years. Interviewees were asked about their socio-economic backgrounds, social networks, difficulties they encountered in New Zealand, supports they provided and obtained, and their satisfaction with their quality of life. **Results :** Findings suggest that the majority of these elderly Chinese migrants leave China out of family obligation to provide care for their grandchildren and domestic support for their children's household in New Zealand. Reciprocal support is exchanged between generations within Chinese families but the support provided by elderly migrants to their children's household does not equal the support they receive. The significance of children's support declines over time, especially when living arrangements change due to the children's further migration to a third country. A large proportion of these elderly migrants are living independently on the social benefit from New Zealand government and social services from the well-established Chinese communities. **Conclusion :** The research further reveals that social benefit and support from the host society appear to be essential and more significant to the quality of life of these elderly Chinese migrants than family support because they are more likely to perceive quality of life on the material level. **Keywords :** social support, quality of life, elderly Chinese immigrants

SS24 410-R-4

A LIFE-COURSE PERSPECTIVE ON ELDERLY RESIDENTIAL MOBILITY IN SOUTHERN CHINA: AN ADAPTATION OF THE AMENITY RETIREMENT MIGRATION MODEL

Nelson CHOW¹, Xue BAI² (*1. Department of Social Work and Social Administration, The University of Hong Kong, China; 2. Department of Applied Social Sciences, The Hong Kong Polytechnic University, China*)

Introduction : It is a widely acknowledged fact that tens of thousands of older Hong Kong residents have lived either periodically or permanently in the Mainland of China since the relaxation of restrictions on cross-border mobility and the increasing interaction, in all aspects, between Hong Kong and the Mainland. This article, based on the findings of interviews with 30 older migrants conducted between 2003 and 2004, examined the migration pattern of Hong Kong residents retiring in the Pearl River Delta of Southern China. **Method :** Purposive snowball sampling method was used. Semi-structured in-depth interviews were conducted on 30 Hong Kong older participants who were retiring in the Pearl River Delta. Each interview

took about one and a half hour. All the interviews were audio-taped while the responses were also written down in as much detail as possible. Results : Results show that the decision to move often starts with some early thoughts about the possibility to move and when retirement comes near, potential movers would then seriously consider the pros and cons of the various options. Factors identified to have influenced the decision include differences in the cost of living, better environment and amenities, desirable life-style, family background and financial resources, past life experiences, and other contextual matters. Conclusion : Haas and Serow's (1993) model of the Amenity Retirement Migration Process can be successfully applied to examine the process of older Hong Kong residents' moving to Pearl River Delta in Southern China from a life-course perspective. Keywords : older Chinese; retirement migration; life-course perspective

SS24 410-R-5 ON MIGRANT OLDER ADULTS IN URBAN CHINA

Shan LI (*College of Public Administration and Social Science, Dalian Maritime University, China*)

Introduction : The problems of migrant older adults in China used to be ignored compared with the young floating population from rural to urban areas since 1980s. It is estimated that people aged over 60 who experienced residential movement in the late 10 years has achieved 11%. Current researches focused on factors affecting elderly movement and the characteristics of migrant elderly. Yet analysis on the social problems of migrant adults in new environment is rarely conducted. Method : This research examined several hypotheses on migrant older adults with a questionnaire survey of 455 older adults conducted in Sep.2009 in Dalian city. Results : The main idea in this thesis is that compared with the native older adults, migrant older adults usually hold more social problems originated from rural-urban structure, social construction, social security system. And also social-economic status, social network and social participation are main factors influencing their social adaptation toward new community for migrant older adults. Conclusion : The main conclusion is that factors affecting migrant older adults include individual factors, social networks, SES, and rural-urban social structure, social insurance system as well. Keywords : migrant older adults, urban China, social adaptation

SS24 413-S GEROTRASCENDENCE: EMERGING CONCEPT IN DESCRIBING LIVES OF OLDER PEOPLE

SS24 413-S-1 TEN YEAR COURSE OF COSMIC TRASCENDENCE IN OLDER ADULTS IN THE NETHERLANDS: RESULTS FROM A FOUR WAVE STUDY

Arjan W. BRAAM¹, Dorly J.H. DEEG², Henrike GALENKAMP²
(1. Longitudinal Aging Study Amsterdam, Vrije Universiteit Medical Centre / University of Humanist Studies, Netherlands; 2. LASA, Vrije Universiteit Medical Centre, EMGO+ Institute, Netherlands)

Introduction : A core aspect of gerotranscendence, consistent across studies, is represented by cosmic transcendence. Cosmic transcendence can be regarded as the tendency among older adults to an increased feeling of unity with the universe; a redefinition of the perception of time, space, life, and death; and a growing affinity with past and future generations. Method : Four interview cycles, with three year intervals, of the Longitudinal Aging Study Amsterdam provided data on cosmic transcendence (CosT, 6-item scale), religious affiliation, social network size, depressive symptoms and physical

limitations. Complete scores were available for 787 respondents. Results : The mean scores of cosmic transcendence were stable, but the variability between the assessments was relatively high. Using dichotomized scores, 31% never had a high CosT score (mean age 66.3 at start of the study), and 29% had three or more times a high CosT score (mean age 68.7). Attaining stable high CosT scores was associated with age, also after adjustment for religious affiliation. Respondents with a religious background had higher CosT scores. The association between frequency of praying/meditation and CosT was highly significant, especially among those without religious affiliation. Conclusion : About one third of the older aged in this sample from The Netherlands never had high levels of CosT: presumably, this part of the sample may lack affinity to this contemplative stance in life. Although the mean Cosmic transcendence scores did not show any increase over time, attaining stable high CosT levels occurred more among the more aged respondents, and was strongly associated with prayer/meditation, also among the non-religious. Keywords : gerotranscendence, religiosity, spirituality

SS24 413-S-2 GEROTRASCENDENCE AND DIFFERENT CULTURAL SETTINGS: STUDIES OF RELIGIOUS AND SECULAR ELDERLY IRANIANS, TURKS AND SWEDES

Fereshteh AHMADI (*Department of Social Work and Psychology, University of Gavle, Sweden*)

Introduction : Within the framework of an international research project aimed at studying the impact of different cultural settings on gerotranscendent development, six groups namely religious Iranians, religious Turks, religious Swedes, secular Iranians, secular Turks and secular Swedes were studied. Method : A life history approach, followed by thematic semi-structured interviews, was applied. One of the objectives of this research project consisting of three explorative studies was to inquire about the possible impact of religion, conceived of as a cultural setting, on development towards gerotranscendence. Results : The findings of this inquiry gave rise to two assumptions as to the relationship between gerotranscendence and religiosity. Conclusion : The first assumption is that the internalization of mystical-type ideas in individuals' ways of thinking is probably a factor involved in the development of a gerotranscendent view of life. On the other hand, whether individuals practice their "religion" in a spiritual, nonorganizational way or in an organizational way may play a role for development towards gerotranscendence. The second assumption is that certain characteristics, such as the secular and individualistic features of modern societies, may delay development towards gerotranscendence. Keywords : gerotranscendence, spirituality, Sufism

SS24 413-S-3 GEROTRASCENDENCE AMONG THE YOUNG-OLD, OLD- OLD, AND OLDEST-OLD IN JAPAN: RESULTS FROM THE SONIC STUDY

Takeshi NAKAGAWA¹, Yukie MASUI², Yasuyuki GONDO¹, Madoka OGAWA³, Yoshiko ISHIOKA¹, Megumi TABUCHI³, Yukiko TATSUHIRA¹, Marina KOZONO¹, Kazunori IKEBE⁴, Kei KAMIDE⁵, Yasumichi ARAI⁶, Ryutaro TAKAHASHI⁷
(1. Graduate School of Human Sciences, Osaka University, Japan; 2. Human Care Research Team, Tokyo Metropolitan Institute of Gerontology, Japan; 3. Department of Psychological Science, Kwansai Gakuin University, Japan; 4. Graduate School of Dentistry, Osaka University, Japan; 5. Graduate School of Medicine, Osaka University, Japan; 6. School of Medicine, Keio University, Japan; 7. Research on Social and Human Sciences, Tokyo Metropolitan

Institute of Gerontology, Japan

Previous studies suggest that older Japanese adults show cultural-specific gerotranscendence signs. So, a Japanese version scale was developed to measure gerotranscendence among older Japanese people. This study examined whether the scale captures the adaptive development with aging, and what predicts gerotranscendence among older Japanese. This study was based on data from samples of the Septuagenarian, Octogenarian, Nonagenarian Investigation with Centenarian (SONIC). 1,000 septuagenarians and 973 octogenarians participated, and nonagenarians are currently participating. A questionnaire survey and health checkups were administered. Gerotranscendence was assessed, using the Japanese Gerotranscendence Scale consisting of 8 subfactors. We measured subjective well-being indices, and sociodemographic, social, and health predictors of six subfactors of gerotranscendence were positively related with subjective well-being indices. Next, stepwise regression analyses were conducted, using each subfactor of gerotranscendence as dependent variables and sociodemographic (i.e., age, gender), social (i.e., social support, religious activities), and health (i.e., diseases, instrumental activities of daily living) indicators as independent variables. The results showed that age was the strongest predictor of the 6 subfactors. Among social indicators, religious activities were positively related with the 4 subfactors. The role of health predictors was inconsistent. However, the link between poor health status and the two subfactors unrelated to subjective well-being was observed. This study suggests that six of eight subfactors of gerotranscendence can capture the adaptive development. Gerotranscendence seems to be promoted by normal aging, whereas some facets of gerotranscendence can be modified by religiosity. Using the data of nonagenarians, these findings will be duplicated at the symposium. Keywords : gerotranscendence, spirituality, psychological development

SS24 414-S
APPLICATIONS OF ICF FOR HEALTHY AGING IN JAPAN AND THE USA

SS24 414-S-1
ICF AS A CONCEPTUAL FRAMEWORK: DEFINITIONS, MEASUREMENT, BARRIERS AND FACILITATORS TO HEALTHY AGING

Kristine MULHORN (*Department of Health Administration, Drexel University, USA*)

Introduction : Attendees will be introduced to ICF, its framework and specific definitions used for aging, including the concept of barriers and facilitators. Method : This is an introduction to the ICF itself and not a study or a research project. The speaker will use hands-on materials as well as references to the WHO website to familiarize the audience with the ICF, an overview of the classification system and it is organized. Results : At the end of the presentation, attendees will be able to understand the reasons for the development of ICF, the basics of the framework, the outline of the definitions, with examples and a description of barriers and facilitators for specific classifications linked to aging. Conclusion : Concluding remarks will summarize the main points of this short introduction. Keywords : ICF

SS24 414-S-2
ICF-BASED ASSESSMENT TOOL USING RASCH METHOD-IMPLICATIONS FOR PRACTICE

Jiro OKOCHI (*Tatsumanosato Geriatric Facility, Japan*)

Introduction : This study focuses on the development of ICF-based scales for practice using Rasch method and functional staging model.

Method : ICF codes were selected initially based on the previous test-retest reliability study. Then the ICF items were divided into categories of the ADLs such as mobility, walking, eating and bathing. In each category, ICF codes were tested to fit the Rasch model and the level of difficulty. , Four ICF items were selected and incorporated into one Guttman-type scale to enable the staging of functioning for each category of measurement. The participants for scale development and validation were Japanese over 65 years old with functional disabilities. Results : 1164 elderly persons were eligible for scale development. To stage the functional performance of elderly persons, 10 Guttman-type scales of ADLs and cognitive functions were developed. The order of item difficulty was validated using 3507 elderly persons. There were no differential item functioning about study location, gender and age-group in the newly developed scales. These scales divide functional performance into five stages according to four ICF codes, making the measurements simple and less time-consuming. Illustrations were added to facilitate the sharing of patient images among health care providers. Conclusion : With the scales developed, patients are assigned to one stage in each scale. This was achieved by hierarchically rearranging the ICF items and constructing Guttman-type scales according to item difficulty of the Rasch model. By using ICF as a common taxonomy, these scales could be used internationally as assessment scales in geriatric care settings. Keywords : ICF, functioning, measurement

SS24 414-S-3
MEASURING THE ELDERLY'S PARTICIPATION IN THE COMMUNITY

Kenichiro ORIMO (*Nisi-Agatsuma Welfare Hospital, Japan*)

Introduction : The goal of community based care for the elderly persons is to retain their activity and participation levels in the community. Aim of this study is to incorporate participation domain of the ICF as a goal of rehabilitation for case-management. Method : To construct a care-management tool based on the ICF, we developed list of participation in three domains, leisure activity (12 items such as watching TV), social participation (7 items such as participation in voting) and communication (9 item such as conversation with friends). The Participants were 3499 elderly persons using institutional or day services of long-term care insurance in Japan. Rasch analysis was performed with RUMM2030 software. Results : Data were obtained from 1590 institutionalized (man 317, female 1273, average age 86) and 1818 day service users (man 317, female 1041 average age 81). Of these randomly selected 300 data were used for Rasch analysis. Of leisure activity items, traveling was the most difficult item, while Watching TV was the easiest items. Conclusion : With these new tools, we can now have a clear image of patients are participating in leisure and communication. Most of the participation related items of leisure, social activity and communication showed good fit to the Rasch model and therefore these items can be used for scaling participation of the elderly persons. These scales are used in a case-management system at Geriatric Rehabilitation Facilities in Japan. Keywords : Participation ICF Care-managements

SS24 414-S-4
COMPARISON OF US AND JAPANESE POPULATION: USE OF ICF TO ASSESS SOCIAL FUNCTIONING OF ELDERLY LIVING IN THE COMMUNITY

Kristine MULHORN (*Department of Health Administration, Drexel University, USA*)

Introduction : How can ICF be used as a link across cultures to compare social and physical functioning of elderly in the community.
Method : The method used is cross-walking from different assessment tools to the ICF which provides a mechanism for defining the meaning of areas of classification.
Results : The results demonstrate a close approximation of key items on the TMIG-IC scale with categories and specific codes in ICF. Some items require a specified code to demonstrate the meaning of the social interaction.
Conclusion : There are different assessment tools for measuring various concepts of functioning and cross-walking is the first step for consideration of which assessment tools may be used.
Keywords : ICF; social functioning; assessment tool; cross-walking

SS24 417-B
ANTAGONIZE CARDIOVASCULAR AGEING

SS24 417-B-1
ANTAGONIZING CARDIOVASCULAR AGEING BY CALORIC RESTRICTION AND CR MIMETICS

Ken SHINMURA (*Department of Internal Medicine, Keio University School of Medicine, Japan*)

Introduction : Caloric restriction (CR) is an established intervention, of which anti-ageing effects are scientifically proved. CR profoundly affects age-related physiological and pathophysiological alterations and markedly increases both mean and maximal lifespan in several species including mammals. In addition, CR exerts pleiotropic effects on the cardiovascular system.
Method : At first, CR could prevent the progression of atherosclerosis and “vascular aging” via direct and indirect mechanisms. Secondly, CR could improve myocardial tolerance against ischemic stress. Thirdly, CR could partially retard cardiac senescence and ameliorate age-associated left ventricular dysfunction.
Results : The exact mechanisms by which CR exerts anti-ageing effects have not been fully elucidated, but increasing evidence demonstrates that 4 intracellular signaling pathways; insulin/insulin-like growth factor (IGF) axis, mammalian target of rapamycin (mTOR) signaling, AMP-activated protein kinase (AMPK)-mediated pathways, and sirtuins (mammalian homologues of Silent Information Regulator 2), play an essential role in the development of CR effects, independent and/or dependent of each other. Furthermore, it becomes clear that mechanisms underlying cardiovascular effects of CR are more complicated, including improvement in systemic risk factors for atherosclerosis and exertion of direct effects on the vasculature and myocardium via different signaling pathways.
Conclusion : Therefore, identifying the specific cellular target responsible for each effect afforded by CR and developing more selective compounds to the downstream targets of CR will be useful in translating the CR research into clinical setting for managing patients with cardiovascular diseases. Although it has not proven yet, we expect that CR and CR mimetics reduce morbidity and mortality of cardiovascular events even in human.
Keywords : caloric restriction, cardiac senescence, vascular ageing

SS24 417-B-2
MTOR SIGNALING INDUCES VSMC SENESCENCE THROUGH P53 AND P21

Hyoung Chul CHOI, Jin Young SUNG (*Yeungnam Univ., College of Medicine, Pharmacology, Korea*)

Introduction : Cellular senescence is related to aging and stable proliferative arrest with active metabolism. Senescent cells can activate mammalian target of rapamycin (mTOR) pathway, which plays a crucial role in the regulation of cell metabolism, cellular

growth and autophagy affected in senescence-associated cardiovascular diseases. We examined whether mTOR pathway is considered to induce cellular senescence by inhibiting autophagy in vascular smooth muscle cells.
Method : We found that VSMC senescence was accompanied by increased activity of mTOR pathway, a major controller of cell growth and a negative regulator of autophagy.
Results : Senescent VSMC to Adriamycin (ADR) treatment induced activation of mTOR pathway and reduced protein levels of signal associated autophagy. In addition, inhibition of mTOR pathway drastically decreased stained cells of senescence-associated beta-galactosidase (SA beta-gal). Moreover, inhibition of mTOR reversed levels of autophagy-related proteins and SA beta-gal stained positive cells. mTOR regulates ADR-induced senescence by up-regulating the expression of p21, which plays an important role in the induction of senescence. Autophagy suppressed VSMC senescence possibly through mTOR-dependent induction of p53 and p21.
Conclusion : As a regulator of metabolism, aging and cardiovascular diseases, mTOR-autophagy are still elusive, we tried to find evidence supporting the role of mTOR-autophagy in senescence.
Keywords : Vascular senescence, mTOR, Autophagy

SS24 417-B-3
MECHANISMS OF VASCULAR AGING AND ITS REGULATION BY SIRTUIN ACTIVATION

Katsuya IJIMA (*Institute of Gerontology, The University of Tokyo, Japan*)

Introduction : Vascular damages according to aging manifest several features, namely ‘atherosis’ and ‘sclerosis’, finally leading to cardiovascular (CV) events with atherosclerosis. Longevity gene, Sir2 (silent information regulator-2), a histone deacetylase, is associated with vascular aging, especially oxidative stress-induced vascular endothelial cell (EC) dysfunction and vascular smooth muscle cell (SMC) calcification.
Method : First, the oxidative stress induces senescent phenotypic change of EC, as detected by senescence-associated β -galactosidase activity. Oxidative stress-induced EC senescence was associated with a decline in SIRT1, a mammalian Sir2 homolog, with eNOS down-regulation. Notably, statins could protect the EC senescence via restoration of SIRT1 expression, leading to up-regulation of mitochondria biogenesis and catalase, MnSOD expression. These observations suggest that the SIRT1-eNOS axis has a fundamental protective effect against senescence-related EC dysfunction.
Results : Second, SMC calcification in arterial media leads to Monckeberg’s-like arteriosclerosis and makes management of hemodynamics more difficult in the elderly. Few reports have addressed whether cellular senescence is correlated with SMC calcification. In the condition of renal failure with hyperphosphatemia, we show the induced SMC senescence was associated with SIRT1 downregulation and subsequent p21 activation, and excessive SMC calcification is attributable to senescence-related osteoblastic trans-differentiation. SIRT1 dynamically protects SMC calcification via inhibition of phosphate-induced Runx2, a transcriptional factor of many osteoblastic genes, finally leading to balance of the SMC phenotype.
Conclusion : Taken together, we review the regulatory protective mechanisms of SIRT1 for vascular aging. Our new findings suggest that strategies to maintain SIRT1 activity level higher may provide us novel therapeutic opportunities for the prevention of athero/arterio-sclerosis.
Keywords : Vascular calcification, Senescence, Longevity gene sirtuins

SS24 417-B-4
MOLECULAR MECHANISM OF VASCULAR AGING AND ITS INTERVENTION BY BETAINE AND PPAR AGONIST

Hae Young CHUNG (*Department of Pharmacy, Pusan National University, Korea*)

Introduction : Our present study was launched to further elucidate the molecular aspects of aortic proinflammatory genes regulation during aging by utilizing two experimental paradigms; anti-inflammatory calorie restriction (CR) and dietary supplementation of phytochemical betaine and a novel PPAR agonist on aged rats. **Method :** Aged rats were calorie restricted or diet supplemented of phytochemical betaine and a novel PPAR agonist. Many biochemical experiments were done to check molecular aspects of aortic proinflammatory genes regulation. **Results :** Result showed that reactive species (RS) and lipid peroxidation products 4-HNE / MDA levels were all increased, accompanied with decreased total thiol contents. In addition, the aortic anti-oxidative capacity was also found to be decreased in old rats. The treatment with betaine and PPAR agonist effectively suppressed these oxidative stress related markers. To further look into the molecular event involved in proinflammatory gene activation in aging aorta, levels of various inflammation biomarkers were determined, including PGE2, TXA2, COX-2, PGES, PGIS, P-/E-selectin, VCAM-1 and ICAM-1, as well as TNF α and IL- β . Results show that those genes are all increased with age, and importantly, they were attenuated by CR and supplementation of betaine and PPAR agonist. **Conclusion :** Based on these finding and others, we concluded that the protection of aging vasculature by anti-aging action of CR and treatment with betaine and PPAR agonist is mediated through its anti-inflammatory property. **Keywords :** vascular aging, PPAR, betaine

SS24 418-S

DAILY STRESS IN MIDLIFE AND OLD AGE: IMMEDIATE AND LONG-TERM IMPLICATIONS FOR HEALTH AND WELL-BEING

SS24 418-S-1

DOES DAILY LIVING WEAR YOU OUT? COMBINING SELF-REPORTED AND BIOLOGICAL INDICATORS OF STRESS

David ALMEIDA (*Human Development & Family Studies, Pennsylvania State University, USA*)

Introduction : Current stress theories suggest that chronic exposure to hormones elicited by stressors leads to accumulated wear and tear on the body, referred to as allostatic load. **Method :** In this paper we use diary methods that obtain repeated measurements from individuals during their daily lives to assess associations between real-life stressors and salivary cortisol in the National Study of Daily Experiences. Respondents completed nightly interviews about daily stressors at two time points across a 10 year period. **Results :** The analyses differentiated between individuals who were high at both occasions versus low at both occasions in stressor exposure and reactivity. The results showed that individuals who were high in their exposure to stressful events at both time points had dysregulated cortisol rhythms. Compared to their younger counterparts, chronically stressed older adults showed the greatest amount of cortisol dysregulation. **Conclusion :** Discussion will focus on how daily stress processes may contribute to an increased risk of illness and mortality. **Keywords :** Stress, Cortisol, Health

SS24 418-S-2

AFFECTIVE REACTIVITY TO DAILY STRESSORS PREDICTS LONG-TERM MENTAL AND PHYSICAL HEALTH OUTCOMES

David ALMEIDA¹, Jennifer PIAZZA², Susan CHARLES³, Jacqueline MOGLE¹, Martin SLIWINSKI¹ (*1. Human Development &*

Family Studies, Pennsylvania State University, USA; 2. Health Science, California State University, Fullerton, USA; 3. Psychology and Social Behavior, University of California, Irvine, USA)

Introduction : Daily stressors, such as an argument with a spouse or an impending deadline, are associated with short-term changes in physical and mental health. Whether these minor hassles have long-term physical and mental health ramifications, however, is largely unknown. **Method :** In two separate studies, we examined whether exposure and reactivity to daily stressors is associated with long-term risk of reporting a chronic physical health condition (Study 1) or an affective disorder (Study 2). Participants from the National Study of Daily Experiences (NSDE) completed a series of daily diary interviews between 1995 and 1996 and again 10 years later. **Results :** Results revealed that heightened affective reactivity to daily stressors at Time 1 was related to a heightened risk of reporting a chronic physical health condition at Time 2, as well as an increased likelihood of reporting an affective disorder. **Conclusion :** Findings suggest that how people respond to seemingly minor events in their lives has long-term implications for their physical and mental health. **Keywords :** stress, reactivity, health outcomes

SS24 418-S-3

ASSESSING THE PERSONAL ECONOMIC COSTS OF DAILY STRESS REACTIVITY

David M. ALMEIDA, Soomi LEE (*Human Development and Family Studies, Penn State University, USA*)

Introduction : Our daily lives expose ourselves to stressful experiences. Yet, we differ from each other in the amount of negative affect we feel in response to stress as well as the amount of stress to which they are perceived (Mroczek & Almeida, 2004). Stress reactivity, how much people react to stressors, has been studied in the association with personality and age. However, no study examined the effects of stress reactivity on economic outcomes. This study assessed the personal economic costs of daily stress reactivity. **Method :** Data are from the Midlife in the United States (MIDUS), a nationally representative survey. Of the 7,108 participants completing the phone survey in 1995-1996, 4,963 were reassessed in 2004-2005. At both waves, respondents also completed short phone interviews about their daily experiences. Respondents who completed daily and main interviews at both waves were included in the analysis (N=3,096). **Results :** To account for inter- and intra-personal variations in the amount of negative affect and the effects stressors on negative affect, we used multilevel modeling. After controlling for personal income, personality, and demographic characteristics at wave1, heightened stress reactivity at wave 1 predicted a significant decrease in personal income at wave2. **Conclusion :** Results indicate that heightened stress reactivity in our daily lives has personal economic costs. Personal income is an objective marker of individual well-being and it affects quality of life by providing security, confidence, and a buffer against the effects of ill health. Addressing personal income as an outcome affected by stress reactivity may provide a new perspective in stress research. **Keywords :** Negative affect, Stress reactivity, Personal income

SS24 418-S-4

DAILY STRESS AND PHYSIOLOGICAL MARKERS OF STRESS OF FAMILY CAREGIVERS: EFFECTS OF ADULT DAY CARE USE

Steven ZARIT¹, David M. ALMEIDA¹, Elia E. FEMIA¹, Laura Cousino KLEIN², Kyungmin KIM¹, Courtney WHETZEL² (*1. Human Development & Family Studies, Pennsylvania State University, USA; 2. Biobehavioral Health, Pennsylvania State*

University, USA)

Introduction : This study examines the effects of daily stressors on physiological markers and well-being in a sample of people exposed to high levels of chronic stressors, family caregivers of people with dementia. Unique to this study is that all participants used an Adult Day Services (ADS) program on some observation days, which lowers stressor exposure, and allows us to examine within-person differences in physiological and behavioral responses on high and low stress days. **Method :** Participants were 174 family caregivers of persons with dementia who attended ADS at least two times a week. Caregivers completed telephone interviews for 8 consecutive days, including days when their relative used ADS (low stress days) and when their relative did not (high stress days). They also provided 5 saliva samples each day. Outcomes were measures of affect and two stress biomarkers: cortisol and dehydroepiandrosterone-sulfate (DHEA-S). **Results :** Findings were analyzed using multi-level modeling. Results showed that ADS days were associated with lower negative affect and more normative cortisol patterns than on non-ADS days. Caregivers had higher DHEA-S on days following ADS use, and also had higher positive affect on those days. **Conclusion :** These results confirm the association of daily variability of stressors with behavioral and physiological outcomes in the context of high chronic stress. Lowering stressor exposure resulted in improvements in daily stress responses on affective and physiological markers. These results suggest that respite services such as ADS that lower stressor exposure may reduce the risk of poor health outcomes for family caregivers. **Keywords :** Daily stressors, cortisol, caregivers

SS24 419-S **THEORETICAL PERSPECTIVES ON AGEING IN** **TRANSNATIONAL FAMILIES**

SS24 419-S-1 **INBETWEENNESS: IDENTITY RECONSTRUCTION OF** **OLDER CHINESE MIGRANTS IN THE TRANSNATIONAL** **CONTEXT**

Wendy Wen LI (*Department of Psychology, James Cook University, Australia*)

Introduction : Chinese immigrants make up one of the largest ethnic groups within the older New Zealand population. However, their everyday experiences of settling in a new and unfamiliar environment have been largely overlooked. This paper seeks to remedy this by exploring the biographies, identities and everyday experiences of older Chinese migrants. **Method :** The research utilised a narrative approach. Three waves of interviews were conducted with 32 older Chinese immigrants to New Zealand. **Results :** The findings revealed that Older Chinese immigrants did often experience biographical disruptions and status discrepancies when they moved from China to New Zealand. However, in response, participants engaged in positive activities such as gardening and art, along with other local and transnational community activities, as a means of cultivating a new sense of self in a new land. This new sense of self is shown to be compatible with participants' existing identities as older Chinese adults. **Conclusion :** Living between China and New Zealand, between homes and between languages, participants did not merely insert or incorporate themselves into existing spaces in New Zealand. Rather, they also create 'inbetweenness' where they experience multiple identities which unify nearness and remoteness, here and there. **Keywords :** Identity, inbetweenness, multiplicity, Chinese, ageing

SS24 419-S-2 **MIGRATION, HOMELAND AND BELONGING: NORMATIVE**

INFLUENCES ON TRANSNATIONAL RELATIONSHIPS OF **SIX MIGRANT GROUPS IN THE UK**

Vanessa BURHOLT¹, Christina VICTOR², Christine DOBBS¹, Wendy MARTIN² (*1. Centre for Innovative Ageing, Swansea University, United Kingdom; 2. School of Health Sciences and Social Care, Brunel University, United Kingdom*)

Introduction : Taking a symbolic interactionist perspective, this paper examines the transnational relationships of two generations (45-64 years; 65+ years) in six migrant groups (Bangladeshis, Indians, Pakistanis, Chinese, African, and African-Caribbean) living in the UK and their relatives abroad. We consider how the perceptions of one's identity ? captured through the sense of belonging to family, ethnic or cultural group, the UK, or country of origin ? influences transnational. **Method :** The number of active transnational relationships is used as the dependent variable. Regression models determine whether migrant status (either migrated to the UK, or born in the UK) and sense of belonging to the UK, the homeland or a cultural group influences these relationships. **Results :** Bivariate analysis showed that migrants with a strong sense of belonging to the UK have significantly fewer active transnational relationships than migrants with a strong sense of belonging to their country of origin or their ethnic or cultural group. However, regression models indicated that this relationship is accounted for by migrant status: older people that migrated to the UK have a greater number of active transnational relationships than those that were born in the UK (even after controlling for total number of inactive and active transnational relationships). **Conclusion :** In the UK, the sense of identity and belonging for people in these six ethnic groups is associated with place of birth. In this respect, the social construction of ethnic identity within the UK and a sense of belonging decreases the likelihood that a person will have active transnational relationships. **Keywords :** Ethnicity , Generational comparison, Transnational

SS24 419-S-3 **CARING ACROSS BORDERS: TAIWANESE IMMIGRANTS** **TO THE UNITED STATES AND THEIR OLDER PARENTS** **LEFT BEHIND**

Yu-kang FAN¹, Merril SILVERSTEIN² (*1. Sociology, University of Southern California, USA; 2. Department of Sociology, Maxwell School of Citizenship and Public Affairs, School of Social Work, Syracuse University, USA*)

Introduction : Migration research has not shed light on intergenerational relations between first generation immigrants and their elder parents left behind. This paper in particular examines familial organization of elder care, understanding the status obligations and practices of the sandwich generation immigrant adults. **Method :** This study identifies different ways of caring across border with mixed methods. In-depth interviews capture a diversity of meanings and care practices, generating significant patterns among Taiwanese immigrants in the U.S. Survey data, on the other hand, are used to point out basic trends and possible explanations for transnational caring. **Results :** Taiwanese immigrants incorporate family networks for elder care. Life course perspectives help understand the shifting practices and meanings of family transitions and elder care throughout migration. **Conclusion :** Taiwanese immigrants in the Southern California have negotiated and performed their status obligation with their elder parents in Taiwan in varying ways in order to compensate for their physical absence of elder care. **Keywords :** Immigration, intergenerational relations, parent care, Asia

SS24 419-S-4

FIRST-GENERATION MIGRANTS AND EXPERIENCES OF PLACE: TRANSNATIONAL TIES IN TWO URBAN NEIGHBOURHOODS

Tine BUFFEL¹, Chris PHILLIPSON² (1. *Adult Educational Sciences / School of Social Sciences, Vrije Universiteit Brussel / the University of Manchester, Belgium*; 2. *School of Social Sciences, The University of Manchester, United Kingdom*)

Introduction : This contribution aims to explore experiences of 'place' among first generation migrants living in deprived urban neighbourhoods. The data for the present research are derived from two qualitative studies in inner-city neighbourhoods in England and Belgium. **Method :** Drawing on semi-structured interviews with older Pakistani and Somali people in Manchester and Liverpool, and Turkish and Moroccan elders in Brussels, the paper reviews the variety of ways in which the idea of "home" is created, the constraints and environmental pressures which may prevent people from developing a sense of "home," and the meaning of transnational ties for the experience of place. **Results :** The findings suggest that many first generation migrants connect their sense of local attachment to their transnational ties and practices, suggesting that these enable them to create a sense of belonging to place, rather than preventing it. **Conclusion :** This implies that transnational and local ties cannot be seen as mutually exclusive, but that 'new places of belonging' to the neighbourhood can be created through the trans-nationalisation and production of space. The final part of the paper discusses conceptual as well as policy issues raised by the research. **Keywords :** older migrants, transnationalism, place attachment

SS24 420-S

CROSS-CULTURAL COMPARATIVE STUDIES ON THE EFFECTIVENESS OF POSITIVE PSYCHOLOGY APPROACH IN PREVENTING LATE-LIFE DEPRESSION AMONG OLDER ADULTS RESIDING IN JAPAN, CHINA AND KOREA

SS24 420-S-1

THE STABILITY AND CHANGE OF DEPRESSIVE SYMPTOMS OVER THE 7 FOLLOW-UP STUDY AMONG KOREAN ELDERS

Yong-jin SOHN (*Department of Humanities, Catholic University of Pusan, Korea*)

Introduction : Along with the population increases in older adults, the prevalence of health problems such as depression has received increased attention in recent years. The main purpose of this study is to determine the presence of depression among Korean elders over the years and to investigate the interlocking aspects of depressive symptoms, self-esteem and suicidal thoughts. **Method :** Data were drawn from the 1~7 wave of Korea Welfare Panel Study (KOWEPS) whose data collection started from the year of 2006 and was continuously surveyed each year since then. A group of 2,670 Korean elders over 65 years old were used to tap the determinants of depressive symptoms and its influencing factors. Linear mixed model was utilized by including demographic dimensions, health status, social relations, health-seeking behaviors, psychosocial factors (self-esteem scale, life satisfaction dimension, suicidal thoughts, and depression). **Results :** As with consistent with previous studies, those who were lower in self-esteem were more likely to report depressive symptoms and had suicidal thoughts. It was also found that the higher level of depression was slightly moderated by having higher dimensions of social networks. However, elders who were experiencing greater depression tended to have more comorbidities and seek less assistance for health-related behaviors, experienced a

lower level in life satisfaction. **Conclusion :** The results of this study support the rationale that depression is determined by various factors. Policy makers need to make health care professionals more aware of the various problems in the mental health sphere. They should offer more substantive support for providing a good psychosocial quality of life in older age. **Keywords :** Depression, Quality of Life

SS24 420-S-2

PREVENTING LATE-LIFE DEPRESSIVE SYMPTOMS IN THE ELDERLY - EFFECTIVENESS OF HAPPY PROGRAM-

Jin YU (*Department of Research, The Dia Foundation for Research on Aging Societies, Japan*)

Introduction : Importance of Depression Prevention in Late Life: Depression is a serious mental illness in late life that underlies a high suicidal rate of the elderly in Asia. It is estimated that one in every four community dwelling elderly are depressed but often they are unrecognized or untreated. **Method :** Depression Prevention Intervention Program for the Elderly: We developed "Happy Program" based on positive psychology approach, and evaluated its effectiveness in reducing depressive symptoms among the community dwelling healthy and frail elderly. The program consisted of group work and home work to learn about late-life depression and how to increase positive emotions and experiences. **Results :** Successful Outcomes of the Program: Compared with the control, the intervention group reduced symptoms of depression, insomnia and anxiety and increased happiness regardless of frailty. The significant improvement remained at one year follow-up among the healthy elderly. **Conclusion :** Our findings suggest that Happy Program can reduce depressive symptoms and improve other mental health indicators among community dwelling elderly. **Achievement:** Two municipalities adapted this program and conducted 31 times in 13 communities between 2009 and 2012. Autonomous working groups are formed by the graduates. **Keywords :** Depression Preventing Positive psychology

SS24 420-S-3

CHINA LONGITUDINAL AGING STUDY : RESULTS OF BASELINE ASSESSMENT

Shifu XIAO¹, Juan LI², Muni TANG³, Wei CHEN⁴, Feng BAO⁵, Huali WANG⁶, Yuping WANG⁷, Ying LIU⁸, Yaping WANG⁹, Yefeng YUAN¹⁰, Xiaoyun ZUO¹¹, Zhongming CHEN¹², Xulai ZHANG¹³, Lijuan CUI¹⁴, Xia LI¹, Tao WANG¹, Wenyuan WU¹⁵, Mingyuan ZHANG¹ (1. *Department of Geriatric Psychiatry, Alzheimer's Disease and Related Disorders Center, Shanghai Mental Health Center, Shanghai Jiao Tong University School of Medicine, China*; 2. *Institute of Psychology, Chinese Academy of Sciences, China*; 3. *Guangzhou Brain Hospital, Guangzhou Brain Hospital, China*; 4. *Sir Run Run Shaw Hospital, Zhejiang University School of Medicine, China*; 5. *Anding Hospital, Capital Medical University, China*; 6. *Institute of Mental Health, Peking University, China*; 7. *Xuanwu Hospital, Capital Medical University, China*; 8. *The First Affiliated Hospital, China Medical University, China*; 9. *The First Affiliated Hospital, Xi'an Jiao Tong University School of Medicine, China*; 10. *The First Affiliated Hospital, Nanchang University, China*; 11. *The Third People's Hospital of Jian City, The Third People's Hospital of Jian City, China*; 12. *Ankang Hospital of Ningbo City, Ankang Hospital of Ningbo City, China*; 13. *The Fourth People's Hospital of Hefei City, The Fourth People's Hospital of Hefei City, China*; 14. *East China Normal University, East China Normal University, China*; 15. *Tongji Hospital, Tongji University, China*)

Introduction : To investigate the prevalence of cognitive impairment and mood disorder in elderly and to establish the national norm of

common neuropsychological measurements for old people. Method : 15 sites from eight provinces participated the research. Mini Mental State Examination (MMSE), the Montreal Cognitive Assessment (MoCA), Neuropsychological Tests Battery (NTB) and other assessments were used. Diagnosis was based on the DSM-IV and related criteria. Results : 3514 subjects Completed baseline assessments, The average age was 71.17 ± 7.78 years. 1659 were male (44.6%). 1945 were female (55.4%). The educational level was 8.24 ± 5.34 years. The prevalence of amnesic mild cognitive impairment (aMCI), vascular mild cognitive impairment, sub-clinical depression, Alzheimer's disease (AD), vascular dementia, mixed dementia, successful aging, major depressive disorder, mild depression, dysthymia, subclinical dysthymia, panic attacks, generalized anxiety, pain disorder, hypochondriasis, primary insomnia and mislanious was as followings: 13.2%, 2.3%, 0.9%, 2.8%, 1.6%, 0.5%, 4.3%, 0.9%, 2.3%, 0.6%, 1.2%, 0.3%, 0.9%, 0.3%, 1.0%, 2.5%, 4.0%. The rates for major depressive disorder and anxiety disorders were 9.7% and 2.6% respectively according to self rating scale. The risk and protective factors for cognitive disorders and common psychological disorders were analyzed, and The NORMs of MMSE, MoCA and NTB were established by age, gender and education. Conclusion : The cognitive disorders and psychological problems are common in the elderly in China The prevalence of anxiety or depressive disorder which meet the diagnostic criteria is relatively low but higher by self-rating scale. The national norms of some cognitive and psychological assessments are established. Keywords : prevalence, cognition, norms

SS24 421-S

WELLBEING IN LATER LIFE: HOW DO WE MEASURE IT AND WHAT ARE ITS DETERMINANTS?

SS24 421-S-1

MEASURING SUBJECTIVE WELL-BEING IN LATER LIFE: AN INTERNATIONAL COMPARISON

Bram VANHOUTTE, James NAZROO, Alan MARSHALL (*Centre for Census and Survey Research, University of Manchester, United Kingdom*)

Introduction : Subjective well-being is often seen as a multidimensional concept. In this paper we will test to what extent different measures of hedonic and eudaimonic well-being can be used to compare the subjective well-being in later life between countries. Method : A confirmatory factor approach using comparable data from ELSA, HRS and SHARE will be used to look at measurement equivalence across countries of commonly used instruments to assess subjective well-being. Results : Multiple instruments can be used to compare different aspects of well-being between countries, as long as the correct form of the instrument is used and a number of less suitable items are excluded from the comparison. Conclusion : A multidimensional measurement of subjective well-being in later life is not only theoretically grounded, but is also empirically feasible. Although levels of subjective well-being between countries vary considerably, this seems to have only limited implications on the reliability of measurement instruments. Keywords : subjective wellbeing, comparative, measurement

SS24 421-S-2

SURVEY MEASURES OF EXPERIENCED WELL-BEING: WHAT CONTRIBUTES TO A GOOD DAY AFTER AGE 50?

Jacqui SMITH, Lindsay H RYAN, Tara L QUEEN, Sandra BECKER, Richard GONZALEZ (*Institute for Social Research, University of Michigan, USA*)

Introduction : Kahneman and colleagues (2004) devised the Day Reconstruction Method (DRM) which adapts detailed time use diaries to assess experienced well-being. They reported discrepancies between this measure of one day's hedonic experiences and global evaluations of life and advocated the addition of DRM and life satisfaction measures to population surveys to assess subjective well-being. Method : We developed and tested several short survey measures of experienced wellbeing in national and local samples of older adults. Participants are asked a) to think about yesterday; b) to report the time they woke up, had lunch, and went to sleep at the end of the day; c) to rate their overall experiences the previous day; and d) indicate their participation in 10 activities. We follow-up this overall reconstruction with a detailed recall of the times throughout the day that each activity occurred and ratings of the feelings experienced while doing each activity. Results : We report age, health, and wealth differences in experienced well-being (activities, affect, and the time spent on activities) revealed in the Health and Aging Study (HRS), a representative panel of the US population over age 50 (N = 5200; Age 50-97), and a related study, ROBUST (N = 968, Age 50-97). The valence and mixture of emotional experience differed by activity profiles, age, health, and education. Conclusion : Our findings highlight measurement issues in understanding the complexity of emotional experience in older adults. They provide important unique information beyond global measures of life satisfaction that enhances our understanding of sources of wellbeing in later life. Keywords : Wellbeing, Time use, affective experience

SS24 421-S-3

DETERMINANTS OF INEQUALITIES IN SUBJECTIVE WELLBEING IN LATER LIFE IN THE UK AND US

Stephen JIVRAJ (*CCSR, School of Social Sciences, University of Manchester, United Kingdom*)

Introduction : The promotion of ageing well in later life is becoming a key strategy of public health policy in many developed countries. In the UK and US, this is accompanied by a shift by health authorities from measuring successful ageing as the absence of physical and mental health conditions towards assessing what is commonly referred to as subjective wellbeing. Method : This paper examines relative difference in three subjective wellbeing outcomes (quality of life, depressive symptoms and life satisfaction) by analysing the determinants in the UK and US using harmonised data from the English Longitudinal Study of Ageing (ELSA) and the Health and Retirement Study (HRS). Results : The analysis focuses on the importance of later-life transitions, including retirement, widowhood and declining health status and determines how these contribute to the relative differences in subjective wellbeing outcomes in ELSA and HRS. We control for other correlates of subjective wellbeing in old age, including gender, ethnicity, wealth, education and social support. Conclusion : Cross-country differences are important in enhancing our understanding of the subjective wellbeing determinants that are universal and those that are a result of national public policy. Keywords : Subjective wellbeing, Cross-country comparison, Ageing

SS24 421-S-4

CROSS NATIONAL COMPARISON OF WEALTH SATISFACTION, WEALTH AND WELLBEING AMONG OLDER ADULTS IN KOREA, THE UNITED STATES AND AUSTRALIA

Sarang KIM, Kerry A. SARGENT-COX, Davina J. FRENCH, Hal KENDIG, Kaarin J. ANSTEY (*Centre for Research on Ageing, Health and Wellbeing, The Australian National University, Australia*)

Introduction : The positive relationship between wealth and wellbeing has received considerable attention over the last three decades. However, little is known about how the significance of wealth for the health and wellbeing of older adults may vary across societies. Furthermore, researchers tend to focus mainly on income rather than other aspects of financial resources even though older adults often rely on fixed income, particularly after retirement. **Method :** Using data from the Household, Income and Labour Dynamics in Australia (HILDA) survey (N=1,431), the Health and Retirement Study (HRS) in the United States of America (USA; N=4,687), and the Korean Longitudinal Study of Ageing (KLoSA; N=5,447), this exploratory cross-national study examined the relationship between wealth satisfaction and objective wealth and wellbeing (measured as self-rated health and life satisfaction) among older Australians, Americans and Koreans (50+ years). **Results :** Regression analyses showed that wealth satisfaction was associated with wellbeing over and above monetary wealth in all three countries. The relationship between monetary wealth and self-rated health was larger for the US than Australian and Korean samples, while the additional contribution of wealth satisfaction to life satisfaction was larger for the Korean than the Australian and US samples. **Conclusion :** These findings are discussed in terms of the cultural and economic differences between these countries, particularly as they affect older persons. **Keywords :** Subjective wellbeing, Wealth

SS24 422-S

HEALTH LITERACY AND ITS IMPACT ON THE LIVES OF OLDER ADULTS: IMPLICATIONS FOR INTERVENTION, PRACTICE, AND POLICY

SS24 422-S-1

HEALTH LITERACY AMONG ENGLISH-AS-A-SECOND-LANGUAGE KOREAN IMMIGRANT ELDERS

Hee Yun LEE, Mihwa LEE (*School of Social Work, University of Minnesota, Twin Cities, USA*)

Introduction : This study investigates levels of health literacy and factors predicting health literacy among older Korean immigrants. **Method :** A total of 208 elderly Korean American immigrants residing in New York City were recruited. Chew et al.'s 16-item health literacy screening scale was employed. Ordinary least squares (OLS) regression analysis was used. **Results :** Based on the scale used, the overall health literacy level was found to be low; more than 60% of the participants were found to be at the inadequate (31.7%) or marginal (29.8%) level. Those with inadequate health literacy struggled with understanding written health care information and filling out medical forms. English proficiency was found to be the most significant predictor of health literacy, followed by education. **Conclusion :** This study highlights the urgent need for health literacy interventions for older Korean American Immigrants. Health care professionals should be aware of low level of health literacy of older immigrants, specifically those who cannot speak English well and have low level of education. Cultural competency training and patient-centered care approach should be provided for those who work with immigrant older patients. **Keywords :** Health literacy, older Korean immigrants, patient-centered care, cultural competency

SS24 422-S-2

PREDICTING HEALTH LITERACY AMONG OLDER KOREAN ADULTS: FINDINGS FROM ANDERSEN'S HEALTH BEHAVIOR MODEL

Byunghyun PARK¹, Youngsun KIM², Songsik CHOI¹, Hee Yun LEE³ (*1. School of Social Work, Pusan National University, Korea;*

2. School of Social Work, Yonsei University, Korea; 3. School of Social Work, University of Minnesota, Twin Cities, USA)

Introduction : Health literacy has been considered to be a critical factor impacting health and mental health disparity. Although health literacy has been evidenced for health disparity among older adults, there is a dearth of empirical research on this topic. This study aims to investigate levels of health literacy and factors predicting health literacy among Korean older adults. **Method :** This study adopts the Andersen's Behavioral Model. A total of 507 Korean American immigrants residing in Korea were recruited. Chew et al.'s 16-item health literacy screening scale was employed. Ordinary least squares (OLS) regression analysis was used. **Results :** The overall health literacy level was found to be low; more than 60% of the participants were found to be at the inadequate (31.7%) or marginal (29.8%) level. Those with inadequate health literacy struggled with understanding written health care information and filling out medical forms. Being female and having lower level of modesty were significant factors for having higher level of health literacy among predisposing factors. Of enabling factors, English proficiency, education, and having a primary physician were found to be significant predictors of health literacy, followed by education. None of the need factors were found to be significant. **Conclusion :** This study highlights the urgent need for health literacy interventions for older Korean adults. Cultural competency training for health professionals and a patient-centered communication approach would reduce health disparity in this vulnerable population with limited health literacy. **Keywords :** Health literacy, Andersen's Behavioral Model, health disparity

SS24 422-S-3

SUNLIGHT EXPOSURE BEHAVIOR AND HEALTH LITERACY AMONG OLDER ADULTS IN HONG KONG

Angela Yee Man LEUNG¹, Mike Kwun Ting CHEUNG², Sophia Siu Chee CHAN¹ (*1. School of Nursing, Li Ka Shing Faculty of Medicine, The University of Hong Kong, China; 2. Centre on Research and Advocacy, The Hong Kong Society for Rehabilitation, China*)

Introduction : Suffering from vitamin D deficiency is common among older adults in Hong Kong, but many of them are reluctant to expose to sunlight. Little is known about the reason of this behavior and how health literacy (HL) is related to this behavior. This study aims to examine the relationship between HL and sunlight exposure behavior, and to identify factors mediating the relationship. **Method :** This is a cross-sectional study conducted in 7 local community centers and 23 residential care homes from May 2011 to January 2012. Path analysis was used to investigate the relationships among the variables of interest. **Results :** Among the 648 older adults surveyed, half of them had inadequate HL and 57% had less than 15-minute sunlight exposure per day in the last 7 days. HL was shown to have direct relationship with the respondents' sunlight exposure (direct effect = 0.075) and an indirect relationship through their knowledge about vitamin D (KVD) and their attitude towards sunlight exposure (ATSE) (indirect effect = 0.015). **Conclusion :** The findings implied that purely improving older adults' KVD or changing their ATSE may not help to rectify their behavior in sunlight exposure. On the contrary, HL seems to play a relative important role in behavior change. **Keywords :** health literacy, vitamin D

SS24 422-S-4

HEALTH LITERACY TRAINING FOR HEALTH CARE PROFESSIONALS: A SYSTEMATIC REVIEW

Nan XIA, Angela Yee Man LEUNG (*School of Nursing, Li Ka Shing*

Faculty of Medicine, The University of Hong Kong, China)

Introduction : Healthcare provider-patient communication could be interfered by the misunderstanding of individuals' health literacy (HL) by healthcare providers. The purpose of this systematic review is to identify the characteristics of effective training in HL and examine the outcomes of these trainings to healthcare providers. **Method :** A search in the online databases, including PubMed, Ovid, and CINAHL, was conducted. The following keywords: nurse, doctor, healthcare provider, healthcare professional, medical student, nursing student, health literacy, training, education, and professional development were used. **Results :** A total of 13 articles were retrieved and were included in the analysis. The reviewed articles illustrated the efforts made to enhance healthcare providers' concern about patients' health literacy. Most of the health literacy training programs (n=8) were conducted to health professional trainees, including medical students, nursing students, dietetics students, and pharmacy students. Another five training programs were held for healthcare practitioners. Face-to-face training was the major method to conduct health literacy training, and evaluation of the effectiveness of health literacy training were mostly surveys before and after the training. **Conclusion :** There is an urgent need to refine the contents of health literacy training. Appropriate design of evaluation such as randomized controlled trial could be used in future studies. **Keywords :** health literacy, training, systematic review

SS24 423-S

CREATIVITY AND LEISURE IN ASIAN SOCIETIES: AN INTERDISCIPLINARY AND LIFESPAN APPROACH

SS24 423-S-1

CREATIVITY & LEISURE: AN ACTIVITY AND ENGAGEMENT PERSPECTIVE

Anna N. HUI (*Applied Social Studies, City University of Hong Kong, Hong Kong*)

Introduction : The purpose of the present study is to investigate that elderly actively or passively engage in art and creative activities will facilitate their quality of life (QoL). It is hypothesized that the awareness of elder's creative values, included: intention determinants of creativity, creative self-efficacy, perceived reward for creativity in society are intrinsic motivators to art and creative activities and also contributing to improve elderly QoL. **Method :** Participants included 439 Chinese participants from 17 elderly day centers across different districts in Hong Kong SAR. Participants completed a questionnaire with assistance from trained researchers. The questionnaire consisted of subjective norm of creativity (4 items), creative intention (2 items), perceived reward for creativity in society (8 items), creative self-efficacy (3 items), quality of life (21 items), passive participation in creative and cultural activities (3 items), and active participation in creative and cultural activities (5 items). **Results :** Reliabilities analyses had indicated that all the scales were reliable. Significant correlations were found between participation in creative and cultural activities and various dimensions of QoL, creative self-efficacy and QoL. Multiple regression analyses had shown that active participation, creative self-efficacy and subjective norm of creativity were significant predictors of the achievement-recognition dimension of QoL, explaining 34% of the variance. Creative self-efficacy and perceived reward for creativity significantly predicted the dimension of subjective wellbeing and interpersonal relation, explaining 10% of the variance. **Conclusion :** Engagement of healthy individuals in creative and cultural activities in their leisure can significantly enhance the quality of life in older adulthood. **Keywords :** Creativity,

Participation, Quality of Life

SS24 423-S-2

CREATIVITY & LEISURE: A CULTURAL-PHILOSOPHICAL PERSPECTIVE

Yuh-cheng FAN (*Leisure Management, Minghsin University of Science & Technology, Taiwan*)

Introduction : In life, we accumulate experience, express our creativity, to solve problems and improve our lives. The accumulation of our expression of creativity results in our culture. Under the leisure condition, creative ability emerges, thus culture develops. This paper aims to provide the relationship between creativity and leisure from the cultural-philosophical perspective and the theories in leisure studies. **Method :** The concept of leisure has deep roots in both Eastern and Western traditional thoughts. Western scholars usually trace back their discussions to Aristotle, and Eastern scholars to the concept of xiaoyao in Zhuangzi. Also Josef Pieper's *Musse* has been considered a classic in leisure studies. This Paper starts with literature analysis of this three thinkers and then to summarize the modern definitions of leisure, creativity and culture, before attempting to investigate the relationship between creativity and culture from the three perspectives of time, activity and experience. **Results :** In this paper, I also stress that viewpoints of leisure, selection of leisure activities, and leisure experiences vary according to cultural contexts. The essence of leisure is to use your free time to engage in activities for it's own sake, in order to enjoy a meaningful way of life. Also leisure is a condition most conducive to the expression of creativity, both individual and collective. **Conclusion :** From the viewpoint of leisure, we see people of societies with different cultural backgrounds setting times differently preferable, having partiality for different activities, expecting different experiences. Thus cultural communities manifest creativities differently and lead to special features of cultural development and achievement. **Keywords :** Creativity and culture; concept of leisure; intercultural studies

SS24 423-S-3

CREATIVITY & LEISURE: AN AESTHETIC AND ARTISTIC PERSPECTIVE - GRANDPA GRANDMA MEMORY BOXES

Evelyna LIANG (*Founder, Art for All, Hong Kong*)

Introduction : Since 2010, with the support of 'i-dArt' of Tung Wah Group of Hospitals, artists from 'Art for All' has started a multi-disciplinary arts group to engage and interact with a batch of elderly with visual impairment or dementia through different art media, multi-sensory activities and games. **Method :** This group of senior citizen is over 85 years old on average. Their work might seem naive and their craftsmanship might be unpolished. However, with a closer look, the works conceal secrets deep within. **Results :** From passive observers, the participatory activities encouraged the elderly to devote and reassume their autonomy and decision-making power. Their perseverance and open-mindedness have deeply touched us. Visual impairment did not hinder their passion to create. Although they cannot see clearly, with their understanding from the past and under the fun and encouraging ambience of the group, they have created large paintings, embellished some gorgeous outfits and even taken portraits for one another. The elderly can express their personal, cultural and spiritual experiences through acts of creation, through which they can also regain their value and respect. Multi-sensory art activities stimulating sight, touch, hearing, taste and even smell reignite and recall the joy of living, through which the memories of the elderly can be revived. **Conclusion :** Creativity not only can motivate us, it also brings people together and enrich relationships. The ability

to create is man's greatest power. It is our legacy. It is a blessing for the elderly to live their lives freely and contently. Keywords : Art participation, dementia, creativity, community

SS24 423-S-4

LEISURE AND CREATIVITY - SOCIAL PARTICIPATORY PERSPECTIVE

Elaine Suk Ching AU LIU¹, Constance CHING² (1. *Department of Applied Social Studies, City University of Hong Kong, Hong Kong*; 2. *Department of Applied Studies, City-Youth Empowerment Project, City University of Hong Kong, Hong Kong*)

Introduction : With the advance of industrialization, non-work time has increased overtime. One of the social concerns that have arisen was that leisure may be unsatisfactory or of sub-standard quality. Method : Operating from a non-obligatory and non-credit-bearing model to ensure that the voluntary operational value is synonymous to the leisure theoretical construct, City-Youth Empowerment Project encourages youth to engage their leisure in meaningful social participation. Since leisure activity has also been found to be an influential determinant of successful aging, the elderly home visit service is a social participation that crisscrosses the youth and the elderly, past and present, history and future. Results : The creative design of this home visit service allows youth to learn through the conventional "serving" role (providing assistance in daily living), it also provides a platform for the elderly to be the role of the "well of wisdom" to pass on life experiences, personal narratives, and hopes for younger generations instead of the passive role only to be served and helped. Conclusion : Overtime, the elderly have creatively found ways to express their gratitude and to participate more proactively. The social interaction borne out of this service promotes feelings of self-esteem while mediating loneliness and isolation for the elderly, and the participatory role provides a continuity of social role so they can experience competence and recognition (Zimmer & Lin, 1996). In addition, creative arts elements are also utilized with volunteers to specifically process their views on the aging process, relationship with elderly family members, and issues on death and dying. Keywords : volunteer, youth, elderly, social participation, creativity, leisure

SS24 424-S

TECHNOLOGY AND AGING: RECENT ADVANCES IN GERMAN-SPEAKING COUNTRIES

SS24 424-S-1

FALL DETECTION WITH BODY-WORN SENSORS: A SYSTEMATIC REVIEW

Clemens BECKER (*Departement of Clinical Gerontology, Robert-Bosch Hospital, Germany*)

Introduction : Falls in older people remain a major public health challenge. Body-worn sensors are needed to improve the understanding of the underlying mechanisms and kinematics of falls. The aim of this systematic review is to assemble, extract and critically discuss published information on studies focusing on study-, reporting- and technical characteristics. Method : The exploration of public accessible electronic literature databases on fall detection with body-worn sensors identified a collection of 96 records (33 journal articles, 60 conference proceedings and 3 project reports) published between 1998 and 2012. Information was extracted into a custom-built data form by independent reviewers and processed via SPSS. Results : Main findings were the lack of agreement in most of the considered domains (study-, reporting- and technical characteristics) as well as a substantial lack of real-world fall recordings. A methodological pitfall

in not using an established fall definition was given in most articles. The sensor types and technical specifications of the devices varied considerably between studies. Conclusion : Limited methodological agreement in sensor-based fall detection studies using body-worn sensors was identified. A published evidence-base for existing commercially available fall detection devices is still missing. A consensus process of research groups worldwide on fundamental questions including, e.g., fall reporting guidelines for incident verification, a shared fall definition, and a shared fall detection concept is hence needed. Keywords : Fall detection, body-worn, sensor

SS24 424-S-2

TECHNOLOGY ACCEPTANCE IN GERMANY: INSIGHTS INTO THE ROLE OF PSYCHOLOGICAL FACTORS, TECHNOLOGY GENERATION, AND THE TYPE OF DEVICE

Katrin CLASSEN¹, Frank OSWALD², Hans-werner WAHL¹ (1. *Department of Psychological Ageing Research, Heidelberg University, Germany*; 2. *Faculty of Educational Sciences, Goethe University Frankfurt/Main, Germany*)

Introduction : Although technology is increasingly seen as a means to support successful aging, little is known about the role of psychological factors influencing older adults' technology acceptance. Method : The project aimed at identifying differences in technology acceptance between two technology generations. The so-called "mechanical generation" (MG, born before 1939) and the "household appliance generation" (HAG, born 1939-1951) were compared in terms of technology usage intention and acceptance, i.e. perceived usefulness and perceived ease of use. The internationally renowned Technology Acceptance Model (TAM; version 3) in a modified version was applied as theoretical background. Study participants were 357 German persons aged 60 to 99 (MG N=165; HAG N=192). Three technological devices, representing the areas of care and prevention (sensor mat), household management (robotic vacuum cleaner), and leisure time (video game console) were selected. Results : No technology generation differences appeared in terms of the perceived usefulness. However, members of the HAG rated the three devices as easier to use. Device specific analyses showed that particularly the robotic vacuum cleaner and even more the video game console were evaluated differently in ease of use. Regarding the role of psychological factors, neuroticism as well as obsolescence were related positively to the usefulness of prevention technology as well as to the intention to use it. On the other hand they came along with lower perceived ease of use ratings of technologies requiring more interaction on the part of the user. Conclusion : Findings underscore that psychological aspects and affiliation to technology generations are both important to explain variability in technology acceptance. Keywords : technology acceptance, technology generations, type of device

SS24 424-S-3

TECHNOLOGICAL SUPPORT TO PROVISION OF INCLUSIVENESS OF TRANSPORT SYSTEMS

Ralf RISSER, Daniel BELL (*Factum Chaloupka & Risser OG, Austria*)

Introduction : During the years following the Commission's first White Paper on a common transport policy, personal mobility has increased and is now seen as an acquired right. It is an ethical and economic necessity that future transport systems and public spaces be designed to be inclusive, so that all segments of the ageing European populations can be safely mobile and lead autonomous lives as long as possible. Method : The EU project CONSOL aims at advancing

knowledge by combining current knowledge on mobility behaviour and needs and traffic safety with newest evidence from basic research, e.g., gender studies, social gerontology and findings on health and functionality with age, while also covering some less well-known elderly safety issues such as single-pedestrian and non-crash public transport accidents. Austrian projects such as Ways2Navigate, TellMeTheWay and TrafficCheck provide state of the art knowledge on basic user needs and usability issues regarding intelligent transport and information systems and evaluate the potential of utilizing these systems to support older road users. Results : Results of current national and international research projects provide insight in both mobility behaviour and traffic safety and the potential of technological innovations to increase the inclusiveness and usability of modern transport systems. Conclusion : A combination of basic research on traffic safety and mobility behaviour of older road users and development and evaluation of modern intelligent transport systems have the potential of utilizing these systems to support older road users in participating in traffic systems and prolong an active lifestyle
Keywords : road safety, its

SS24 424-S-4
E-INCLUSION OF SENIORS: INTEGRATION AND PARTICIPATION VIA WEB 2.0

Jonathan BENETT (*Social Work, University of Applied Sciences Bern, Switzerland*)

No Abstract

SS24 424-S-5
TECHNOLOGY AND AGING: RECENT ADVANCES IN GERMAN-SPEAKING COUNTRIES: THE PERSPECTIVE OF SWITZERLAND

Stefanie BECKER¹, Luigi CORRADO² (*1. Institute on Ageing, Swiss Society of Gerontology Bern University of Applied Sciences, Switzerland; 2. Corporate Departments of FSASD help and home care foundation, President of the Association Romande de Biotelevigilance (ARBT), Switzerland*)

Introduction : Research and development as well as the use of Gerontechnology in the practice of everyday life is a very actual topic in Switzerland at the moment. In 2011 experts and organisations have founded the 'Association of Biotelevigilance in Western Switzerland (ARBT)' in order to promote the development and use of technology for old age. These activities resulted in the foundation of a working group within the Swiss Society of Gerontology. Method : Parallel to that development in the field of everyday life, European research programs like AAL (Ambient Assisted Living) or the European Research Programm 6/7 have stimulated research aiming at the development and implementation of products, services and systems mainly based on information and communication technology (ICT) and web 2.0. For Swiss enterprises this provides new possibilities for the development and distribution of new products. Also the improvement of the efficiency and the effectivity of the patient-centered health system is an important aim. Results : However research of the working group 'Gerontechnology' showed that there are a lot of technological solutions for the promotion of everyday life of senior citizens, their (caring) family members and for professional nursing and health care already available, but less of them are known and even lesser expand into everyday life. Conclusion : Since Switzerland has a lot of highly qualified research groups as well as powerful enterprises, the future development in Gerontechnology has to focus in bringing them more closely together with the end-users' needs in order to really unfold their full potential. Keywords :

Technology, Ageing, Swiss, Future

SS24 426-C
BODY WEIGHT MANAGEMENT IN OLDER ADULTS: IS IT RELEVANT AND SAFE?

SS24 426-C-1
OBESITY IN ELDERLY: METABOLIC ALTERATIONS AND THEIR CLINICAL IMPACTS

Eleonor RIESCO (*Kinanthropology, Faculty of Physical Education and Sport, University of Sherbrooke, Research Centre on Aging, Canada*)

Introduction : Currently, 7% of the world's population is over 65 years of age and it is projected to rise to 12% by 2030. During the past 30 years, the proportion of older adults who are obese has doubled. Hence, the problem of obesity in the elderly is becoming of greater relevance and will require more attention. However, the World Health Organization guidelines for identification and treatment of obesity have not given specific details about how to define obesity in the elderly. Method : Although the number of studies showing that obesity is not a trivial condition in older individuals has increased over the past few years, there are still some inconsistencies about the harmful effect of obesity in this population. In fact, while the negative impact of high BMI on all-cause mortality is now well recognized, this relationship tends to be weaker in the elderly. Mortality is not the only end point that should be considered in the evaluation of the impact of obesity on health profile in older individuals. Results : Several studies have demonstrated that obesity, more particularly visceral fat, is related to metabolic alterations even in "older" older individuals. Actually, metabolic syndrome is more common in older than in younger individuals leading to an increased risk of chronic diseases such as type 2 diabetes or cardiovascular diseases. Finally, obesity in old age seems to be associated with disabilities which have been shown to be predictive of earlier mortality. According to these different findings, weight management in elderly should receive more attention. Keywords : Obesity prevalence, metabolic alteration, elderly

SS24 426-C-2
CONSEQUENCES OF OBESITY IN OLDER INDIVIDUALS

Martin BROCHU (*Kinanthropology, University of Sherbrooke/Research Centre on Aging-Health and Social Services Centre, Canada*)

There is a high prevalence of obesity in older adults up to age of 80 yrs in North America. While women generally gain body weight during menopause transition, men tend to accumulate an excess of fat mass earlier in life. In consequences, an increasing proportion of older adults are now obese. It is widely recognized that obesity is associated with metabolic syndrome, Type 2 diabetes, and cardiovascular diseases in younger populations. However, recent evidences show that in older adults, obesity is also related to metabolic diseases, Alzheimer disease, functional impairment and decreased quality of life. Based on the current scientific literature, studies are needed to better understand the impact of obesity in elderly in order to prevent or better treat obesity-related complications. Keywords : Obesity, Body composition, Body fat distribution

SS24 426-C-3
HOW TO DEFINE IDEAL BODY WEIGHT IN OLDER ADULTS: THE PERSPECTIVE OF A GERIATRICIAN

Daniel M. TESSIER (*Medicine, University of Sherbrooke, Research Center on Aging, Sherbrooke Geriatric University Institute, Canada*)

Introduction : With the aging phenomenon, body composition changes are characterized by a diminution in muscle mass, an increase in adipose tissue with central distribution and frequently, a diminished time spent in exertion. In the elderly, obesity may be associated with an increased risk of metabolic syndrome but in contrast, a diminished risk of hip fracture. Weight gain later in lifetime (after the 50's) and some genetic factors are determinant of the intensity of the metabolic syndrome. **Method :** Reasons for weight loss in the older population may be to obtain a better glycemic, blood pressure and lipid control, decrease weight bearing on lower limb in presence of arthrosis and in some cases, for cosmetic reasons. However weight loss by caloric restriction without a regular exercise program may result in muscle mass loss. Randomized studies on weight loss in older diabetic individuals have shown that the initial benefit in terms of weight diminution and improvement in HbA1c is frequently lost in the year following the end of the study protocol. Weight loss may also be unintentional and undesirable: this phenomenon has been associated with frailty, co morbidities and an increased risk of mortality. **Conclusion :** In conclusion, the decision to suggest weight loss in the elderly should be made on an individual basis. Frailty status and life expectancy should be taken in account in this situation. **Keywords :** Ideal body weight, elderly, geriatrics

SS24 426-C-4

THE ROLE OF PHYSICAL ACTIVITY IN BODY WEIGHT MANAGEMENT OF OLDER ADULTS

Isabelle J. DIONNE (*Faculte d'education physique et sportive, University of Sherbrooke, Canada*)

In "young" older adults, including post-menopausal women, it seems that the reason for recommending to lose weight is mostly related to metabolic outcomes whereas later on, the impact of obesity may be more important on physical functioning. Overall, it is the quality of life and physical dependence that is at stake in obese older adults. The controversy about recommending weight loss in older adults is highly present in the "older" older population. Indeed, studies rarely examined individuals older than 65 yrs of age with only a few going above 60 yrs old. In these, however, it is usually observed that combining diet and exercise provides the most positive outcomes such as a decrease in metabolic risk factors and improvement in physical function. **Method :** This presentation will overview the literature pertaining to the impact of exercise in body weight management in older adults and provide some recommendations in terms of exercise modalities. **Keywords :** Exercise, physical activity, weight loss, weight management

SS24 427-C

CARDIOVASCULAR RISK FACTORS, FRAILTY AND DEMENTIA: IS THERE A LINK?

SS24 427-C-1

ASSOCIATION BETWEEN CARDIOVASCULAR RISK FACTORS AND FRAILTY

Julio Cesar MORIGUTI (*Internal Medicine, University of Sao Paulo, Brazil*)

Association between cardiovascular risk factors and frailty Frailty is described as a syndrome of loss of muscle mass and strength, energy and exercise tolerance, and decreased physiologic reserve with associated increased vulnerability to physiologic stressors, such as acute illness, hospitalization, or extreme heat or cold. Hypertension, diabetes, obesity and dyslipidemia could be associated with frailty in older persons. This presentation plan to show this possible association.

Frailty occurs more frequently in patients with metabolic syndrome, which is also increasing their risk for atherosclerosis. Advanced atherosclerosis is associated with arterial stiffness and vascular calcification. The relationship between atherosclerosis and frailty could be in the aetiopathogenesis of the atherosclerosis since as a state of chronic inflammation, may result in a catabolic state with its systemic manifestations contributing to frailty. High body mass index (BMI) and obesity are associated with frailty phenotype indicators. High BMI is also associated with increasing likelihood of a prefrail state, although overweight status is least associated with frailty. Frailty was associated with diabetes mellitus, congestive heart failure, peripheral vascular occlusive disease, and osteoarthritis. Coronary artery disease, although significantly associated with prefrail status, was not associated with frail status. Because obesity is also associated with diabetes mellitus, atherosclerotic diseases, and osteoarthritis, it was hypothesized that these diseases would confound the association between the frailty syndrome and obesity, but contrary to this hypothesis, obesity was related independently to prefrail and frail status, even after controlling for comorbid chronic diseases. **Keywords:** Frailty, Older person

SS24 427-C-2

HYPERTENSION AND COGNITIVE DECLINE

Nereida Kc LIMA (*Internal Medicine, School of Medicine of Ribeirao Preto - University of Sao Paulo, Brazil*)

Introduction : Both high blood pressure and cognitive decline have been associated with frailty syndrome. We have recently showed that frail individuals had higher blood pressure than pre-frails and non-frails of same age. Being frail is also a risk for worse cognitive performance. **Method :** It will be discussed the potential effect of hypertension in cognitive decline and the influence of the treatment in preventing dementia. **Results :** There are many evidences that hypertension is associated with increased risk of Alzheimer's disease and other dementias, especially vascular. Wysocki et al. evaluated very elderly individuals and found hypertension as a risk factor for more rapid progression of loss of cognition in individuals with mild cognitive impairment. Another study only found hypertension in middle age associated with higher risk of dementia in old age, finding even a possible protective role of mild hypertension on cognition in older individuals. Regarding the role of treating hypertension in the prevention of dementia, the results are more contradictory. In the study Syst-Eur, with use of calcium channel antagonist versus placebo, there was a 55% reduction in the risk of Alzheimer's, vascular or mixed dementia. In PROGRESS study, there was a 19% reduction of dementia secondary to stroke, using inhibitor of angiotensin converting enzyme with or without diuretics. However, SHEP, SCOPE and HYVET-COG studies showed no reduction in risk of dementia. **Conclusion :** There is evidence that uncontrolled hypertension may promote cognitive decline, perhaps contributing to the development of the syndrome of frailty; **Keywords :** hypertension, dementia, frailty

SS24 427-C-3

(PRE)DIABETES, BRAIN AGING AND COGNITION

Jarbas De Sa RORIZ-FILHO (*Clinical Medicine, Federal University of Ceara, Brazil*)

Introduction : Persons who have diabetes mellitus (DM) tend to have an accelerated aging process that places them at greater risk for developing frailty at an earlier age. Cognitive dysfunction and dementia have recently been proven to be common (and underrecognized) complications of DM. **Method :** Revision of evidence-based literature. **Results :** Several studies have evidenced that

phenotypes associated with obesity and/or alterations on insulin homeostasis are at increased risk for developing cognitive decline and dementia, including not only vascular dementia, but also Alzheimer's disease (AD). These phenotypes include prediabetes, diabetes, and the metabolic syndrome. Diabetes is also important risk factor for decreased performance in several neuropsychological functions. Chronic hyperglycemia and hyperinsulinemia primarily stimulates the formation of Advanced Glucose Endproducts (AGEs), which leads to an overproduction of Reactive Oxygen Species (ROS). Protein glycation and increased oxidative stress are the two main mechanisms involved in biological aging, both being also probably related to the etiopathogeny of AD. AD patients were found to have lower than normal cerebrospinal fluid levels of insulin. Besides its traditional glucoregulatory importance, insulin has significant neurotrophic properties in the brain. Hyperglycemia and hyperinsulinemia seems to accelerate brain aging also by inducing tau hyperphosphorylation and amyloid oligomerization, as well as by leading to widespread brain microangiopathy. Diabetes subjects are more prone to develop earlier leukoaraiosis (White Matter High-Intensity Lesions - WMHL). Conclusion : People with more advanced WMHL are at increased risk for executive dysfunction, cognitive impairment and dementia. Clinical phenotypes associated with insulin resistance possibly represent true clinical models for brain and systemic aging. Keywords: diabetes, brain aging, cognition

SS24 427-C-4

FRAILITY AND COGNITIVE IMPAIRMENT

Eduardo FERRIOLLI (*Internal Medicine, School of Medicine of Ribeirao Preto at University of Sao Paulo, Brazil*)

Introduction : Although cognitive deficit is not included among the diagnostic criteria of the frailty syndrome as proposed by Fried et al., many recent works have shown association between frailty and cognitive decline. Macuco et al. (2012) have shown, in 384 Brazilian community dwelling older people, worse performance on the Mini-Mental State Examination (MMSE) between those with the frailty phenotype. The pathophysiology of frailty has, indeed, common pathways with well described risk factors for cognitive decline, including inflammation, hormonal factors, malnourishment and low energy expenditure. Method : We have examined the association between frailty, as defined by Fried's criteria, with cognitive performance measured by the MMSE and the function of different systems, including the variability of heart rate and blood pressure, body composition and spontaneous physical activity. Results : Frail older persons have impaired function of the different systems studied, and worse performance on the MMSE. Direct association between worse cognition and isolated system dysfunction was not observed. Conclusion : Low cognitive performance may become a relevant marker of frailty and vice-versa. More studies are needed to verify if cognitive decline itself is involved in the pathogenesis of frailty, to improve knowledge about the common pathogenesis of both syndromes and to evaluate potential interventions. Keywords : Frailty, Cognition, function

SS24 507-R

THE IMPACT OF DIFFERENT FINANCING MODELS ON CARE INTEGRATION

SS24 507-R-2

THE NEED FOR NEW FUNDING MODELS AND INTEGRATED DELIVERY - A KPMG STUDY ACROSS 14 COUNTRIES

Wai Chiong LOKE¹, Nigel EDWARDS² (*1. Global Healthcare*

Practice, KPMG, Singapore; 2. Global Healthcare Practice, KPMG, United Kingdom)

Introduction : In rapidly ageing societies, governments increasingly cannot afford to bear the extra costs needed to provide long-term care, and insurers' premiums are often prohibitively high due to risks involved. An over-emphasis upon costly residential care in certain markets distances the elderly from their communities, stretches budgets and falsely raises the expectation that the state can care for all its older citizens. Clearly new models of funding and delivery are needed. Method : As part of a study commissioned by Lien Foundation to help inform and stimulate the global dialogue on elder and long term care. interviews were conducted with 46 thought leaders, professionals and practitioners in the aged care sector from 14 selected countries, during August and September 2012. The individuals chosen to participate in were selected through KPMG's professional network and recommendations from experts in long term care. Interviewees were asked to offer their views on new funding and delivery models. A team of in-house researchers collected supporting background data. Results : Ideas being tested include savings programs, long-term insurance, equity release, personal budgets. The focus of medical care needs to shift from providing a 'cure at all costs' to managing a gradual decline, and emphasize on wellbeing and happiness as important outcomes. Many are rebalancing their long term care systems by shifting from institutional to home and community care. Conclusion : Different countries are considering various mixes of public and private models to ensure sustainability, yet the scale of the challenge calls for innovative approaches to both funding and care delivery. Keywords : funding, delivery, elderly care, sustainability, innovation, cost

SS24 507-R-3

PRELIMINARY EXPERIENCE PILOTING COMMERCIAL LTC INSURANCE IN CHINA

Ninie WANG (*LTC Research & Training Center, Gerontological Society of China, China*)

Introduction : Without any social policy framework for funding of long-term care services, China had no choice but to encourage commercial insurance companies to offer innovative products that may help its aging population pay for most needed care services. While the impact of such a model would need further study, preliminary feedback has been unclear whether partnership in the private sector can improve care integration. Method : A team of insurers, policy makers and care providers gathered to manage pilot project design, execution and analysis; phone calls, group interviews were carried out to assess the impact. Results : Early stage pilots of commercial insurance offerings seem to do very little to the existing system of healthcare, there are still a lot of blind spots in long-term care education, unavailability of care services especially for the eldest seniors today. There is limited incentive for public and private healthcare providers to integrate their efforts. Conclusion : In a country like China were traditional healthcare system is more resilient to change and new services are yet to be developed, financing model may have an important role in shaping how care is provided to the ageing population. Without strong government commitment, the private sector would find it very difficult to drive the changes necessary for modern care integration. Keywords : care integration, commercial insurance

SS24 508-R

WHAT HAVE WE LEARNED FROM EACH OTHER IN LONG TERM CARE POLICY DEVELOPMENT? COMPARATIVE

ANALYSIS OF STABILIZED SYSTEMS IN GERMANY AND JAPAN AND THE CONTINUING SEARCH FOR SOLUTIONS IN ENGLAND AND AUSTRALIA

SS24 508-R-1

PROMOTING ACCESS, QUALITY AND COST CONTAINMENT IN JAPAN'S LONG TERM CARE SYSTEM: CURRENT POLICIES AND FUTURE DIRECTIONS

Takako TSUTSUI¹, Naoko MURAMATSU² (1. Department of Health and Social Services, National Institute of Public Health, Japan; 2. Division of Community Health Sciences, School of Public Health, University of Illinois, USA)

Introduction : Japan implemented a mandatory social long-term care insurance (LTCI) system in 2000. Quickly accepted in the Japanese society, this LTCI system has developed into one of the largest LTC programs in the world. However, it faces a number of challenges as Japan experiences rapid population aging and economic recessions. Method : The goals of this presentation are to review the contexts and key aspects of Japan's LTCI system over its 12-year history, and to discuss its emerging opportunities and challenges as it implements the 2012 law "Comprehensive Reform of Social Security and Tax". Results : The LTCI implementation of 2000 has significantly improved LTC access by making every Japanese person aged 65+ eligible for benefits (institutional and community-based services for 10% co-pays; but not cash benefits) based strictly on physical and mental disability. The 2006 LTCI revision emphasized prevention-oriented LTC and introduced measures to contain costs. The Community-based Integrated Care, established in 2012, is intended to develop a community-based comprehensive care system that integrates medical and long-term care. Central in this system are municipalities (local governments), which have played essential roles as LTCI insurers since 2000. Japan precedes other countries in becoming a 'super-aging' society and implementing this innovate community-based integrated health care system. Conclusion : Maintaining LTC access, containing costs, and promoting care quality through this integrated care system constitute major opportunities and challenges of the LTCI system in Japan. Keywords : Japan's long-term care insurance system, long-term care insurance act revision, community-based integrated care

SS24 508-R-2

LONG-TERM CARE REFORM IN ENGLAND: A LONG AND VERY UNFINISHED STORY

Caroline GLENDINNING (Social Policy Research Unit, University of York, United Kingdom)

Introduction : Debates about reforming the funding of long-term social care in England have a long history; over the last 2 decades there has been a succession of reports and proposals from organisations representing older people, think tanks and official government-appointed Commissions. All agree that present arrangements are inadequate, inequitable and unsustainable, particularly given evidence of current extensive under-funding and anticipated future demographic pressures. Meanwhile, major reforms have taken place in the organisation and delivery of long-term care, as all older people eligible for publicly funded care at home are now offered a personal budget with which to arrange their own personalised support. This represents a further step in the individualisation and marketisation of care services. Method : The paper describes these developments and then reflects on the failure of successive governments to achieve funding reform. Results : The paper suggests a number of possible cultural and organisational barriers to reform, including the fragmentation of

responsibilities for long-term care between different sectors and levels of government; cultural traditions and legacies; and the difficult political challenges of raising (additional) revenue to fund care, particularly during a global recession. Conclusion : The paper argues that the fragmentation resulting from the introduction and elaboration of markets in care services has actually increased the political and institutional barriers to achieving funding reform. Keywords : long-term, care; funding; markets

SS24 508-R-3

AGED CARE REFORM IN AUSTRALIA: ARE WE THERE YET?

Anna HOWE (Consultant Gerontologist, Australia)

Introduction : Australia has seen major reforms in aged care around every 15 years since the mid 1980s when the current aged care system was established by the Labour Government's Aged Care Reform Strategy. Shortfalls in capital funding for residential care emerged by the early 1990s, but radical reforms proposed by the Liberal Government met with strong opposition and were substantially modified in the Aged Care Act 1997. After returning to office in 2007, the Labour Government commissioned an Inquiry into Care of Older Australians by the Productivity Commission and a major reform agenda Living Longer, Living Better was announced in April 2012. Measures proposed to address capital funding relied on increased user payments and there is continuing doubt as to whether they will generate adequate capital funding. Method : This paper examines the causes and consequences of successive failures to resolve this area, including default options that have developed by way of adjustments to target levels of provision and growth of assisted living accommodation. Results : Notwithstanding progress in containing residential care and expanding community care, the current 'narrow band' policy approach has given insufficient attention to the impact of external factors, including the wider investment context and structural changes in the aged care sector. This approach contrasts with the implementation of a National Disability Insurance Scheme to cover the younger population. Conclusion : The paper argues that similar 'broad band' solutions are required in aged care, but the prospects for further reform appear uncertain in the foreseeable political and economic climate. Keywords : insurance, capital funding

SS24 509-R

INNOVATIVE WOUND MANAGEMENT FOR OLDER PEOPLE: CHALLENGING CURRENT PARADIGMS AND PRACTICES

SS24 509-R-1

CHANGING POLICY AND PRACTICE TO EMPOWER OLDER PEOPLE WITH CHRONIC WOUNDS

Ellie LINDSAY (Independent Specialist Practitioner and Visiting Fellow, Queensland University of Technology, The Lindsay Leg Club Foundation, United Kingdom)

Introduction : The experience of diagnosis, psychological support and attitudes from both professionals and society represent critical chapters in the lives of people living with chronic wounds. Patients living with a heavily exuding leg ulcer often experience social stigma, lack of wellbeing and poor quality of life as leg ulcers can be unsightly, painful and malodorous. Method : The Leg Club model was developed to address limitations of existing mechanisms, such as home visits and leg ulcer clinics, in meeting patients' needs. It provides a highly cost effective framework in which, in a departure from the traditional nurse dominant / patient passive relationship, patients are educated and empowered to take ownership of their care and make informed

decisions regarding treatment. Results : Research has demonstrated significant improvements in a range of 'quality of life' indicators, including healing rates, pain levels, mobility, and morale, for patients attending Leg Clubs. A patient (member) satisfaction questionnaire has identified high levels of satisfaction with all aspects of the model, in particular their enhanced ability to understand and cope with their chronic lower limb problems. Conclusion : The introduction of Leg Clubs has demonstrated positive changes achieved through the commitment and motivation of nurses and communities working together. A partnership that delivers true patient empowerment, enabling members to become expert partners in the process of their care, de-stigmatising their condition, encouraging informed behaviours and facilitating the sharing of sensitive and/or emotional concerns in a supportive empathic environment. Keywords : Patient Empowerment, Wellbeing

SS24 509-R-2

CLINICAL AND COST EFFECTIVENESS OF SPECIALISED AND INTERDISCIPLINARY CHRONIC WOUND SERVICES

Helen EDWARDS (*School of Nursing, Queensland University of Technology, Australia*)

Introduction : The purpose of this study was to evaluate clinical and cost effectiveness of service pathways to facilitate implementation of evidence-based management for older people with chronic leg ulcers. Method : 104 patients were recruited for a 12 month retrospective study of usual service pathways and outcomes related to healing of leg ulcers. 70 of these patients were then recruited for a follow up prospective study of 24 weeks to examine outcomes of health services pathways specifically designed to implement evidence-based wound management. Results : The retrospective analysis revealed that patients accessed an inconsistent variety of health providers, received wound care from up to eight different health care disciplines/organisations during one ulcer period and that implementation of evidence was low. The prospective analysis demonstrated that improved healing outcomes were associated with implementation of evidence based guidelines. The economic analysis showed there was a significant incremental cost saving for weekly costs of care between the retrospective (usual care) and prospective (evidenced-based) phases of the study. Conclusion : Findings indicated there were no consistent service pathways for these patients and that once they received care services following evidenced based guidelines healing rates improved. Further, these pathways reduced costs to both the patients and service providers. Implementing optimal care pathways for this population will improve healing outcomes and result in more efficient use of health resources. Keywords : wound management; effective pathways; reduced costs

SS24 509-R-3

EFFECTIVENESS AND ECONOMIC EFFICIENCY OF A NOVEL PROTOCOL FOR PREVENTING THE PROGRESSION OF DEEP TISSUE INJURY

Hiroki SANADA (*Dept. Gerontol Nurs/Wound Care Manage, The University of Tokyo, Japan*)

Introduction : Pressure ulcer occurs as a result of prolonged pressure and shear. Deep tissue injury (DTI) is now considered as a new type of pressure ulcer resulting from deterioration of skin from deeper tissue. To prevent the progression of DTI, a translational research strategy was introduced. Method : To establish the novel protocol for preventing the progression of DTI, we elucidate its molecular mechanism, developed ultrasonographic assessment technique and a treatment device using vibration. Finally, management protocol for

DTI using these techniques are established and evaluated by controlled clinical trial. Results : Insufficient blood flow which contributes to the upregulation of hypoxia inducible factor-1 and its related downstream gene expression for degrading the deep tissues was the main cause of DTI progression. Ultrasound with high frequency probe can detect the structural and functional changes in deeper tissue and the vibration therapy can rescue these abnormal changes by modulating the blood flow. These attempts are beneficial for managing the DTI in laboratory base. Based on this basic research approach, we then established a management protocol for DTI using these techniques and trained the nurses, who are specialized in pressure ulcer management, that is a wound, ostomy, and continence (WOC) nurses to perform this protocol. We proved the high effectiveness and economic efficiency of the protocol for preventing the progression of DTI by clinical trial. Conclusion : From these studies in basic, clinical, and policy sciences, I will provide some suggestions for future perspective on nursing research in wound management field. Keywords : Pressure ulcer, Translational research, Clinical trial

SS24 510-R

THE ROAD MAP FOR EUROPEAN AGEING RESEARCH: ADDRESSING THE GRAND CHALLENGE OF AGEING

SS24 510-R-1

THE EUROPEAN AGEING RESEARCH ROAD MAP

Alan WALKER (*Sociological Studies, University of Sheffield, United Kingdom*)

This paper provides an overview of the Road Map for Ageing Research in Europe. It begins by summarising the demographic context of advanced ageing and the European policy goal of increasing healthy life expectancy. Then it describes the process by which the Road Map was designed, which involved a novel inclusive and iterative series of workshops comprising scientists and research end users. The fundamental principles underpinning the Road Map are explained, as is the core purpose to promote active ageing across the life course. Finally the four key implementation assumptions are discussed and justified: infrastructure, capacity building, user involvement and knowledge exchange. Keywords : Active Ageing, Road Map, Knowledge Exchange

SS24 510-R-2

REDUCING UNHEALTHY LIFE YEARS, FROM CELL TO SOCIETY

Carol JAGGER¹, Stuart PARKER² (*1. Institute for Ageing and Health, Newcastle University, United Kingdom; 2. Sheffield Institute for Studies on Ageing, University of Sheffield, United Kingdom*)

Introduction : The challenge of our ageing populations is to maximise the quality of the extra years of life and reduce the number of unhealthy life years. The new science of ageing requires a more multidisciplinary approach with a recognition that interventions for healthy ageing may be targeted anywhere within the spectrum from cell through individual to neighbourhood and society. Method : Seven major research priority themes were identified by FUTURAGE and explained in the Road Map according to a standard format covering: the significance of the theme; the fundamental insights necessary for future research; an overview of current research knowledge; and the main priority topics within the general theme. This presentation focuses on the 'Healthy Ageing For More Life In Years' theme, highlighting its breadth. Results : Seven challenges related to future European ageing research were identified in the area of healthy ageing for more life in years: Healthy ageing and frailty; understanding the

process and defining the concepts; Organising and delivering interventions for health promotion; The ageing process and early markers of ill-health; Modelling links between disease and functioning over the lifecourse; Effectiveness and efficiency of clinical and social care; Education and lifelong learning; Environmental conditions for ageing well. Examples of specific research questions within these will be given. Conclusion : Understanding the risk factors and optimal interventions at a cellular, individual and societal level to reduce unhealthy life years is crucial to inform policy makers on planning for ageing populations and to maximize the health of our growing older populations. Keywords : healthy life years

SS24 510-R-3

HOME AND AWAY: HOW PHYSICAL-SPATIAL-TECHNICAL ENVIRONMENTS CAN SUPPORT HEALTHY AGEING

Hans-Werner WAHL¹, Susanne IWARSSON², Torbjorn SVENSSON²
(1. Department of Psychological Aging Research, Heidelberg University, Germany; 2. Department of Health Sciences, Lund University, Sweden)

Introduction : Environmental gerontology takes the interrelations between ageing persons and their physical-spatial-technical (P-S-T) environments serious. A key issue of the field is how P-S-T environments shape outcomes of healthy ageing such as functional competence, well-being or participation. Method : The platform for the ageing and environment component of the FUTURAGE roadmap has been laid by two 2-day workshop events in Heidelberg (Germany) and Lund (Sweden), including a wide scope of scholars from various disciplines, who came from 20 countries from all over Europe as well as the U.S. and Japan. Workshop outcomes were discussed, synthesised and refined at various meetings including stakeholders and a range of ageing scientists. They were also backed by a world-wide scanning and analysis of existing research agendas and a compilation of core publications in the area. Results : Based on these analytic activities, overarching issues have been identified as critical in the area such as: development of new theory; method development and refinement; implementation; and young scholar promotion. Identified research themes for a roadmap on ageing and the environment include the need for differentiated knowledge on the enabling and constraining characteristics of P-S-T environments at the home and community level and the better understanding of the meanings of P-S-T environments for older adults' lives. Conclusion : It is our hope that the environmental gerontology component of the roadmap will nurture respective ageing research in Europe at large and lead to a better balance of considering the ageing person and his/her P-S-T environment, at the theory, method, empirical, and implementation level. Keywords : environmental gerontology, person-environment fit processes, healthy ageing

SS24 510-R-4

INCREASING INCLUSION AND PARTICIPATION OF THE YOUNG-OLD AND THE OLD-OLD

Francesco BARBABELLA¹, Carlos CHIATTI², Giovanni LAMURA¹
(1. Centre for Socio-Economic Research on Ageing, INRCA - National Institute of Health and Science on Aging, Italy; 2. Scientific Direction, INRCA - National Institute of Health and Science on Aging, Italy)

Introduction : While healthy ageing represents a pre-condition for older people to enjoy a longer and disability-free life span, quality of life in older age is dependent also upon society's ability to grant individuals social protection, as well as to promote their active participation in the community until the very end of life. These issues

constitute a challenge for current and future research on ageing. Method : A 2-year consultation process with over 70 international experts was conducted within the FUTURAGE work-stream focussed on social and economic resources in ageing research. This process allowed a comprehensive discussion on most relevant social participation and protection issues involving scientists, users' organisations, policy makers and other stakeholders, which led to a set of specific research priorities. Results : The main challenges identified for future ageing research concerning social participation are: ageism; migration; life-long learning; digital divide; spirituality; volunteering; mobility and accessibility; discrimination in the labour market; consumption and access to products and services; and work-life balance. As for social protection, the following core issues have been spotted: sustainability; support to informal carers (also through ICT-based services); efficiency; access to care; cost-effectiveness and quality of interventions; initiatives to improve intergenerational solidarity. Conclusion : Societal challenges related to social participation and sustainability of social protection systems clearly urge new actions in research, practices and policy on ageing. In particular, the identification of over-arching issues, barriers and enablers contributes to strengthen scientific research in the field, as well as to support policy makers in improving social life and quality of life of older people. Keywords : social participation, social protection, research priorities

SS24 513-S

MIGRANT CARE WORKERS IN THE CONTEXT OF AN AGEING WORLD

SS24 513-S-1

MIGRANT CARE WORKERS AS ETHNIC 'OTHERS': A STUDY OF CROSS-CULTURAL INTERACTION IN SWEDISH ELDERLY CARE

Sandra TORRES¹, Jonas LINDBLOM² (1. Dept. of Sociology, Uppsala University, Sweden; 2. Dept of Sociology, Malardalen University, Sweden)

Introduction : The globalization of international migration is changing how we think about aging and old age across Europe. In some parts of Europe we are seeing increased ethnic and cultural diversity among elderly care recipients and elderly care providers. This is the case in Sweden, a society known for both a relative generous and inclusive elderly care regime and a relatively welcoming migration regime. In this presentation we explore what Swedish daily newspaper articles focusing on elderly care have written about migrant care workers. Method : The project upon which this presentation is based uses quantitative as well as qualitative content analysis of all daily newspaper articles published by one of the Swedish major national daily newspapers between 1995 and 2011 (n=123). Results : The results show that the newspaper articles analyzed construct elderly care recipients with migrant backgrounds as a challenge to the elderly care sector. In contrast, they construct care workers with the same backgrounds as an asset to the sector. The media representations in focus here are, in other words, characterized by an ambivalent understanding of who migrants are and what migrant backgrounds mean to the sector's capacity to deliver high quality and user-friendly care. Conclusion : By exploring how the position of migrantship is constructed in newspaper articles focusing on elderly care, this presentation will argue that migrant care workers are constructed by the media as ethnic 'Others' in relation to elderly care. This is the case despite the fact that these workers are regarded as assets to the sector. Keywords : migration, elderly care

SS24 513-S-2

OPPORTUNITIES AND CHALLENGES OF MIGRANT WORK IN THE ITALIAN LONG-TERM CARE SYSTEM

Francesco BARBABELLA¹, Mirko DI ROSA¹, Carlos Juan CHIATTI², Maria Gabriella MELCHIORRE¹, Giovanni LAMURA³ (1. Centre for Socio-Economic Research on Ageing, INRCA - Italian National Institute of Health and Science on Ageing, Italy; 2. Scientific Direction, INRCA - Italian National Institute of Health and Science on Ageing, Italy; 3. Centre for Socio-Economic Research on Ageing, INRCA, Italy)

Introduction : Italy is one of the most aged countries in the world, with a longstanding tradition of family care of the dependent elderly. In recent times, however, Italy has been witnessing in-depth social and cultural changes, which have been negatively impacting on informal care provision. In addition, the public long-term care (LTC) system highly relies on cash-for-care schemes for supporting older people, whereas “formal” care services are characterised by weak coverage and intensity. This situation has led to a remarkable increase in the private employment of migrant care workers (MCWs), whose number increased by four times in the last two decades. Method : An overview of MCWs phenomenon in Italy is provided through the analysis of empirical data retrieved by available official sources at national level, as well as by results from own surveys conducted in recent years on large samples of MCWs. Results : The following opportunities and challenges concerning MCWs’ employment in the LTC sector were identified: improve MCW’s capacity to deliver quality care; reduce the risk of elder abuse and neglect and of meeting MCWs’ own care needs; increase their social integration in destination countries and reduce “care drain” in sending countries; and how to improve stakeholders’ involvement for a better exchange of good practices and more effective policy measures. Conclusion : In these years, privately-employed MCWs have contributed to change the traditional Italian “family care model” into a new “migrant-in-the-family care model”. However, the issue concerning the sustainability of this model within the Italian LTC system in the future is still open. Keywords : migrant care workers, informal care, Italy

SS24 513-S-3

THE ROLE OF FOREIGN DOMESTIC HELPERS IN FAMILY CARE OF THE ELDERLY IN HONG KONG

Alice Ming Lin CHONG (Department of Applied Social Studies, City University of Hong Kong, China)

Introduction : There is an increasing trend in Hong Kong to employ foreign domestic helpers (FDHs) to take care of frail community-dwelling older people who require assistance in their daily living due to physical and/or cognitive impairments. The number of foreign domestic helpers rose from 21,500 in 1982 to 292,473 in June 2011; the majority came from Indonesia (50%) and the Philippines (47.5%) (Ng, 2011). Yet, the impacts of FDHs on family care of frail elders are under-researched. The main objective of the study is to identify similarities and differences in views among the frail elders, their family caregivers and the FDHs on the expectations on caregiving tasks and on decision-making issues relating to caregiving. The reasons behind the differences in views and in practice would also be explored. Method : A qualitative study using indepth interview will be conducted with a total of 10 matched triads of frail elders, their primary family caregivers and the FDHs. Results : The interviews will be audio-recorded with respondents’ consent. The content of the interviews will be transcribed and analysed. Conclusion : This study will provide much needed and indepth information and recommendations to plan relevant training and support to the FDHs,

and to design community care services in order to enable the frail older people to age-in-place with the support of the FDHs. Keywords : Foreign domestic helper, ageing-in-place, family care

SS24 513-S-4

A STUDY OF FAMILY MEMBERS COMPLIMENTED BY MIGRANT CARE WORKERS IN SINGAPOREAN AGEING FAMILIES

Kalyani Kirtikar MEHTA (School of Human Development and Social Services, SIM University, Singapore)

Introduction : The first part of the paper focuses on the national policies relating to migrant care workers in Singapore. As Singapore is ageing rapidly in terms of its demographic profile, and there are manpower shortages both in the community as well as in institutional settings, the reliance on migrant care workers has been on the increase. The government has to design policies that protect both the care recipients i.e. the elderly as well as the caregivers i.e. the migrant care workers. The second part of the paper discusses the findings from a recent qualitative study on intergenerational relationships, and caregiving for older people in the family context. The experience of foreign domestic workers as care workers in the family is captured in the study by interviews with 15 foreign domestic workers. Method : A total of 73 qualitative interviews were conducted (30 with adult children caregivers, 28 grandchildren and 15 domestic workers). In addition, two interviews were conducted with spousal caregivers. The interviews were transcribed verbatim, coded and analysed. Central themes that emerged were identified and the experiences of the migrant care workers were examined. Results : The paper analyses the triangulation of caregiving functions by various family members and migrant care workers. The central themes that emerged are: a. Intergenerational dynamics of caregiving b. Stress experienced by family and paid caregivers c. Meaning of caregiving. Conclusion : Caregiving for an older relative within the family impacts upon each generation differently. Implications for future research and policies conclude the paper. Keywords : Care workers, Asia

SS24 514-S

MANAGING AN AGEING WORKFORCE IN EASTERN AND WESTERN CONTEXTS: A COMPARATIVE AND INTERNATIONAL PERSPECTIVE

SS24 514-S-1

INSTITUTIONAL CONDITIONS FOR THE SUCCESSFUL REVERSAL OF EARLY EXIT IN EAST AND WEST: A COMPARISON OF OECD COUNTRIES

Dirk HOFACKER (Mannheim Centre for European Social Research, University of Mannheim, Germany)

Introduction : In previous decades, early exit from work had turned into a widespread political practice as a consequence of expanding welfare states programs and economic challenges. However, in view of foreseeable demographic ageing, policy makers increasingly consider this trend as being financially unsustainable. Since the 1990s, an international consensus to reverse early exit from work has emerged. Recent reform measures have encompassed diverse political programs, ranging from raising retirement ages and eliminating attractive early retirement options to improving the conditions for older workers’ continued employment, e.g. through measures of life-long learning or other active labour market policies. Yet, hitherto it remains unclear which institutional configurations can be considered as viable pathways to a successful reversal of early exit. Method : Against this background, our paper will provide a comparative

historical analysis of the cross-national variations in the institutionalization of early exit regimes and its recent reversal using macro-indicators on early exit trends and time-variant qualitative information on accompanying institutional arrangements. Results : Using Qualitative Comparative Analysis (fuzzysset/QCA) that allows modeling the configurational interaction of social policy and economic institutions, the paper seeks to delineate the differences in welfare state 'pull' factors, economic 'push' factors and employment-supportive 'stay' policies that have led to early exit from work and more recently contributed to its reversal. Conclusion : By contrasting institutional configurations and their labour market outcomes in Japan and Korea with those in other OECD countries, the paper will contribute to the debate about 'Eastern' and 'Western' approaches to deal with the implications of demographic and labour market changes. Keywords : Retirement, institutions, QCA, international comparison

SS24 514-S-2

WORKING BEYOND RETIREMENT AGE IN CONTRASTING INSTITUTIONAL SYSTEMS- PERSPECTIVES FROM JAPAN AND THE UK

Heike SCHRODER (*Institute for Human Resource Management, Vienna University of Economics and Business, Austria*)

Introduction : Throughout the developed world, real retirement ages are rising. Previous research suggests that this trend is partly a result of changes to state pension systems and employment laws closing off early retirement routes and facilitating work beyond pension age. State institutional systems including welfare and business systems can help shape workers' career and retirement trajectories. In this paper, we explore the experiences of older workers in the productivist/developmentalist system of Japan and the liberal-residual/regulatory system of the UK. Method : This paper is based on semi-structured interview data drawn from 45 older workers from each of the two countries (90 older workers in total). Results : Based on a life course framework for analysing the relationship between institution and human agency, we explore the ways in which individuals in these two different countries make decisions as to how and when to retire. Our questions include how they navigate their way towards preferred retirement outcomes; and the impact of employers, government and family on their retirement outcomes. Conclusion : We argue that, while the Japanese institutional system offers some older workers clear routes to phased retirement, the UK system offers workers more scope for tailoring their retirements. Keywords : retirement; Britain; Japan

SS24 514-S-3

OPPORTUNITIES TO RECEIVE AND PROVIDE TRAINING: EMPLOYEE OUTCOMES IN THE UNITED STATES AND JAPAN

Jungui LEE¹, Marcie PITT-CATSOUPHES², Tay K MCNAMARA³, Haenim LEE³ (*1. Division of Policy Research, Gyeonggido Family & Women's Research Institute, Korea; 2. The Sloan Center on Aging and Work, Boston College, USA*)

Introduction : The body of literature investigating job training in cross-national perspective has grown. However, while some scholars suggest that mentoring others is associated with increasing work outcomes, less than adequate attention has been paid to the relative importance of opportunities to provide training, as opposed to opportunities to receive training, across two or more cultures. In this paper, we examine the effects of two aspects of training (i.e., opportunities to improve skills and opportunities to teach others) on three employee outcomes (i.e., job satisfaction, work engagement, and organizational

commitment) in the United States and Japan. Method : We used a subsample drawn from the 2009-2010 Generations of Talent study. Separate models were estimated for respondents in the United States and Japan and random-effects models were used to adjust for nesting within sites. Results : Our results showed the importance of opportunities to improve skills for job satisfaction, organizational commitment, and work engagement, and highlighted the importance of opportunities to teach or train others for job satisfaction and work engagement. However, the relationship between opportunities to teach or train others and organizational commitment was not significant. Conclusion : Contrary to concerns that older adults value training less than their younger counterparts, our results suggest that workers of all ages value both training given and received. In addition, our results underline the importance of designing training programs that allow employees to both receive and provide training. Keywords : training, employee outcomes, job satisfaction, organizational commitment, work engagement

SS24 514-S-4

BARRIERS AND OPPORTUNITIES TO PHASED RETIREMENT IN THE UK AND HONG KONG- WHAT THE CAPABILITIES APPROACH CAN TELL US

Matthew FLYNN (*Centre for Research into the Older Workforce, Business School, United Kingdom*)

Introduction : This paper explores the degree of choice older workers feel that they have over how and when they retire in the UK and Hong Kong. In both contexts, government has sought to encourage employers to create phased retirement opportunities using a light regulatory approach, and both labour markets are flexible. As such, just as careers are protean, retirement outcomes are also highly individualised and dependent on the worker's ability to negotiate preferred retirement outcomes. Using Sen's Capability Approach, we explore the barriers and opportunities older workers face by way of their organisations' HR policies; managers' attitudes; and their own retirement planning; as well as how they use their own skills and commodities to construct their retirements. Method : Data is derived from a survey of older workers on work and retirement planning in four case study organisations (two public and two private in both countries); as well as data gathered through four action research "innovation groups" of older workers within the case studies organised to identify ways to facilitate phased retirement. Results : The study investigated the different approaches which older workers used in both countries to use their skills sets, or commodities, to advocate for workplace adjustments which would facilitate extended working lives. While cultural factors played a role, institutional factors such as employment law and, in the case of the UK, the abolition of the default retirement age, shape older workers' retirement planning. Conclusion : The study showed the impact of external factors at the macro, meso and individual level on older workers' agency. Keywords : older workers, cross-cultural

SS24 514-S-5

OLDER WORKERS' EMPLOYMENT AND SOCIAL SECURITY: A COMPARATIVE STUDY BETWEEN CHINA AND GERMANY

Yuxin LI¹, Dirk HOFACKER², Wing-kit CHAN³ (*1. Institute for Employment Research, University of Warwick, United Kingdom; 2. MZES, Mannheim University, Germany; 3. School of Government, Sun Yat-sen University, China*)

Introduction : Although China currently still has a young population, it is aging fast. The country is running the risk of "getting old before

rich". Consequently, the period within which organisations can prepare for ageing workforces is much shorter. The need for a more fully covered and effective social security system and more employment opportunities for older people becomes pressing. Method : The main characteristics of the demographic structure, employment pattern of older workers and social security system between China and Germany will be compared both quantitatively and qualitatively. Using two comparable surveys from China and Europe, the China Health and Retirement Longitudinal Study (CHARLS) and the German Ageing Study (DEAS), we will compare the employment structure, retirement pattern, pension and elderly care in these two countries. Results : Differences in terms of institutional context, traditional value and relevant historical facts related to ageing will also be discussed in order to elaborate how China can learn from Germany to transfer to an active ageing society with proper social protection. Conclusion : We argue that Germany's social security policies and its experience in changing from encouraging early retirement to active ageing can have applicability in a Chinese context with practical significance. Keywords : older workers, employment, social security

SS24 515-S
EXCHANGES OF SUPPORT WITHIN FAMILIES ACROSS THE LIFE SPAN

SS24 515-S-1
INTERGENERATIONAL EXCHANGES ACROSS THREE GENERATIONS

Karen FINGERMAN¹, Steven ZARIT² (1. *Human Development & Family Sciences, UT Austin, USA*; 2. *Human Development and Family Studies, Pennsylvania State university, USA*)

Introduction : Few studies have considered the middle-aged adults' support of multiple family members. This talk describes the multidimensional intergenerational support model. We consider elements that distinguish support between parents and grown children. In Western countries, support typically flows from parent to adult children. Factors that elicit parental support include everyday needs, other family members (e.g., babysitting), and assistance to further future achievements. Offspring also support parents support, and filial motivation to provide support includes beliefs about obligation and personal rewards derived from supporting parents, in addition to parental perceived needs or reciprocating support received. Method : This study involves data from the Family Exchanges Study, an ongoing longitudinal study of over 600 three generation families in the US including middle-aged adults, their aging parents, and their grown children (overall N = approximately 1700). The first wave took place in 2008 and a second wave is ongoing in 2013. Findings illustrate the complexities of support to multiple generations. Results : Multilevel models revealed that most participants provided more support to the average grown child than to the average parent. Yet, a proportion of the sample reversed this pattern, providing more support to parents. Mediation models revealed that middle-aged adults provided greater support to offspring because they viewed offspring as more important than parents and offspring had greater everyday needs (e.g., being a student, not married). Parental disability accounted for greater support to parents in some families. Conclusion : Discussion focuses on complexities in patterns of support across three generations. Keywords: intergenerational support

SS24 515-S-2
SANDWICHED GENERATION? INTERGENERATIONAL EXCHANGES OF KOREAN BABY-BOOMERS

Gyounghae HAN (*Child Development & Family Studies, Seoul*

National University, Korea)

No Abstract

SS24 515-S-3
WHY FAMILY MEMBERS VIEW INTERGENERATIONAL EXCHANGES DIFFERENTLY: EFFECTS OF GENERATION, BELIEFS AND QUALITY OF RELATIONSHIPS

Kyungmin KIM¹, Steven H. ZARIT¹, Kira S. BIRDITT², Karen L. FINGERMAN³ (1. *Department of Human Development and Family Studies, The Pennsylvania State University, USA*; 2. *Institute for Social Research, University of Michigan, USA*; 3. *Department of Human Development and Family Sciences, University of Texas, USA*)

Introduction : This study investigated how dyadic discrepancies in reports of support that parents and their adult offspring exchanged with one another vary within and between families. We examined what factors explain the within- and between-family variations of dyadic discrepancies. Method : Data from 929 parent-child dyads nested within 458 three-generation families were analyzed. Using multilevel models, we examined between-family factors (e.g., race, size of family, and average levels of family obligation and relationship quality) and within-family factors (e.g., generational position, gender composition, living arrangements, relative levels of family obligation and relationship quality) to explain variations in dyadic discrepancies. Results : There were substantial between-family differences as well as within-family differences in dyadic discrepancies in reports of support exchanges. For downward exchanges (from parent to child), both within-family factors and between-family factors revealed significant effects on the dyadic discrepancies. However, for upward exchanges (from child to parent), only within-family factors (e.g., gender composition, coresidence, parent's family obligation, and parent's and offspring's positive relationships) were significant. Conclusion : Although reporting discrepancies in support exchanges were mainly associated with dyad-specific characteristics, it also appears to be influenced by family emotional environments. Families with better relationships among family members tended to be more congruent in their perspectives about support given to offspring. Keywords : Intergenerational exchanges, Within-family differences, Between-family differences, Dyadic discrepancy

SS24 515-S-4
INTERDEPENDENT FAMILY LIVES OF MIDDLE-AGED COUPLES

Jeong Eun LEE (*Human Development and Family Studies, Penn State University, USA*)

Introduction : To date, most research on intergenerational help exchange has been almost exclusively based on wives' report on their help or intergenerational relationship with family. This study attempts to advance the current understanding of help exchanges through analysis of couple data examining the relationships and contributions of spouses who are exchanging help with their adult children. Method : The sample consisted of 197 couples from Family Exchange study, who had one or more children over the age of 18. Husband and wife independently completed telephone interviews that included measures of the help each gave to and received from their aging parents and adult children and their relationship with each other. Results : As expected, wives gave and received more support from adult children. Different patterns of exchanges of support husband and wife had with adult children was associated with marital satisfaction. Exchanges of each child also had implication on the couples' relationships with children such as ambivalence. Parental feelings of stress and rewards

moderated the association between helping offspring and parental ambivalence towards adult children. Conclusion : In conclusion, findings demonstrated the shared family experiences of middle-aged couples and the implications of involvement in the lives of adult children and spouse on individuals' well-being. Further this study underscores the importance of considering both spouses' perspectives in examining exchanges of support and relationship qualities between parents and adult children. Keywords : Dyadic analysis, couples, family support

SS24 517-B

MOLECULAR MECHANISMS LINKING ALZHEIMER'S DISEASE AND ITS NON-GENETIC RISK FACTORS - TOWARDS NOVEL THERAPEUTIC STRATEGIES

SS24 517-B-1

PATHOLOGICAL INTERACTION BETWEEN ALZHEIMER'S DISEASE AND DIABETES MELLITUS

Naoyuki SATO (*Clinical Gene Therapy, Geriatric Medicine, Osaka University, Japan*)

Introduction : Epidemiological studies suggest that diabetes mellitus increases the risk of onset of Alzheimer disease (AD). However, the underlying mechanisms have not been fully understood. Retrospective studies indicate that diabetes does not increase senile plaques. On the other hand, a Japanese cohort, Hisayama study suggested that insulin resistance in midlife increased the risk of development of senile plaques. Therefore, the aim of this study is to understand the mechanisms by which diabetes increase the risk of AD by dividing them into two phases; 1) before and 2) after the development of senile plaques. Method : 1) To test whether insulin resistance increases Abeta accumulation in the brain, we fed wild-type mice with a high-fat diet and measured the levels of Abeta in the brain. 2) To investigate the effects of diabetes on AD, we further analyzed the phenotypes of APP+ob/ob mice, which showed the increased cerebral amyloid angiopathy and impaired insulin signaling (Takeda, Sato, et al. Proc Natl Acad Sci U S A, 107, 7036-41, 2010), especially focusing on tau phosphorylation. Results : 1) Six months high fat diet increased Abeta40 in B6C mice brain. 2) 18 month old APP+ob/ob mice showed highly increased level of tau phosphorylation in the brain. Conclusion : Tau phosphorylation is increased by diabetes in APP mice, suggesting that Abeta is prerequisite, but insufficient to cause tau phosphorylation in vivo. Abeta accumulation, insulin signaling and tau phosphorylation might play essential roles in the pathological interaction between AD and diabetes. Keywords : Abeta, Insulin signal, tau

SS24 517-B-2

ROLE OF INFLAMMATION IN THE PATHOGENESIS OF ALZHEIMER'S DISEASE

Makoto HIGUCHI (*Molecular Imaging Center, National Institute of Radiological Sciences, Japan*)

Introduction : Accumulating evidence has supported mechanistic implication of microglial activation in the pathogenesis of Alzheimer's disease (AD), while key molecules regulating deleterious and protective microglial responses to the hallmark AD pathologies are largely unknown. We recently demonstrated the significance of 18-kDa translocator protein (TSPO) as a biomarker for detrimental microgliosis, and utilized two distinct microglial clones expressing TSPO at low and high level for identifying neurotoxic and neuroprotective neuroimmune systems. Method : Microglial clones were implanted in the hippocampus of amyloid precursor protein

transgenic mice, and amyloid β peptide (A β) deposition and TSPO-positive microgliosis were assessed by longitudinal neurimaging and then by postmortem immunohistochemistry. Results : Low TSPO expressor clone induced removal of A β aggregates by itself and by activating resident microglia in a TSPO-negative fashion, and enhanced production of brain-derived neurotrophic factor in host neurons. By contrast, implantation of high TSPO expressor clone accelerated A β amyloidosis. We also found that secretion of a proinflammatory chemokine, CCL-2, from high expressor was increased by 1,000 fold relative to low expressor. CCL-2 release from microglial culture was suppressed by co-treatment with TSPO ligand. Moreover, high TSPO expressor implant provoked upregulation of an isoenzyme of glytaminyl cyclase (isoQC) in neighboring glia. Since isoQC is known to catalyze conversion of A β and CCL-2 to more biostable forms, our result highlights parallel promotion of A β amyloidosis and deleterious microgliosis by a vicious cycle upregulating TSPO, CCL-2 and isoQC. Conclusion : The present findings provide evidence for contributions of microglia to enhancement and suppression of core AD pathologies via distinct signaling pathways. Keywords : Alzheimer's disease, Transgenic mouse, Microglia

SS24 517-B-3

AN EMERGING ROLE OF INSULIN RESISTANCE IN AMYLOID-BETA CASCADE HYPOTHESIS

Takeshi IKEUCHI (*Neurology, Brain Research Institute, Niigata University, Japan*)

Introduction : Alzheimer's disease (AD) is neuropathologically characterized by accumulation of extracellular amyloid-beta (Abeta) and intracellular phosphorylated tau. The question of how extracellular Abeta induces hyperphosphorylation of tau remains unanswered. Recent epidemiological studies have provided evidence that the insulin resistance associated with type 2 diabetes is a strong risk factor for AD; however, the underlying mechanisms are not fully understood. With these backgrounds, we attempt to address the role of insulin resistance in amyloid-beta cascade hypothesis associated with AD. Method : Neuroblastoma N2a cells were incubated in medium containing various concentrations of glucose (50 to 400 mg/dL) or high insulin (10 nM), and secreted Abeta was quantified under these conditions. We developed cell coculture system to assess the effect of extracellular Abeta at physiologically relevant levels secreted from donor cells on the phosphorylation of tau in recipient neuronal cells. Results : When cells were incubated in media containing high glucose or high insulin, the levels of secreted Abeta was markedly increased. Physiologically relevant levels of extracellular Abeta are sufficient to cause hyperphosphorylation of tau in primary culture neurons. The mechanism underlying the Abeta-induced tau hyperphosphorylation is mediated by the impaired insulin signal transduction because we demonstrated that the phosphorylation of Akt and GSK3beta upon insulin stimulation is less activated. Treating cells with the insulin-sensitizing drugs, PPARgamma agonists, attenuated the Abeta-induced hyperphosphorylation of tau. Conclusion : These findings suggest that insulin resistant may be implicated in the overproduction of Abeta and accelerating Abeta-induced hyperphosphorylation through impaired insulin signaling. Correcting insulin resistance in AD may offer a potential therapeutic approach. Keywords : Alzheimer disease, insulin signaling, insulin resistance

SS24 517-B-4

NEUROPATHOLOGIC ANALYSIS OF ALZHEIMER'S DISEASE AND RELATED DISORDERS

Shigeo MURAYAMA (*Neurology and Neuropathology, Tokyo*)

Metropolitan Geriatric Hospital and Institute of Gerontology, Japan)

Introduction : Neuropathological and clinical spectrum of age-associated cognitive decline forms continuous process and does not match disease- control paradigm. **Method :** Brain Bank for Aging Research (BBAR) Project combines clinical longitudinal follow ups and pathological extensive studies. Immunocytochemistry with anti-Abeta, phosphorylated tau, 3 repeat and 4 repeat tau isoforms, phosphorylated alpha- synuclein, phosphorylated TDP43 and ubiquitin antibodies were applied to all the cases registered to BBAR. Half of the brain was frozen for biochemical and molecular studies and apoE genotyping and RIN were determined. Peripheral autonomic nervous system (PANS) was also included in the regime of banking for alpha-synucleinopathy. **Results :** The project confirmed amyloid cascading hypothesis, role of apoE4 in enhanced deposition of Abeta, positive effect of aging on accumulation of all the abnormal proteins examined, and frequent multiple proteinopathy in aged brains. The project also confirmed Braak's dual hit hypothesis, elucidating that alpha-synucleinopathy in olfactory system is independent from that involving PANS and brain stem. **Conclusion :** Our study confirmed continuous and combined process of proteinopathy, reflecting age-related cognitive decline. BBAR resource may contribute to the study of human aging as a whole spectrum of continuous process from the standpoint of neurological disorders. **Keywords :** amyloid beta, tau, alpha- synuclein

SS24 518-S

A MULTI-DISCIPLINARY APPROACH TO PROMOTING LONGEVITY, HEALTHY AND SUCCESSFUL AGEING

SS24 518-S-1

WHO IS AT RISK FOR RISK? SOCIAL DETERMINANTS AND PREVENTIVE HEALTH BEHAVIOUR - THE CASE OF SINGAPORE

Paulin Tay STRAUGHAN (*Sociology, National University of Singapore, Singapore*)

Introduction : We will discuss the key social factors that contribute to variation in health screening behavior, and identify what facilitates successful ageing in a fast greying society. **Method :** This paper will draw information from a recently concluded large survey of a representative sample of 1500 Singaporeans aged 50-69. **Results :** Demographic factors continue to be important in differentiating preventive health behaviour in spite of community efforts to broadcast health prevention messages. **Conclusion :** Greater attention must be focused on address social inequalities to prevent entrenchment of disadvantages among the elderly population. **Keywords :** preventive health inequality

SS24 518-S-2

SOCIAL CAPITAL AND HEALTH SCREENING IN THE SINGAPOREAN ELDERLY

Joonmo SON (*Sociology, National University of Singapore, Singapore*)

Introduction : Social capital is a network-based resource that carries its own weight independently from economic capital and human capital. It is richly demonstrated in the literature that social capital is related to health outcomes at both individual and population levels. However, it has not been examined if it is associated with preventive health measures such as health screening. **Method :** position generator multiple regressions. **Results :** The multiple regression analyses based on a nationally representative sample in Singapore report that social

capital is significantly related to the number of health screenings for the whole sample. Further, social capital is related to the number of female-specific health screenings. Given that we dealt with elderly respondents, there was significant portion of the sample that did not have any social contacts (20% of the whole sample). The regression outcomes indicate that the elderly with no social capital are significantly less likely to get health screenings; and the same applies to female-specific screenings too. In addition, we also formed a separate social contact measure of medical professionals (doctors and nurses) from the position-generator. Having a doctor or a nurse in a social network significantly increased the chance of getting both general and female-specific health screenings. **Conclusion :** The study thus verifies that network-based social capital is a hidden mechanism that leads the Singaporean elderly to get health screenings controlling for other plausible confounders such as educational levels, income, or age. Comparative future studies are warranted to examine if this mechanism works in international contexts. **Keywords :** social capital; health screening

SS24 518-S-3

WHAT DOES SUCCESSFUL AGING REALLY MEAN FOR ASIA? THE PERCEPTION STRUCTURE OF "SUCCESSFUL AGING" IN THE SINGAPORE ELDERLY

Qiushi FENG (*Sociology, National University of Singapore, Singapore*)

Introduction : Current literature of successful aging is mostly based on Western societies, and the cultural varieties of this important notion come to be acknowledged in non-western contexts. This study focused on how successful aging is perceived by older adults in Singapore, a city county located in Asia. **Method :** The data were from a national survey in Singapore with interviewing 1,540 local residents aged 50 to 69. The respondent was asked to rate the importance of 12 specific standards used to judge "successful aging", all of which were coded based on extensive qualitative interviews from focus groups prior to the survey. Exploratory Factor Analysis was used to identify the perception structure of successful aging for local Singaporean of old age. Structural Equation Model was used to investigate the disparity of this perception structure across various sociodemographic subpopulations. **Results :** The results showed that three major perception domains of "successful aging" were adopted by old Singaporeans, namely personal health/economics, family relationship, and social relationship, with personal health/economics perceived as the most important one. We also found out that local elderly with spouse tended to emphasize the importance of family relationship in successful aging; education promotes acknowledgement of social relationship; and non-Chinese ethnicity was associated with more emphasis on both family and social relationship. **Conclusion :** In conclusion, the perception of successful aging in Singapore is featured by individual-based concerns, especially for the local Chinese elderly as the population majority. **Keywords :** successful aging. Singapore

SS24 518-S-4

SOCIAL DETERMINANTS OF HEALTHY AND SUCCESSFUL AGEING IN SEOUL

Eun Jin CHOI (*Health Policy Research Division, Korea Institute for Health and Social Affairs, Korea*)

Introduction : As the lifespan of the population has been extended, there has been increased burden of chronic diseases in Korea. The purpose of this study was to explore selected social determinants of successful aging in Seoul. **Method :** A household based, face to face interview survey was conducted for adults living in Seoul. A total of

1,203 representative sample of adults aged between 50 and 69 was surveyed in July and August in 2012, right after the official approval from IRB. The age group for this study included baby boomers in Korea as well. We had 70.7% female respondents and 29.3% male respondents. About 65% of the respondents reported that they were from outside of Seoul region. An SPSS 12.0.1 program was used for statistical analysis. Results : About one third of the respondents reported they face barriers for health screening. Overcoming barriers to health screening was positively related to increased physical activities. About 60% of the respondents had some social network of people with selected occupation, measured by the Treiman's Standard International Occupation Prestige Scale(SIOPS) and Ganzeboom et al's International Socio-Economic Index of Occupational Status(ISEI). Self-efficacy of getting regular health screening was significantly associated with the occupational prestige scores, successful aging, and life satisfaction. Conclusion : It is expected to give more attention to social capital in health promotion policy in Korea. It is suggested that government may incorporate and support informal social network in health promotion policy. Further research needs to get empirical evidence of social capital and healthy aging of the population in Korea. Keywords : healthy ageing, social capital

SS24 518-S-5

BETTER HEALTH BUT WORSE HEALTH BEHAVIOR? THE DILEMMA OF CHINA

Zhihong ZHEN (*Sociology, Shanghai University, China*)

Introduction : According to studies from the western societies, trends of functional health in later life generally show some gradual improvement in recent decades; meanwhile published reports on leisure-time physical activity of older adults reveal that old people of the western countries tend to be more active in recent years over time. However fewer studies were done to examine these two trends together, especially in a developing society. Method : The data were from the Chinese Longitudinal Healthy Longevity Survey (CLHLS: 2002, 2005, and 2008). Activity of Daily Living (ADL) was used for measuring disability. Regular exercise was used to examine leisure-time physical activity. The major independent variable was survey year. Random-effect models were applied to estimate trends over time, referenced to 1998. Results : The results showed that the Chinese elderly was less likely to be ADL disabled from 2002 to 2008; however the odds of engaging regular exercise also declined in the same period. Conclusion : We found out a unique pattern in China that old people are becoming physically healthier but more sedentary in daily life in the recent ten years. Keywords : China, disability

SS24 518-S-6

CONTEXTUALIZATION OF HEALTH INEQUALITY IN ASIAN SOCIETIES: A COMPARISON BETWEEN SINGAPORE AND KOREA

Minhye KIM (*Sociology, National University of Singapore, Singapore*)

Introduction : Although health inequality has been broadly investigated, most of the published studies are on North American and European societies. To better contextualize the conditions and mechanisms of health inequality among societies with different historical trajectories, this paper aims to examine the similarities and differences of health status between two Asian urban populations - the middle-aged and the young elderly (50 - 69 yrs.) in Singapore and Korea. Method : Two nationally representative data will be used (n=1,559 in Singapore; and n=1,203 in Korea) to address four research hypotheses. Results : First, the morbidity of main chronic diseases

(e.g. cancer, cardiovascular disease, hypertension, and diabetes) is higher among Korean males than Singaporean males. We suggest that this is due to the Korean economy's reliance on heavy industries, which is physically strenuous. On the other hand, the economy in Singapore is driven by knowledge-based, non-manual sectors such as finance. Second, depressive symptoms are more prevalent in Korea than in Singapore considering Korea has higher suicide rate and Singapore has lower tendency of emotional expressiveness. Third, an inquiry into the social determinants of health difference reveals that ethnicity plays the most prominent role in Singapore. However, education is the salient determinant in Korea. We posit that these respective determinants are indicative of the socio-political cleavages. Lastly, the effect of income on health disparities is higher in Singapore than Korea as Singapore has higher level of income inequality and less social welfare system. Conclusion : Health status is closely associated with historical development, culture, political cleavage, and welfare system. Keywords : health inequality, comparative analysis, Asian societies

SS24 518-S-7

SOCIOECONOMIC STATUS AND ITS ASSOCIATION WITH COGNITIVE IMPAIRMENT AMONGST COMMUNITY-DWELLING ELDERLY IN A LOW SOCIO-ECONOMIC NEIGHBORHOOD IN SINGAPORE

Gerald Choon-huat KOH¹, Liang-en WEE² (*1. Saw Swee Hock School of Public Health, National University of Singapore, Singapore; 2. Yong Loo Lin School of Medicine, National University of Singapore, Singapore*)

Introduction : Neighborhood socioeconomic-status (SES) can affect cognitive function. We assessed cognitive function and cognitive impairment amongst community-dwelling elderly in a multi-ethnic urban low-SES Asian neighborhood, comparing against a higher-SES neighborhood. Method : The study population involved all residents aged ≥ 60 years in two housing estates comprising owner-occupied housing (higher-SES) and rental-flats (low-SES) in Singapore in 2012. Cognitive-impairment was defined as < 24 on the Mini-Mental-State-Examination. Demographic/clinical details were collected via questionnaire. Multilevel linear regression was used to evaluate factors associated with cognitive function, while multilevel logistic regression determined predictors of cognitive impairment. Results : Participation was 61.4% (558/909). Cognitive-impairment was 26.2% (104/397) in the low-SES community and 16.1% (26/161) in the higher-SES community. After adjusting for other sociodemographic variables, living in a low-SES community was independently associated with poorer cognitive function ($\beta = -1.41$, S.D=0.58, $p < 0.01$) and cognitive impairment (adjusted odds ratio, aOR=5.13, CI=1.98-13.34). Amongst cognitively-impaired in the low-SES community, 96.2% (100/104) were newly-detected. Conclusion : Living in a low-SES community independently associated with cognitive-impairment in an urban Asian society. Keywords : socioeconomic-status, cognitive impairment, elderly

SS24 519-S

GRANDPARENTS AS A RESERVE ARMY: GLOBAL PERSPECTIVES ON THE ROLE OF GRANDPARENTS IN DUAL-EARNER FAMILIES

SS24 519-S-1

TO CARE OR NOT TO CARE: GRANDPARENTS MEETING DEMANDS OF GRANDCHILD CARE IN SINGAPORE

Leng Leng THANG (*Japanese Studies, National University of Singapore, Singapore*)

Introduction : With the norm in dual-working couple families, grandparents are generally regarded as suitable caregivers for their grandchildren in Singapore. On the one hand, this seems to parallel the 'traditional' role expected of grandparents, while on the other hand, they may not be roles entirely accepted by today's grandparents. This paper explores the voices of the grandparents and their responses to the grandchild-caring expectations and examine the strategies adopted by the grandparents to achieve a balance in childcare. **Method :** The data from a qualitative study of 16 grandparents in a three-generational family research conducted in 2004, insights from literature review and observations from recent news relating to grandparenting issues in Singapore will be engaged for analysis. **Results :** The analysis suggests an ambivalent attitude towards caring for grandchildren among the grandparents. While grandparents see the responsibility to care for their grandchildren as a way to relief the burden of their working children, they also lament over the lack of freedom as a result of their commitment. Some grandparents feel that extra help in the form of foreign domestic helper is necessary to help relief their burden, while others set a clear boundary on the limits about caring for the grandchildren. **Conclusion :** Does the emergence of grandparents suggest about the changes that may be observed among contemporary grandparents? The paper ends with an examination of a group of grandparents who have initiated a network to combine childcare responsibility with personal desire for learning and development, and question the shift in the 'traditional' role expected of grandparents. **Keywords :** grandparents, Singapore ambivalence

SS24 519-S-2

GRANDPARENTS CARING FOR GRANDCHILDREN IN RURAL CHINA: THE IMPORTANCE OF FAMILY STRUCTURE AND PERSONAL RESOURCES

Merril SILVERSTEIN¹, Zhen CONG² (1. *Department of Sociology and School of Social Work, Syracuse University, USA*; 2. *Human Development and Family Studies, Texas Tech University, USA*)

Introduction : We examine whether changes in family structure and improvements in the health and economic well-being of older adults have altered the likelihood that grandparents in rural China provide care for their grandchildren. This issue is salient because unprecedented rural-to-urban migration of working age adults has resulted in a record number of grandparents caring for grandchildren left behind in their native villages. **Method :** We used the Longitudinal Study of Older Adults in Anhui Province, first fielded in 2001 with a replenishment sample added in 2009. We compared similarly aged grandparents (60-68) from 2001 (N= 553) and 2009 (N= 370). Multinomial logistic regression identified whether grandparent caregiving has changed and how much of the change is attributed to changes in family structure and well-being. **Results :** Grandparents in 2009 were less likely than their 2001 counterparts to provide part-time care for their grandchildren but more likely to provide full-time care. Part-time care declined primarily because of reduced demand for childcare (smaller families and increased education of children); full-time care increased because improved well-being enhanced the capacity of grandparents to provide custodial care (improved physical, mental, cognitive, and economic status). **Conclusion :** The involvement of rural grandparents as custodial caregivers appears to be robust, heightened by the confluence of improved well-being of older adults and continued economic incentives for adult children to migrate. Part-time care is less often engaged because of reduced opportunities and is not sensitive to improvements in well-being. Results are discussed in terms of migration patterns, reduced fertility, and family policy in a changing China. **Keywords :** intergenerational relations, grandparenting, Asia

SS24 519-S-3

GRANDPARENTS CARING FOR GRANDCHILDREN IN CHINA AND KOREA: FINDINGS FROM CHARLS AND KLOSA

Pei-chun KO¹, Karsten HANK² (1. *SOCLIFE PhD training group, University of Cologne, Germany*; 2. *Institute of Sociology, University of Cologne, Germany*)

Introduction : The study provides an overview of the prevalence and profiles of grandparents caring for their grandchildren in two East Asian countries, China and South Korea, sharing a similar cultural background but very different contemporary institutional, demographic, and socio-economic circumstances. **Method :** We apply logistic models to analyze pilot data from the China Health and Retirement Longitudinal Study (CHARLS) and data from the Korean Longitudinal Study of Aging (KLoSA; wave 2). Our analytic sample comprises 772 Chinese respondents and 4,958 Korean respondents aged 45 to 79. **Results :** The proportions of grandparents providing care for grandchildren differ considerably between China (58%) and South Korea (6%). Still, the determinants of grandparents' involvement in childcare (e.g. age, geographic proximity) are fairly similar in both countries. However, financial support from adult children to grandparents is found to be significant in China only, whereas Korean grandparents exhibit a greater propensity to care for their (employed) daughters' children than for their sons'. **Conclusion :** Our analysis suggests that patrilineal considerations may begin to lose some of their importance in shaping downward functional solidarity between generations in East Asia and that instead (grand-)children's actual needs, particularly such related to maternal employment, receive more attention. **Keywords :** Grandparenting , Intergenerational support, East Asia

SS24 519-S-4

WHERE DO GRANDPARENTS WORK THE BEST? EUROPEAN WELFARE STATE DIFFERENCES IN WORKING GRANDPARENTS' INVOLVEMENT IN CHILD CARE

Fleur THOMESE (*Sociology, VU University Faculty of Social Sciences, Netherlands*)

Introduction : Grandparents are increasingly seen as a reserve army, stepping in when working parents need (additional) child care. This paper explores when and for whom grandparent in European welfare states do so. (1) The more involved the parents, and the less involved grandparents, are in paid work, the more grandparents look after grandchildren. (2) The more involved the mother, and the less involved the grandmother, is in paid work, the more grandparents look after grandchildren. (3) Effects of (grand)parents' work situation are the largest in countries with the lowest level of public support for intergenerational obligations. **Method :** The 2005 wave of the Survey on Health and Retirement in Europe provides information on 4,468 grandparents' child care in the families of 6,102 children from 11 European countries. Frequency of child care for grandchildren by a maximum of 4 selected children is recoded into monthly or more versus less or never. Frequent child care is regressed on work status of grandparents, work and partner status of children, grandparents' and children's sex, and country. **Results :** Preliminary results: Grandmothers are more responsive to their own and their children's work status. This effect is stronger in countries with low support levels. **Conclusion :** Gender relations strongly inform both intergenerational support and women's occupational opportunities. This may bring grandmothers in a predicament between their own and their daughters' economic success. Intergenerational policies can

resolve this. Keywords : grandparents, child care, welfare state

SS24 524-C

DEMENTIA CARE: FROM DIAGNOSIS TO INSTITUTIONALIZED CARE

SS24 524-C-1

DIAGNOSIS DEMENTIA IN A DUTCH MIGRANT POPULATION: OBSTACLES AND SOLUTIONS

Ozgul UYSAL-BOZKIR (*Internal Medicine, Academic Medical Center, Netherlands*)

Introduction : With the aging society in the Netherlands, elderly migrants will form a substantial part of the Dutch elderly in the next decade. Cognitive decline and dementia are difficult to evaluate in elderly migrants because of their different cultural background, language barrier and low level of education, while prevalence of dementia is expected to be higher due to different contributing factors (hypertension, diabetes). In general, commonly used cognitive screening instruments are not applicable for non-Western migrants. Therefore, we developed a new non verbal dementia screening test. This Cross Cultural Dementia screening (CCD) exists of four subtests, which evaluate memory, executive functions and psychomotor speed. The test materials are non verbal and test instructions are given by computerized voice samples in the patients' language. Method : We tested 1000 cognitively healthy and demented subjects. We will present the latest data on sensitivity and specificity of CCD test results as well as data on the influence of age, cultural background, education and gender on the results. Results : Baseline data will be presented at the conference. Analysis of the CCD subtests yields a sensitivity of 90% and a specificity of 94% for the Turkish participants. Conclusion: The newly developed CCD can detect dementia in subjects with a different cultural background, with little or no education, and can be applied in situations in which a linguistic barrier needs to be overcome. Keywords : diagnosing dementia in minorities, health situation in minorities

SS24 524-C-2

COMPARING MODELS OF DEMENTIA CASE MANAGEMENT IN NETHERLANDS BASED ON PRELIMINARY RESULTS OF A TWO YEAR COHORT STUDY

Janet Lynn MACNEIL VROOMEN (*Internal Medicine, AMC Amsterdam, University of Amsterdam, Netherlands*)

Introduction : The Netherlands comprises of emerging and existing case management models to improve dementia care although it is unclear 1) whether case management is more effective than usual care and 2) which case management model improves functioning and well-being at the caregiver and person with dementia level. The objective is to present the clinical baseline data that compares two case management models against usual care. Method : Design: a prospective, observational, controlled, cohort study among 525 persons with dementia and their informal caregivers in several regions of the Netherlands to measure outcomes of case management, and a qualitative study design for the process evaluation. Inclusion criteria for the cohort study are individuals: with a dementia diagnosis, community-dwelling, not terminally-ill, not anticipated to be admitted for long term care facilities within 6 months, and who have an informal caregiver fluent in Dutch. Participants are monitored for two years. The primary outcome measure is the Neuropsychiatric Inventory scale for persons with dementia and the General Health Questionnaire for their caregivers. Quality of care indicators are used

to measure the care process in participants. Results : Baseline data will be ready and presented at the conference. Conclusion : What distinguishes this study from other case management studies is its ability to simultaneously describe the care processes and implementation of two case management models and compare the outcomes of the case management models with usual care. Keywords : Dementia, case management, geriatric care, community

SS24 524-C-3

IMPLEMENTATION OF PERSONALIZED SUPPORT IN DEMENTIA CARE: A COMPARISON OF CASE MANAGEMENT MODELS

Lisa Deborah VAN MIERLO (*Department of General Practice and Elderly Care Medicine, VU University Medical Center, Netherlands*)

Introduction : The process analysis that was conducted and described in this article was part of a large evaluation study (COMPAS-E) that investigates the effectiveness of case management for people with dementia and informal caregivers. The aim of this process evaluation was to provide insight into facilitators and barriers of the delivery of personalised care in two Case Management models, the linkage model and the combined intensive and joint-agency model. Insight into these facilitators and barriers in different models and regions is important to create guidelines for successful implementation of case management in other regions. Method : A qualitative study design was used with semi-structured interviews among 22 key figures in various phases of the implementation process. Key figures were representatives from different organisations involved in case management or the dementia collaboration network surrounding case management. The interviews were based on the theoretical model of adaptive implementation. Results : The results suggest that the implementation of the intensive case management model is preferred as case managers in this model are able to provide more quality of care, are less impeded by competitiveness of other care organisations and are more closely connected to the expert team than case managers in the linkage model. Conclusion : The results of this process evaluation provide insight into facilitating and impeding factors for implementation of different case management models and argue in favour of the implementation of the intensive case management model. Keywords : case management, dementia, proces evaluation

SS24 524-C-4

REVIEWING THE DEFINITION OF CRISIS IN DEMENTIA CARE

Janet MACNEIL VROOMEN (*Internal Medicine, Amsterdam Medical Center, University of Amsterdam, Netherlands*)

Introduction : Crisis is a term frequently used in dementia care but lacks a standardized definition. This work reviews definitions of crisis in dementia care literature to create a standardized definition that can be utilized for research, policy and clinical practice. Method : We systematically searched PubMed and EMBASE for articles containing definitions of crisis in the context of dementia care. We created an operational framework of crisis based on retrieved definitions. Recommendations to address crisis situations were reviewed and classified according to care settings. Results : Abstracts and titles of 1,113 articles were screened by two independent reviewers and narrowed down to 27 articles. Crisis was defined as a feedback loop where a stressor causes an imbalance requiring an immediate decision to be made which leads to a desired outcome and therefore a resolution of the crisis. If the crisis is not resolved, the cycle continues. Recommendations for resolving crisis involving persons with dementia and their informal caregivers include: structured support

after diagnosis, and increased contact with: general practitioners, case managers, caregiver support and education. Furthermore, healthcare professionals should be attuned to the environmental, physical and psychological needs of persons with dementia. Conclusion : This is the first work to review the definition of crisis in the context of dementia care. We used an operational framework to compile types of crisis stressors and recommendations from the crisis literature based on; the person with the dementia, the caregiver and the healthcare providers. Our framework may be usable to calculate costs of crisis. Keywords : crisis dementia care caregivers

SS24 526-C

THE ELDER FRIENDLY HOSPITAL: AN INTERNATIONAL RESPONSE TO THE AGING IMPERATIVE

SS24 526-C-1

DEVELOPMENT AND APPLICATION OF A FRAMEWORK OF AGE-FRIENDLY HEALTH CARE IN TAIWAN

Shu-ti CHIOU (*Director-General, Bureau of Health Promotion, Department of Health, Taiwan*)

Introduction : Older persons are important users of health care. Evidences have shown that health service utilization can impose risk to or add health gain for older persons. We aimed to develop a framework of age-friendly health care and help hospitals and health services identify their weaknesses, develop action plan, and continuously improve themselves to meet older persons' needs and expectations. Method : The contents of our framework were based on the WHO principles of age-friendly healthcare, the WHO Standards for Health Promotion in Hospitals, and the Elder-Friendly Hospital Initiative in Canada. There are 4 standards, 11 sub-standards and 60 measurable elements in the framework. After being pilot-tested and validated, it was used for recognition of "age-friendly hospitals and health services". Results : In 2011, a total of 20 hospitals applied for the recognition and 19 passed. We identified weakness on several elements, including IT support for implementation and evaluation of the age-friendly policy; training in core competence for clinical staff, and guidelines on multidisciplinary geriatric assessment and interventions on high-risk seniors. Scoring on organizational preparedness showed that hospitals demonstrated very high leadership support, allocated resources for age-friendly care, and were expected to have promising future development. Conclusion : A framework of age-friendly health care has been developed, validated and applied to 20 hospitals for recognition in Taiwan. Weaknesses in management policy and care processes were identified and can be highlighted as the focus of continuous improvement. The impact of this recognition program on the experiences and health gains for older persons should be evaluated in the future. Keywords : Age-friendly health care, Age-friendly hospital, Health Promotion

SS24 526-C-2

BUILDING SENIOR-FRIENDLY CARE HOSPITALS IN THE UNITED STATES: WHERE ARE WE AND WHERE DO WE NEED TO GO?

Marie BOLTZ, Elizabeth CAPEZUTI (*College of Nursing, New York University, USA*)

Introduction : NICHE (Nurses Improving Care for Healthsystem Elders) of the New York University College of Nursing provides over 350 hospitals with aging-specific staff training, clinical protocols, project management/evaluation tools, and inter-site collaboration. The NICHE Program Self-Evaluation is used on a bi-annual basis to plan and track progress toward a senior-friendly hospital. Method : Using

2011 survey data, the dimensions of a geriatric acute care model were evaluated to describe the scope and depth of NICHE implementation. Results : The sample (N=180) represented U.S. hospitals diverse in size (mean # beds: 348.7; +/- 263.9), teaching status (33% non-teaching, 37% teaching and 23% academic medical centers), and level of NICHE implementation (15 .6% early; 57.8% progressive; 23.3% senior friendly; 3.3%). The majority describe: an interdisciplinary and interdepartmental steering committee, leadership by a gerontological nurse active in policy committees, implementation of the Geriatric Resource Nurse Model, interdisciplinary rounds, a gerontological core curriculum provided to staff on several units, use of at least two evidence based guidelines, and policies that support family involvement in care. Key areas identified for improvement include the physical environment and program evaluation. No relationship was found between facility characteristics and either dimension scores or levels of implementation. Conclusion : The NICHE framework provides a blueprint to guide senior-friendly implementation in diverse hospital settings. There is a need to support hospital efforts to modify the physical environment and utilize data to improve care of hospitalized older adults. This symposium is co-sponsored by the Bureau of Health Promotion, Department of Health, Executive Yuan, Taiwan. Keywords : elder -friendly acute care

SS24 526-C-3

ADOPTING THE SENIOR FRIENDLY HOSPITAL FRAMEWORK IN THE NETHERLANDS: CARING FOR FRAIL OLDER PATIENTS IN THE ORBIS MEDICAL CENTRE

Herbert HABETS¹, Walther SIPERS² (*1. Clinical Geriatrics, Orbis Medical Centre / Zuyd University, Netherlands; 2. Clinical Geriatrics, Orbis Medical Centre, Netherlands*)

Introduction : - Objectives Hospitals in the Netherlands face an increase in older frail patients, vulnerable to loss of function and often experiencing adverse events during hospital stay. The Orbis Medical Centre aims to work towards better health outcomes for these patients and has adopted the Senior Friendly Hospital Framework (Parke, 2004) as a main strategy. In a strong cooperation with Zuyd University of Applied Sciences and the University of Maastricht a variety of projects are executed to develop and operationalise this concept. Maintaining and improving optimal health and function, improvement of patient and family satisfaction, facilitating discharge, targeted interventions to prevent complications are main objectives of this integrated model. Method : The five-domain framework for Senior Friendly Hospitals was translated in a so-called 5-C model. The five building blocs (C's) of this model are: Construction: physical environment; Communication / Attitude; Coach / Family; Continuity of care; Complication prevention. Facilitated by the support and commitment of the management of the hospital, in cooperation with older persons (or their advocates), with students from different background participating in studies and projects, the model is realized in a stepwise approach. Results : Hospitalbroad screening for frailty and complications. Multidisciplinary consultation team assessment and advices. An effectstudy of this approach is underway. The innovative physical environment offers new options with regard to family participation, delirium prevention and communication. Conclusion : An inspiring model, engaging professionals, students and older people in changing the entire hospital into a more senior friendly environment. Keywords : models of acute care

SS24 526-C-4

THE BUILDING OF A NATIONAL AGENDA FOR ELDER FRIENDLY HOSPITALS IN CANADA

Belinda PARKE¹, Barbara LIU², Angela JUBY³ (1. Faculty of Nursing, University of Alberta Scholar in Residence Vancouver Island Health Authority, Canada; 2. Geriatric Program, Toronto Regional Geriatric Program Associate Professor Medicine University of Toronto, Canada; 3. Geriatrics, Northern Alberta Regional (NARG) Geriatric Program Associate Professor University of Alberta, Canada)

Introduction : The concept of elder-friendly hospitals was developed in Canada in 1999. Since then many organizations have adopted the principles of older adult-hospital environment fit across Canada. We present the findings of a national collaborative to reach consensus on recommended standards for older adults in hospital. **Method :** Methods A multi phased approach beginning with the establishment of advisory committee, a literature review of modifiable factors in hospital; three networking national workshops; a round table meeting with key stakeholders and clinical experts; and Delphi electronic voting by two groups, those that attended the round table meeting and a second group that did not attend the meeting. The use of qualitative content analysis and coding was applied to the data collected at the round table meeting. **Results :** Results The five national standards and corresponding descriptive statements were drafted. Electronic voting showed that there was strong agreement in both groups that the descriptive summaries matched the standard statements. Relevant clinical topics were identified within each standard statement to target efforts toward elder-friendly hospitals innovations. **Conclusion :** Conclusions The national standards provide a framework to advance older- adult hospital environment fit. The standards enable us to narrow the care gap by providing a platform for advancing research in the area of elder friendly hospitals. **Keywords :** elder friendly hospitals, older adults, hospitalization

SS24 527-C

THE AMERICAN MEDICAL DIRECTOR ASSOCIATION: THE CERTIFIED MEDICAL DIRECTOR FOR LONG-TERM CARE. A MODEL TO ENSURE CORE COMPETENCIES OF MEDICAL STAFF, DRIVE QUALITY, PATIENT CENTERED CARE AND TEACH IN THE NURSING HOME SETTING

SS24 527-C-1

THE CERTIFIED MEDICAL DIRECTOR: UPDATE ON THE DEVELOPMENT OF CORE COMPETENCIES

Paul KATZ (Medical Administration, Baycrest, Canada)

Introduction : The nursing home has become a critical element of the health care continuum. The provision of medical care in the nursing home (NH) demands a unique skill set that recognizes the increasing complexity of patient care in an environment that is highly regulated and resource constrained. **Method :** The American Medical Directors Association has developed a set of competencies for Medical Directors and nursing home attending physicians that seeks to define the knowledge and skills necessary to provide optimum care to residents that are typically frail and experience multiple care transitions. **Results:** The symposium will review the rationale underpinning the NH competencies while at the same time distinguish them from broader based geriatric skills. Discussion will also focus on potential metrics to measure the NH competencies and explore the future possibility of specialization. Finally, the relationship between medical staff organization and physician competency will be explored. **Conclusion :** By the end of the session, participants will be able to: 1. Understand the rationale behind the development of NH competencies 2. Appreciate the roles and responsibilities of attending physicians in nursing homes 3. Understand the relationship between medical staff organization, physician competency and commitment to overall quality

of care. **Keywords :** Nursing Home, Medical Director, Core Competencies

SS24 527-C-2

THE CERTIFIED MEDICAL DIRECTOR: A DRIVER OF QUALITY IMPROVEMENT IN THE NURSING HOME

Sabine VON PREYSS-FRIEDMAN (Medicine, Division of Gerontology and Geriatric Me, University of Washington, USA)

Introduction : The Medical Director for Long-term Care is responsible for appropriate patient care. Quality Process Improvement is a continuous, proactive, self-monitoring process designed to analyze and improve existing processes with the goal to improve quality outcomes. Knowledge about the principals of Quality Improvement and integrating them into the practice of Medical Direction is fundamental to the role of the Certified Medical Director. The Objective of Quality Improvement is the provision of safe, timely, efficient and state of the art care for patients in Nursing Homes. **Method :** Data sets, including MDS, Infection control surveillance data, Incidents and Accidents, Re-hospitalization data as well as patient and family satisfaction data are monitored systemwide to determine areas needing improvement. Outcomes that do not meet determined goals are examined for root causes of failure in an interdisciplinary fashion that involves the entire team. A corrective plan of action is then developed and implemented and monitored until necessary. **Results :** Data will be presented showing clinical outcomes affecting quality of life, health status and patient safety. The Medical Director leads the interdisciplinary team via root cause analysis and interdisciplinary efforts to address underlying causes improvements are demonstrated in the areas of infection control, overprescribing of antibiotics, accidents and falls, pressure ulcer development, pain management and diabetes management. **Conclusion :** The Certified Medical Director is uniquely positioned to lead the team in the analysis of system wide data and develop processes that effect improved outcomes in the entire population of the Nursing Home via the Quality Improvement process. **Keywords :** Nursing Home, Medical Director, Quality,

SS24 527-C-3

INTERDISCIPLINARY GERIATRICS EDUCATION IN A TEACHING NURSING HOME

Irene HAMRICK (Family Medicine, University of Wisconsin, USA)

Introduction : Our population is aging, living longer and healthier. Demographic shifts will cause a decrease in the number of caregivers, necessitating more nursing home care in the future. Nursing homes are a link in the transition to and from homes and hospitals and are the ideal setting to teach the full spectrum of geriatrics. The objective is to improve geriatric and gerontology instruction for health professionals, students and staff (collectively called: learners). **Method :** Learners, including but not limited to nursing, medicine, pharmacy, social work, therapy, physicians in training in internal-, rehab- and family medicine get a hands on experience by pre-rounding on patients followed by team rounds. Geriatric didactic lectures add to the educational experience. Evaluation tools include: University of California Los Angeles geriatric knowledge and attitude scale, team evaluation tool, nursing home aggregate data and qualitative information from learners and nursing home staff. **Results :** By working together participants learn from each other and learn to respect each other's knowledge and skill. Geriatric knowledge increased during the rotation. Care for frail and disabled elderly improved. Additionally, attitudes towards geriatrics and team building will be evaluated. The continuing presence of the teaching team is expected to benefit the nursing home by decreasing transfers to the hospital and staff turnover, as well as

increasing patient satisfaction and facility fill rate. Conclusion : The teaching nursing home is an optimal way to teach geriatrics to various disciplines while improving care to nursing home patients. Keywords : Education, nursing home, multidisciplinary

SS24 527-C-4

THE ROLE OF THE SKILLED NURSING HOME IN REACHING THE TRIPLE AIM

Robert J. SCHREIBER (*Department of Medicine, Hebrew SeniorLife, USA*)

Introduction : The nursing home is becoming a very important delivery system of care in the United States as the aging population expands dramatically. Acute hospital care is under siege as penalties for rehospitalizations have taken hold and the focus is now on improving the health of the population an organization or system serves, The quality of care and the cost of care per person. Hebrew Seniorlife (HSL) has two main post acute care skilled nursing facilities (50 beds each) and a smaller unit of 15 beds at one of our housing sites. Method: The approach we have taken to reduce the 30 day acute care readmission rate from skilled nursing care includes a systematic approach to managing patients which ensures high quality and standardized discharge plans. The actual components of this program include standardized geriatric admission templates, palliative care consults done on patients with multiple issues, holding TIPS Conferences, connection with specialists and/or Primary care providers about issues and using Project RED as a discharge tool on the skilled units. Results : The results of this program have resulted in significantly lower rehospitalizations, increased discharges to the community and lower nursing home admissions, high patient satisfaction and lower cost of care. As a result of these outcomes, HSL has become a preferred provider of skilled nursing care for all the major academic and community hospitals in the greater Boston, Massachusetts region. Conclusion : The skilled nursing home can be a highly valued care delivery system in a health care system when value and quality of care can be demonstrated. Keywords : Health Care Systems, Skilled Nursing Facility Care, Palliative Care, Transitions of Care

Tuesday June 25th

SS25 108-R

SMART WALKERS: TOWARDS AUGMENTING THE AUTONOMY OF THE ELDERLY

SS25 108-R-1

SMART-WALKER FOR THE ELDERLY: INTUITIVENESS COMES FROM FORCE SENSORS, A PRELIMINARY STUDY

Viviane PASQUI¹, Didier MARIN¹, Ludovic SAINT-BAUZEL¹, Blandine BOUDET², Pierre RUMEAU³, Nadine VIGOUROUX⁴
(1. Institut des Systemes intelligents et de Robotique, Universite Pierre et Marie Curie, France; 2. Gerontopole de Toulouse, UMR 1027 Inserm, France; 3. Gerontopole de Toulouse, Hopital La Grave, France; 4. IRIT, Universite Paul Sabatier, France)

Introduction : The RobuWalker developed by RoboSoft is a robotic walker for the handicapped elderly. It is designed bearing in mind those who can not stand-up without physical human aid but then can use efficiently a walker. RobuWalker uses to move two rear driving wheels and two caster wheels at the front. It has two motorized arms to help the elderly to stand from seated. Note that RobuWalker obeys the space standards for wheelchairs. This robotic device will interact

mechanically with the user in order to assist to stand up and when walking. An intuitive haptic control has been developed in order to reduce the cognitive load and cope better with the needs of those with cognitive impairment. Method : The intuitive control has been tested by 4 younger (28-49) healthy subjects and 4 elderly patients (80-93) in the rehabilitation ward of Toulouse Hospital. The tests are made from normalized test used in geriatric medicine to diagnose frailty and walking difficulties: the 4 meters walking test. and the Time Gait up and Go test. Results : We could see that RobuWalker was readily accepted by the elderly patients and was usable. Moreover, we could observe in a 93 years old lady ending a one month period non-weight bearing the correction of a weight bearing asymmetry after a 30 mn session performing 4m walk and modified get up and go tests with a regular walker then with RobuWalker. Conclusion : A preliminary study about an intuitive control to drive the RobuWalker was conducted with elderly patients and showed the usefulness of the robot and its possible use in rehabilitation. Keywords : smart-walker, evaluation.

SS25 108-R-2

DEVELOPMENT OF SMART MOBILE WALKER FOR ELDERLY AND DISABLED, CAPABLE OF SIT-TO-STAND ASSISTIVE FUNCTION

Hyunseok YANG¹, Woonghee CHO¹, Inho KIM¹, Byunghoon MIN², Byeong Rim JO² (1. School of Mechanical Engineering, Yonsei University, Korea; 2. Convergence Lab, LG Electronics, Korea)

Introduction : Walker, or rollator, is well known walking aid for seniors or disabled. Sit-to-stand (STS) motion is another difficult task for the walker users. Smart mobile walker (SMW) is aimed at combining walking support and STS support function on the same device. Method : SMW has four wheels (two driving wheels and two dummy wheels). Four legs, having a wheel on each end, support top plate which users put their arms on. All legs are independently controllable by linear actuators. Users can walk with SMW by pushing or pulling the top plate. Multiple force sensors attached on the top plate and legs, catch user intention and state of SMW, make SMW keep up with the user's step while walking. The sensors are also used while performing STS motion to keep the user posture stable during the motion. Results : SMW is useful not only on planar fields but also on slopes with various angles and bumpy surfaces. SMW helps users sit and stand with reduced force requirements on their lower bodies while keeping stable posture. Conclusion : SMW has ability to help people with weakness on their lower bodies by assisting walking and STS tasks. We expect SMW will have many potentials in rehabilitation and clinical supports. Keywords : Walking and STS assistance, Smart Mobile Walker

SS25 108-R-3

A NOVEL ROBOTIC WALKER FOR OVER-GROUND GAIT REHABILITATION

Kyung-ryoul MUN, Haoyong YU (*BIOENGINEERING, National University of Singapore, Singapore*)

Introduction : Robotic assisted gait rehabilitation not only can reduce labor intensity for therapists, but also can potentially provide better functional outcome than conventional therapy. Current rehabilitation robots are expensive and not available to community centers or chronic patients at home. In this talk, we present a novel robotics walker platform that enables patients post stroke or with Parkinson's Disease to perform gait training at home or community rehab centers. Method : The system consists of an omni-directional mobility platform, an active body weight support (BWS) unit, and a pelvic and

trunk support and assist module. The omni-directional motion coupled with the pelvic support allows unrestricted natural trunk posture and gait. The user of the system interacts with the system through a six degree-of-freedom force/torque sensor. An admittance controller enables a natural and intuitive interface. The adaptive shared controller enables several control modes depending on the patient condition. Results : The system can provide stability, balance, and assistance. It can also provide resistance and error augmentation training methods to enhance training efficacy. Wearable motion capture sensors based on inertia measurement units are used to monitor the user gait kinematics and provide quantitative measures of gait recovery. Surface EMG sensors are used to monitor muscle condition and activation pattern. A functional electrical stimulation module can also be implemented on the system to provide simulations for patients with severe drop foot to enhance gait recovery. Conclusion : In this torque, we will present the system design and the preliminary testing results. Keywords : Robotic assisted gait, stroke patients, omni-directional, over-ground, pelvic support

SS25 108-R-4
SMART-WALKER FOR THE ELDERLY: NEW OPPORTUNITIES IN GERIATRIC REHABILITATION

Pierre RUMEAU¹, Viviane PASQUI², Ludovic SAINT BAUZEL², Nadine VIGOUROUX³, Blandine BOUDET¹, Christine LAFONT⁴, Isabelle FERRANE³, Frederic LERASLE⁵, Fati NOURHASHEMI¹ (1. La Grave Gerontechnology Lab - Gerontopole, CHU Toulouse, France; 2. Institut des systemes intelligents et de robotique, Universite Pierre et Marie Curie, France; 3. Institut de Recherche en Informatique de Toulouse, UMR 5505 CNRS Universite Paul Sabatier, France; 4. Rehabilitation department - Gerontopole, CHU Toulouse, France; 5. Laboratoire d'Analyse et d'Architecture des Systemes, CNRS, France)

The perception of robots is by large conditioned by sci-fi movies and comics yet they remain a kind of tool that may adapt, with the smallest effort from the user, to its scheduled task in a foreseen environment. We like to consider that they should be part of a global service as an aid to relieve human work force of "low value" tasks. Intelligent walking aids are a good example where the physiotherapist will be allowed to observe the patient during standing up and walking giving a better qualitative assessment and improved rehab. Such a goal requires a throughout coop within a multidisciplinary team where each role is well identified to the volunteers (according to the ethical counsel of the French society of technology for autonomy). But acceptance, in comparison to that of humanoid companion robot or even animal-like toys, by elderly people is excellent as we could see in our experiments. Eventually, it seems that when users are not afraid by a massive device they will focus on service and expected benefits. Service is most linked to interaction between the robot and the human, ideally this should be fully transparent (understanding of the movements and gestures, voice recognition, haptic control...), respecting the physiology of movement (compliant links to avoid trauma, geometric limits...) and avoid energy transfers from the walker to the human other than mechanical support required to control gait and balance. Preliminary tests with elderly people without and with cognitive impairment are showing that intelligent walkers have the greatest potential in geriatric rehabilitation but still need improvements. This paper is reporting work funded by Agence Nationale de la Recherche, Caisse Nationale de Solidarite pour l'Autonomie and the Ambient Assisted Living Program. Keywords : robotized aids, acceptance, walkers, rehabilitation

SS25 109-R

INPEA/ILC GA: ADDRESSING ELDER ABUSE, THROUGH A HUMAN RIGHTS LENS A MULTI-COUNTRY COMPARISON OF PERCEPTIONS, INTERVENTIONS AND AWARENESS AMONG DIVERSE CULTURES AND DISCIPLINES

SS25 109-R-1
INVESTIGATING ISSUES OF ELDER ABUSE IN KOREA THROUGH A HUMAN RIGHTS LENS

Mee Hye KIM (Graduate School of Social Welfare, Ewha Womans University, Korea)

Introduction : Korea had been a society where the elderly was respected and cared for by family. Increase of the elderly changed the value and family structure based to care for the elderly. The covered elder abuse emerged in Korean society and awaked the society being chanted by the myth of respecting the elders. The power of the Confucianism culture is no longer influencing on relationship between persons and family members especially younger and older. The purpose of this study is to understand elder abuse with the respect of human right in Korean society. Method : The study employs literature research method. Relevant reports from personal research, articles to official statistics are collected. This date is analyzed to find out the reasons, results and responses to elder abuse in Korea. Results : The reasons of elder abuse are characteristics and dependency of the abused elders, personal problems of abusers, care burden, lack of support systems, etc. The results are psychological damages of abused elders such as depression, fear, withdrawal, etc. The reponses are legislation, centers for abused elders which provide the service, education, public relations. Conclusion : The reasons and results are not reviewed with human rights so that the strategies improving the human rights of abused elders need to be developed. Keywords : Elder Abuse in Korea, Human Rights

SS25 109-R-2
A HUMAN RIGHTS APPROACH TO PREVENTION OF ELDER ABUSE IN LATIN AMERICA

Lia Susana DAICHMAN (ILC-Argentina and UN ILC-GA Representative, ILC-Global Alliance, Argentina)

Introduction : Since first identified more than forty years ago as a social and health problem, elder abuse, like other forms of violence has been recognized as a public health and human right issue, and a criminal justice concern. Elder abuse has become a worldwide phenomenon and the discrimination and mistreatment of older persons and its nature as a hidden problem, is no longer unusual. Consequently elder abuse is acknowledged as an issue in most Latin American countries. Results : Today, concern about elder abuse has driven a worldwide effort to increase awareness about the magnitude of the problem and encourage development of prevention and intervention programs. This is predicated on the belief that older people are entitled to live out their advancing years in peace, dignity, good health, and security. Conclusion : Further research on the prevention and intervention of elder abuse is essential in Latin America to examine elder abuse, within a local and cultural environment, and should lead to contextualized policies which are sensitive to their own regional needs. Keywords : Elder Abuse, Human Rights, Latin America

SS25 109-R-3
ADDRESSING ELDER ABUSE IN THE LIGHT OF MIPAA + 10 FROM SOUTH KOREA. MEDICAL,LEGAL AND SOCIAL ISSUES. THE CARIBBEAN VIEW

Rosy Elvira PEREYRA (Policy and Practice, ILC-DR. INPEA, Dominican Rep)

Introduction : One of the fundamental rights of every human being is the enjoyment of the highest standard of health without distinction of race, religion, political believe and economic or social condition. In view of this, we will focus on elder abuse and its medical, legal and social issues. **Method :** We decided to study the different conditions that may contribute to elder abuse in the Caribbean region knowing the fact that men and women are the fastest growing group in the world and that our population is growing old before becoming rich or even educated. **Results :** Women are discriminated against on the basis of age at younger ages than men and are routinely perceived as weak, vulnerable and dependent. Those on the seventh decade have a higher incidence of illiteracy and this, together with the negative image, make older women more susceptible to abuse. Policy makers, physicians, citizens and even families misunderstand or neglect older persons. **Conclusion :** In order to achieve a diminution in the cases of abuse and neglect, we have to ensure efficient and adequate health and social services, the necessary legislation that can penalize abuse and an improvement in the socioeconomic status of our people to make them aware of their rights and able to report the violations that may appear. We know that there are differences among countries in our region but we also know, that only by joining forces we might be able to achieve a binding legislation that may ensure the protection of this portion of the population. **Keywords :** Elder abuse

SS25 109-R-4

GAPS IN STANDARDS AND SERVICES IN LTCS IN KOREAN: APPLYING RESEARCH TO PROTECT VULNERABLE OLDER PERSON'S RIGHTS

Sooyoun K. HAN¹, Taehyun KIM² (1. Executive Director, CARE the Right, USA; 2. Social Welfare, Sungshin University, Korea)

Introduction : The purpose of this study is to develop an Elder Abuse Protection Protocol (EAPP) for Demented Elders (DE) and their Family Caregiver (FC), who are placed in LTC facilities with medical co-morbidity scored under 13 on MMSE (Max; 30). **Method :** First, this study analyzed the nationwide annual report conducted by Korean Elder Protection Agency (EPA, 2012), and institutional elder's abuse report done by ChoongChung Nam Do's EPA (2012). The study characterized the relationship between the abuser and the abused, the types of abuse for both community and Long Term Care (LTC). Second, this study analyzed the annual LTC survey (2012) inspected by the National Health Insurance Corporation (2012). The study reviewed the areas on the Resident's Right (RR) and Quality of Life (QOL). **Results :** This study discovered there is no direct channel to process LTC abuse reports for DE who have no a FC or someone who can represent them. Their abuse cases suffer as a result. They were more easily exposed to unnecessary life sustaining treatments and/or excluded from comfortable End of Life Care. This observation was also found to be true for their QOL and personal care. **Conclusion :** The study contends that developing an EAPP for DEs as well as their FCs is necessary for, who not only often coordinate multiple services for them, but also play a critical role in maintaining their RR and QOL. To make short the Gaps for vulnerable older person's Rights, encouraging healthcare policy maker to be cognizant for some extension services- public guardianship, institutional Ombudsman program, watch-dog grass rooted agency programs. **Keywords :** Demented Elder, Elder Abuse Protection Protocol

SS25 110-R

TRANSLATING PRIMARY RESEARCH FINDINGS ON BALANCE SYSTEM CHANGES TO PRACTICE THROUGH PHYSIOTHERAPY LED BALANCE TRAINING PROGRAMS AND RATIONALE FOR SELECTION OF EXER_GAMING

PROGRAMS

SS25 110-R-1

POSTURAL INSTABILITY & REDUCED SENSORI-MOTOR FUNCTION IN MID-LIFE/OLDER DECADES OF WOMEN SUPPORT PRE-EMPTIVE INTERVENTIONS FOR HEALTHIER AGEING: CAN TESTS OF POSTURAL STABILITY PREDICT FALLS?

Nancy LOW CHOY (Physiotherapy, Australian Catholic University & TPCH (Q-Health), Australia)

Introduction : Knowledge of age-related changes in postural stability and balance and sensori-motor function could enable rationale for pre-emptive interventions to foster healthier ageing. **Method :** Cross sectional sampling from decade age cohorts of women aged 20 to 80 years using postural stability tests and sensori-motor measures and follow-up 10 year survey. **Results :** Postural stability in bipedal stance (firm surface) was reduced by the 60s and on foam and one leg (eyes open) by the 50s. Bipedal stance (Foam eyes closed) and one-leg stance (eyes open) yielded low rates of failed trials in mid-life decades and higher failure rates in older decades. Strength of quadriceps and hip muscles gradually reduced from the 40s with women in their 70s being significantly weaker than younger decades. Reduced somatosensation (vibration sensitivity, joint position error; tactile acuity) and vision occurred by the 40s with further reductions in subsequent decades. Some women presented with gaze instability in the 40s/50s with significantly more women unable to maintain focal gaze in the 60s/70s. Women who failed the postural stability tests were usually older, less active, had poorer health and reduced strength, somato-sensation, vision and gaze instability. The prospective survey study 10 years after baseline measures demonstrated that bipedal stance (Foam eyes closed) was predictive of single and multiple fallers, while balance, health and bone density were predictive of fractures in these women. **Conclusion :** These findings could be used by physiotherapists to develop rationale for pre-emptive interventions for delivery to women during the pre-clinical period of change in balance to foster healthier ageing. **Keywords :** postural stability, sensori-motor function, healthier ageing, predicting falls

SS25 110-R-2

DOES AGE AFFECT POSITION OF CENTRE OF GRAVITY WHEN THE SENSES ARE MANIPULATED USING THE MODIFIED CLINICAL TEST OF SENSORY INTERACTION IN BALANCE IN A REPRESENTATIVE SAMPLE OF COMMUNITY AMBULANT WOMEN?

Jill BOUGHEN (Division of Physiotherapy, School of Health and Rehabilitation Sciences The University of Queensland, Australia)

Introduction : This study investigated if changes in the centre of gravity (COG) start location in the antero-posterior direction occurred across age-decades and if start location differed under altered visual input and surface compliance. **Method :** Independent community-dwelling women (N=481) aged 40 to 80 years were categorised in four age-decades (40s, 50s, 60s and 70s) and completed the modified Clinical Test of Sensory Interaction in Balance (mCTSIB) using NeuroCOM Balance Master™ (BM). The mCTSIB included 4 tests in quiet stance: firm surface, eyes open (FiEO) and eyes closed (FiEC) and foam surface, eyes open (FoEO) and eyes closed (FoEC). These data were used to allocate COG start locations to forwards or backwards categories for each test condition. Pearson's Chi Square test was used to test if start location was related to age-decade, visual condition or surface compliance. **Results :** There was no change in start location related to age-decade or visual condition on each surface

type ($p>0.05$). There was a significantly increased likelihood of the position shifting to the forward start location ($p<0.001$) when standing on a foam surface. Conclusion : The location of COG within the base of support does not change with age or under different visual conditions. The start location did change from a firm to a foam surface with a significant shift to an anterior rather than a posterior location of COG on a foam surface. Additional research might further explore the use of this method of tracking COG location in the presence of different pathologies. Keywords : centre of gravity, position, sensory

SS25 110-R-3

TREATMENT TO PREVENT FALLS AND FRACTURES: TARGETING AGE RELATED SENSORI-MOTOR DECLINE THROUGH BALANCE STRATEGY TRAINING OR INTERACTIVE VIDEO GAMING

Jennifer NITZ (*Physiotherapy, The University of Queensland, Australia*)

Introduction : To investigate the impact of a balance strategy training program (BSTP) of exercise devised by physiotherapists to address the age-related sensori-motor and bone density decline contributing to falls and fractures. Self-directed home-based application of the BSTP and the impact of home-based participation in the WiiFit balance program were also investigated for potential utility for sustained preventive health action. Method : Three RCTs of the BSTP in adults over 60 who had fallen ($N=73$), osteopenia ($N=98$) and younger sedentary women ($N=50$) are reported. A controlled trial of the BSTP in osteopenic women as a self-directed home program ($N=23$) and a small study of Wii Fit training in healthy women <60 years ($N=10$) are also reported. Results : Significant improvement in balance and strength measures was found in all studies. Falls and fear of falls were reduced in the faller study and bone density improved in the two osteopenia studies. Sedentary women additionally showed improvement in somato-sensation not measured in the other two RCT studies. The Wii Fit study showed significant improvement in balance and strength but not somato-sensory measures. Conclusion : The BSTP has been demonstrated to reduce fall and fracture risks in a variety of vulnerable patient groups. Wii Fit also has positive benefit on balance but not on somato-sensation. Further comparative studies are indicated to determine benefit from these interventions. Home-based and self-directed BSTP in the osteopenic women aged between 40 and 80 was protective for falls and fractures and might be considered as a cost effective preventive intervention. Keywords : balance bones exer-gaming

SS25 111-R

MODEL OF SOUTH KOREAN SENIOR WELFARE CENTERS FOR A SUCCESSFUL OLD-AGE AND HEALTHY AGED SOCIETY

SS25 111-R-1

THE MEANING AND ROLE OF SENIOR WELFARE CENTERS IN POPULATION AGING AND IN ELDERLY WELFARE DEVELOPMENT

Gyeong-seok Seo (*Woori Mapo Community Welfare Center/Woori Mapo Community Senior Club, Korea*)

Introduction : Studies on the role of senior welfare centers that have dealt with the issues related to elderly people while keeping up with the government policy regarding the aging process of the South Korean society have been insufficient. As such, studies on such matters must be conducted. Method : This study aims to suggest the role of senior welfare centers in the aging of the society by exploring

the changes in the elderly welfare system and in the development of senior welfare centers, looking into the role of such centers in the changes undergone by the society and by the welfare policy for the elderly, and finding the meaning of such role, based on the year 2000, when South Korea became an aging society. Results : This study will be conducted to pave the way for a better understanding of the role of senior welfare centers in the South Korean society's aging process and in the country's elderly welfare development, by analyzing the data regarding the changes in the government's welfare policy for the elderly and regarding the development of welfare programs for the elderly, as well as the senior welfare center evaluation results. Conclusion : It can be said that senior welfare centers have been quantitatively and qualitatively expanded due to the need for them owing to the aging of the South Korean society and the country's political needs, rather than based on the studies and thorough strategies for the advent of an aging society. Keywords : Population aging, welfare policy for the elderly, senior welfare center

SS25 111-R-2

THE ROLES, FUNCTIONS, AND TASKS OF SENIOR WELFARE CENTERS IN THE AGED SOCIETY

Ho-gyeong LEE (*Korean Association of Senior Welfare Centers, Korea*)

Introduction : Senior welfare centers, which are being used by 15% of the elderly in South Korea, are the places where the South Korean elderly culture is reflected as it is. As determined in 2012, about 270 senior welfare centers are in operation nationwide, and it is expected that the number will further increase to keep up with the speed of aging in the country. Method : It is comforting to know that the directors of the senior welfare centers in the country are taking the initiative to reform their centers to keep up with the changes in the elderly welfare environment, and are working hard to raise the level of satisfaction of their users with their facilities, having recognized that reforming their respective centers is not a matter of choice but of survival. Results : This study aims to explore the roles and functions of future senior welfare centers amidst the changes in the elderly welfare environment in the country and in the external environment of elderly welfare by. Conclusion : (1) exploring the current situations of the senior welfare centers operating in the country; (2) analyzing the problems regarding the functions and roles of senior welfare centers prescribed in the Elderly Welfare Act; (3) attempting to redefine the roles and functions of senior welfare centers (i.e., their essential value and purpose); and (4) suggesting ways of developing and maintaining the essential value and purpose of senior welfare centers. Keywords : Senior Welfare Centers, roles and functions, leisure facility

SS25 111-R-3

CASE STUDY OF SERVICE USER ORIENTED PRACTICE IN KOREAN SENIOR WELFARE CENTER- FOCUSED ON TARGET AGE-SPECIFIC SPECIALIZED PROGRAM CASE -

Jun Woo LEE (*Dean of College and Graduate School of Social Welfare of Kangnam University, Korea*)

Introduction : the purpose of this study is to examine present state of the age-specific specialized program among the senior welfare service performed in Korean senior welfare center and seek for directions in service practice which should be pursued by Korean senior welfare center. Method : This study classifies the elderly into pre old, young old, and old old from service user centered perspective, thoroughly analyzes the state of age-specific specialized program practiced in Korean senior welfare center, and seeks for desirable direction of age-specific customized senior welfare service practice of Korean senior

welfare center. This study will collect data by selecting centers practicing specialized age-specific program among Korean senior welfare center and carry out focus group interview of specialists and survey service users. Results : In the past 22 years of history, senior welfare center concentrated on general welfare programs of the elderly like the senior job placement project, volunteer program, leisure culture program, home-care service, day-care service and suicide prevention program. Conclusion : First, Korean senior welfare center should initiated the new senior welfare paradigm from 'service user-centered'. Second, it is significant in that the study is analyzing the status of service practice and grasping the flow by dividing the elderly into pre old, young old, and old old when Korea is facing the entrance of babyboom generation and super-aged society. Third, furthermore, this study provides senior welfare practice service principles which the Korean senior welfare center should pursuit and Korean senior welfare center must position itself as the new front-runner of senior welfare facility. Keywords : Korean Senior Welfare Center, Service User, Target Age-Specific Specialized Program Case

SS25 112-R

SOCIAL WELL BEING OF OLDER PEOPLE BY DIGITAL LIFE

SS25 112-R-1

DIGITAL AGEING POLICIES IN KOREA

Jeong-hyeun KO (*National Information Society Agency, Digital Inclusion Policy Division, Korea*)

Introduction : Korea is the fastest ageing country and the most informatized country in the world. So, Korean government has carried out various digital ageing policies in the perspective of digital welfare from early 21 century by the cooperation of the public and private parts. Method : Government annual white paper and public reports and statistics. Results : Firstly, we've made great efforts for seniors excluded from the Internet to freely access and use it. Thus, we have supported refurbished PCs to low-income seniors and IT education to the elderly for free. Secondly, we've launched Senior IT Volunteer Groups composed of skilled elderly internet users to help provide them with the opportunity to participate in the society using IT. They're volunteering as IT tutors for seniors who don't use internet, or as Silvernet News producers, PC repairs, etc. And we hold senior's IT contest in June annually throughout the country. Finally we established ubiquitous sensing care system to prepare for the emergency, secure safety of seniors who live alone. Therefore Internet usage rate of elderly people rose from 2.3%(2002) to 22.9%(2011). And a lot of seniors make good use of Internet in their lives including running online shopping malls, teaching IT, making videos. Conclusion : Still, there are some problems which have to be solved. Many elderly people yet do not come into the digital world. Besides we have to develop and suggest various models and ways to make full use of Internet to senior Internet users. And finally, we have to deal with the mobile digital divide. Keywords : digital-divide e-inclusion digital-ageing

SS25 112-R-2

PROMOTING ICT PROGRAMS USING SENIORS AS INTERNET NAVIGATORS

Dong Hee HAN (*Research & Development, Research Institute of Science for the Better Living of the Elderly, Research Center for Anti-Aging, Korea*)

Introduction : This study focuses on promoting active aging by using "Internet Navigators" at the Wellaging Center of Busan's RISBLE Institute. The use of Internet Navigators is a way of providing digital education by older people to other older people and to demonstrate

how seniors can serve as role models in the community. Method : Survey and interview 20 Internet Navigators. Results : This study assessed internet navigators' activities. Respondents were asked about their involvement in education and training, social activities and workforce related activities. Internet Navigator was determined to be a role demonstrating a positive image of older persons. This role was also found to be a good way to promote active aging. The program was developed 10 years ago and is deemed a best practice approach in the Nam-gu community of Busan, Korea. The activities of the Internet Navigators will be discussed in terms of several of its activities such the cyber family, e-life monitors, 1080 family game festivals, green walking programs. It was a role model for digital aging in Busan Korea. Conclusion : This presentation also discusses the future direction and development of digital aging to improve the quality of life of older people and how this program can promote Internet Navigators as a new role for seniors seeking an active aging lifestyle. It is suggested that older people can learn and teach computer technology and this in turn will enhance their sense of wellbeing in society. Keywords : Digital Aging, Active Aging, Internet Navigator, Cyber Family

SS25 112-R-3

CLIENTS OF MEDICAL ALERT SERVICE: WHO ARE THEY AND WHY DO THEY CALL FOR HELP?

Cullen T HAYASHIDA (*Kupuna (Elder) Education Center, Active Aging Consortium in Asia Pacific (ACAP) and Kapiolani Community College, USA*)

Introduction : The growth of the frail elderly in home settings, the increase in falls and the tendency for older adults to be at home alone can result in premature hospital and nursing home placements. Nations are also struggling to address the cost of healthcare workers and the challenges of finding good workers. Medical alert service is an important cost effective means of summon help quickly in the event of falls to prevent small problems from becoming medical disasters. While there have been studies on the efficacy of this service, there has been little in the literature on the characteristics of the clients. Who are the clients? What is their average age? What is their typical disability level? How long do they typically stay with this type of service and why do they summon help? Method : Data was collected from about 1000 medical alert subscribers in Hawaii from 2010 to 2011 from a total census of all subscribers served. In addition, a more detailed survey was conducted on one program that managed about 500 subscribers with a survey in April 2012 with a 50% response rate. Results : Most clients are women who are using the services for approximately 31 months before they they need to be placed into a different type of setting. Disability levels on a 1 - 5 scale indicates that most are generally independent (average score ranging from 3.15 to 4.49). Thirty percent of calls are for falls. Conclusion : Understanding client characteristics can help better link PERS services with other needed services. Keywords : Disability Level, Medical Alert, Falls

SS25 112-R-4

SENIORS WITH CHRONIC DISEASE CAN BENEFIT FROM TECHNOLOGY TOOLS TO ENHANCE SELF-MANAGEMENT SKILLS AND IMPROVED HEALTH

Bonnie K. CASTONGUAY (*Health Navigation and Care at Home, Ho'okele Health Navigators, LLC, USA*)

Introduction : Eight of 10 Americans age 65 or older are living with heart disease, diabetes or some other form of chronic illness, according to a new report by the U.S. Centers for Disease Control and Prevention (CDC). Individuals with multiple and complex medical and social

conditions (“complex individuals”) are disproportionate drivers of healthcare costs and are generally experiencing poor individual health outcomes due to lack of a methodical and holistic approach to coordinating their care. Method : Over 100 individuals with multiple chronic illnesses were a part of studies under several grants to determine the effectiveness of care coordination and health coaching enabled with technology. The technology reinforced the care coordination and health coaching efforts to help individuals develop self-management skills through daily biometric monitoring, maintaining meal logs, using educational tools and contact with their care coordinator and or health coach. The initial results have shown improvement in their ability to manage their chronic diseases, specifically diabetes, congestive heart failure, and hypertension. Results : The grants are in progress with preliminary results demonstrating improvement in all measures ranged from 7% to 25%. Of note, those with the greatest improvement were individuals with the worst baseline measures. There was one readmission to the hospital and no ED visits up to this point of the study. Conclusion : The use of technology tools in combination with care coordination and health coaching is effective in helping individuals, particularly seniors with improving the management of their chronic diseases and validates studies performed that have been performed by the VA and Geisinger. Keywords : Self-management, care coordination and health coaching

SS25 113-S
THE BABY BOOMER'S QUALITY OF LIFE AND THE RETIREES OF BABY BOOMER GENERATION

SS25 113-S-1
THE BABYBOOMERS' USING INFORMATION TECHNOLOGY AND ITS EFFECT ON THE DIGITAL LIFE SATISFACTION

Meeryoung KIM (*Department of Community Development and Welfare, Daegu University, Korea*)

Introduction : In the digital period, online community works as support group such as exchanging information and support. Also, users work one another as resources of support and information. This study examined the effect of Korean babyboomers' adaptation abilities on the use of information technology who live in the borderline of the digital and analog period. Method : The sample size of this study was 400 and it was selected by the ratio of region, age, gender based on the population census of the country(except Jeju island) who can use internet. As adaptation abilities, the recognition of the effect of digital life and self-efficacy were used. Results : The research results indicated that there were differences in the approach of information technology, communication through the information technology and the ability of using information technology by self-efficacy and the recognition of the effect of digital life. The results of the regression indicated that self-efficacy and the recognition of the effect of digital life affected on the approach of information technology in a statistically significant level. Also, self-efficacy affected the communication through the information technology and the ability of using information technology in a statistically significant level. The approach, communication and use of information technology have mediating effect on the digital life satisfaction. Conclusion : Since the recognition of the effect of digital life comes from their experiences of using IT, it is important for Babyboomers to have a chance to learn and use the internet. Also it is important to raise their self-efficacy to use IT usefully and effectively. Keywords : competence-environmental press model of adaptation, self-efficacy, use of information technology,

SS25 113-S-2
DIFFERENCES IN ECONOMIC WELL-BEING AMONG KOREAN BABY-BOOMERS: THE SELF-EMPLOYED VS. EMPLOYEES

Jeungkunn KIM (*Dept. of Public Policy, Samsung Economic Research Institute, Korea*)

Introduction : The main purpose of this study is to analyze whether and why there is income difference between employees and self-employed among Korean baby-boomers. Method : Many Korean baby-boomers are forced to retire earlier than other OECD countries. Average retirement age in Koreans is 53. After exiting from their main jobs, many Korean baby-boomers are more likely to run the small size of self-employed business. Using Korea Welfare Panel Study, this study investigates differences in income status between the self-employed and employees and analyzes which factors affect income status among Korean baby-boomers. Results : The results find that the self-employed are more likely to be males and married than employees among Korean baby-boomers. Age and education level are significantly related to differences in income status between a self-employed and an employee. Among Korean baby-boomers, one interesting finding is health status and relationships between family members are positively related to income status of the self-employed, not employees. Conclusion : Social policy for baby-boomers needs to focus on the types of work status in order to maintain their economic status after their retire. In particular, because social safety net does not cover well self-employees in Korea, it is important for government-based social insurance to be modified to fill gaps in the coverage of social insurance and to protect baby-boomers from various social risks. Keywords : Economic Well-being, Baby-boomers, self-employee

SS25 113-S-3
A STUDY ON A NEW WELFARE MODEL FOR ENHANCING BABY BOOMERS' QUALITY OF LIFE

Yeong-ran PARK (*Division of Silver Industry, Kangnam University, Korea*)

Introduction : This study aims to develop a new conceptual welfare model for enhancing quality of life of the Korean baby boomers as they retire. Method : Based upon literature review, secondary analysis of existing data and focus group interviews, this study delineates the socio-demographic characteristics and welfare needs of the Korean baby boomers focusing on their income security, health, social engagement and care issues. Results : According to the analysis of the data, the Korean baby boomers showed ‘diversity’, ‘lack of preparation for retirement’, and ‘blind spot of welfare policy’ as three major characteristics of the group. Conclusion : In order to overcome the limitations of the existing old age security system, this study suggests an alternative model of so called 'Affirmative Action for Active Ageing.' This conceptual approach includes expansion of services for senior life design, development of transitional support programs for the retirees, and reconstruction of the old age security system from an active ageing perspective. Keywords : Korean baby boomers welfare model affirmative actions

SS25 113-S-4
THE SEARCH FOR PURPOSE AMONG US BABY-BOOMER RETIREES

Eldon WEGNER (*Department of Sociology, University of Hawaii at Manoa, USA*)

Introduction : The Baby-Boomer generation in the U.S. has always been distinctive due to the unique social conditions which have shaped their values and their personal characteristics. They are more educated

and enjoy much better health than earlier generations. They have also been characterized as more consumer-oriented, self-indulgent and less compliant with traditional roles. The meaning of retirement is undergoing redefinition due to their generational characteristics as well to rapidly changing economic conditions. Most persons will experience several decades of retired life due to increased longevity, but will individuals be able realize a high quality of life during these years? This paper will focus on finding purpose and personal fulfillment in retirement, which may be a mixture of productive activities as well as leisure and passive activity traditionally associated with retirement. However, many baby-boomers will want to pursue encore careers or volunteer activities which make use of their skills and expertise and give them a sense of purpose. The paper will cover the following: 1) noting the challenge which retirement poses to maintaining economic and psychological quality of life, 2) describing emerging trends towards post-retirement employment in phased retirement arrangements or in a variety of encore careers; 3) describing new efforts to broaden pre-retirement planning beyond financial issues to finding activities which offer purpose and meaning 4) describing efforts to expand the opportunities for meaningful employment and voluntary civic engagement which utilize the education, experience and skills of older adults. Method : Qualitative interviews with experts Results : Funding and information needed. Conclusion : Retirees offer potential productivity. Keywords : retirement planning, volunteer engagement

SS25 114-S

PRODUCTIVE AGEING: AN ASIAN PERSPECTIVE

SS25 114-S-1

TRUST AND VOLUNTEERISM IN HONG KONG: A LIFE COURSE PERSPECTIVE

Alice Ming Lin CHONG, Susu LIU (*Applied Social Studies, City University of Hong Kong, China*)

Introduction : In many conceptualizations of social capital, the construct of 'trust' is considered one of its most important components, and is linked to a stronger involvement in social activities and public affairs (Putnam, 1993). This study aims to examine the effect of trust (societal trust and individualized trust) and age on volunteerism from a life course perspective. Method : The respondents were Hong Kong Chinese aged between 15 and 79 (N=1170), which were divided into three age groups: the youth group (N=455), adult group (N=464) and elder group (N=251). A self-constructed questionnaire was distributed to the participants through a randomized household survey. Results : Age was found to be positively related to individualized trust, but negatively correlated with participation in voluntary work. Significant differences were found between the three age groups in terms of volunteer hours in past month, volunteer motivations and individualized trust. Hierarchical regression analysis showed that societal trust positively predicted voluntary work, while individualized trust indicated negative effect. The two types of trust explained 0.9% variances of voluntary work after age, gender and educational level were controlled ($p < .001$). Conclusion : This study is one of the very few to examine the effect of trust on volunteerism. Generally speaking, Chinese people hold a higher level of trustworthiness towards individuals than society. People endorsing individualized trust might stick to personal and family values, and were less inclined to participate in voluntary work. Strengthened efforts should be taken to raise societal trust and appropriate measures are suggested to promote elderly volunteerism. Keywords : individualized trust, societal trust, elder volunteerism

SS25 114-S-2

PARTICIPATING AND SUSTAINING VOLUNTEER WORK: THE PERSPECTIVES OF OLDER CHINESE VOLUNTEERS

Iris LEE, Diana LEE, Doris YU, Lisa LOW (*The Nethersole School of Nursing, The Chinese University of Hong Kong, Hong Kong*)

Introduction : There is substantial evidence to suggest the positive benefits of senior volunteering. Yet, it is always a challenge to sustain the volunteering effort among older adults. This study explored the motivators and barriers to continued volunteering among the Chinese senior volunteers in Hong Kong. Method : This was an exploratory descriptive qualitative study. Semi-structured interviews were conducted with 26 senior volunteers from various community elderly centers. They were aged above 60 and had participated in volunteer work for at least three months. Content analysis was adopted as the analytic strategy. Results : Altruism was identified as the key motivator for senior volunteers to engage in and continue with the volunteer work. The informants reported three other motivators that encouraged their continuation with volunteer participation. These motivators were 'offering help to others', finding enjoyment in the process' and 'building social relationship with co-volunteers'. On the other hand, declining physical health and family commitment were reported as the major barriers that hinder their continuation in volunteering work. However, majority of the informants neither regarded senior volunteering as a formal role function in later life nor an experience that enable them to achieve life goals. Conclusion : The study provided directions on ways forward to sustain senior volunteering among Chinese older adults. Making the volunteering as a meaningful experience in helping the others and filling the later life years with joys and friendships would be important incentives. Optimizing the physical health of senior volunteers and allowing flexibility in their commitment will also promote continuing participation in senior volunteering. Keywords : Senior volunteering, Chinese older adults, Social participation

SS25 114-S-3

PRODUCTIVE AGING IN SINGAPORE

Treena WU (*Research and Evaluation, Tsao Foundation, Singapore*)

Introduction : Productive aging is an effort to come to a better understanding of individual involvement in society and / or the economy as one option during the later years. This is as opposed to the prevailing myth of a period of frailty, disengagement and the consumption of resources in late life. From the Singapore perspective, productive aging is viewed in terms of continued employment in late life, volunteerism and care-giving. Method : From a meta-review of the literature and policy concerning the aging population of Singapore, older Singaporeans are expected to remain employed longer. The aim is to ensure that older Singaporeans will be able to meet their own increasing social security needs, given longer life expectancy. In addition to employment, the state aims to promote a spirit of volunteerism among older Singaporeans. Also there are older persons who provide care for their spouses or for their grandchildren. Results : Policies tend to be focused on promoting more employment opportunity for older adults, lifelong learning and outreach to reduce age discrimination in the workplace. To a much lesser extent, there are aspects of productive aging in the form of volunteerism and care-giving. Conclusion : While there are various ways for older Singaporeans to be actively engaged within society, there is the concern that there may be too much emphasis on continued employment in late life. The individual should not be expected to take on a disproportionate amount of personal responsibility for old age social security. There should be more state intervention. Keywords :

Productive Aging Singapore

SS25 114-S-4

POST-RETIREMENT ADAPTATION AND PRODUCTIVE AGING: A QUALITATIVE STUDY OF COMMUNITY-DWELLING ELDERLY IN HONG KONG

Susu LIU (*Applied Social Studies, City University of Hong Kong, Hong Kong*)

Introduction : A body of previous research on the impact of retirement typically converged on the view that retirement was a life crisis for older people because of the loss of identity and independence (Braithwaite & Gibson, 1987). However, evidence from productive ageing practice has shown that older retirees are able to maintain social roles and generate societal benefits in modern times. Against this background, this study aims to examine how older adults look upon and adjust to the stage of post-retirement and their approaches to lead a productive ageing life. Method : A total of sixteen older adults aged from sixty-five to ninety living in the community was invited to individual interviews. Participants were selected from two elderly community centres in two districts of Hong Kong respectively. Semi-structured interviews were taped and the dialogues were transcribed verbatim. Results : Research has shown that most of the participants can accept the vital transition to retirees and take their initiative to adjust to post-retirement life. Half of the respondents approved of the notion of productive ageing and practiced it after retirement. Findings revealed that undertaking paid jobs and participating in volunteering work were two major forms of productive ageing among the respondents. Besides, lifelong learning and leisure pursuits in the community were also prevalent approaches to distract loneliness derived from retirement. Remarkably, a few senior citizens were still exercising their civil rights and engaged in civic affairs in the Hong Kong context. Conclusion : Retired older people can continue to make contributions to society by ways of productive aging. Keywords : Retirement, Productive aging, Transition

SS25 115-S

PILOT STUDY ON ABUSE AND NEGLECT OF OLDER ADULTS IN CANADA: PRECURSOR TO A NATIONAL PREVALENCE STUDY

SS25 115-S-1

WHAT IS UNIQUE ABOUT THE CANADIAN STUDY?

Lynn MCDONALD (*Faculty of Social Work; Institute for the Life Course and Aging, University of Toronto, Canada*)

Introduction : The overarching aim of pilot research program, Defining and Measuring Elder Abuse and Neglect was to examine the main problems associated with the conceptual definitions and measurement of mistreatment of older adults; the difficulties on the theoretical front, the current challenges associated with identifying risk factors for abuse and neglect and the issues surrounding the collection of reliable and valid data related to the prevalence of abuse and neglect. Method : The methods included a community consensus approach that integrated the views of major stakeholders from across Canada at the inception of the project and finished with a knowledge transfer event for these stakeholders to share in the results and plan for the future. Results : The Canadian study is unique because: it introduced a theoretical perspective that served as a framework for the study and which was tested in the study; it tested the validity of the measurements for the first time in the elder mistreatment field; the major issues of over and under estimation of the rates of elder mistreatment were examined. Conclusion : An extensive ethics manual was developed that could be

used by both practitioners and researchers in any aspect of intervention through practice or research that afforded the protection and resources older adults might require. Keywords : Elder abuse, Ethics manual

SS25 115-S-2

THE THEORY BEHIND THE STUDY: THE LIFE COURSE PERSPECTIVE AS A FRAMEWORK

Ariela LOWENSTEIN (*President, Yezreel Valley College, Emek Yezreel; University of Haifa, Israel*)

Introduction : Although in recent years more prevalence data on elder abuse is available, there is lack of a unified conceptual paradigm which might help in developing more unified definitions to understand the factors related to elder abuse and neglect, especially in domestic settings. Method : The paper will focus on an attempt to develop such a framework based on linkages between the life course perspective and paradigms of intergenerational family solidarity-conflict and ambivalence, and the ABCX model of coping with stress situations, linking care giving and elder abuse. Results : The paper will present some background information on issues involved in populations ageing and the need for care; the meaning and outcomes of family care for frail elders focusing on abuse in informal care settings, mainly within family systems. Conclusion : Finally, data will be presented and analyzed from a large qualitative Israeli study which followed the first national prevalence study. Keywords : elder abuse, life course, intergenerational family solidarity-conflict and ambivalence

SS25 115-S-3

ISSUES ASSOCIATED WITH MULTILINGUAL AND MULTICENTRIC DATA COLLECTION IN ELDER ABUSE IN CANADA

Marie BEAULIEU (*Gerontology, University of Sherbrooke, Canada*)

Introduction : Canada is a bilingual country of 34 000 000 inhabitants. Conducting a prevalence study on elder abuse necessitates validated material in both official languages (English and French) as well as a research process that allows synchronised modification in both languages. The aim of this presentation is to present the linguistic adaptation (from English to French, back to English) and the research process respecting these adaptations. Method : Our pilot study of elder abuse required 5 steps in both languages. 1) Defining concepts and choosing the "correct" words. 2) Question development. 3) Focus group on comprehension of questions. 4) Cognitive testing. 5) Data collection. Results : 1) Even is the research term for elder abuse is "maltraitance" in French, we decided to ask question using the term "abus" which is mainly used in common language. 2) Questions were designed in both languages. 3) A synchronised phase of focus groups in both languages permitted to modify questions that were not correctly understood. 4) Cognitive testing permitted to test the actual material and to evaluate the length of the interviews (significantly longer in French). 5) Due to recruitment strategies, more French respondents than English ones had experience abuse. What could be considered a bias in another study is seen as strength because it allows ascertaining the capture of abuse experience. Conclusion : This pilot study has permitted to develop and validate a questionnaire in both languages (English and French) that leads us to proceed to a population study on prevalence of elder abuse in Canada. Keywords : elder abuse multicentric study multilingual study

SS25 115-S-4

EXPERIENCES OF ABUSE & NEGLECT AMONG STUDY PARTICIPANTS & VALIDATION OF THE COMMUNITY SURVEY AND RISK FACTORS FOR ABUSE

Cynthia THOMAS (*Human Services, Westat, USA*)

Introduction : The 267 respondents who participated in a community survey were classified into two groups: 39 who indicated that they had experienced abuse or neglect and 228 who said they had not. The main objectives of the analysis were to validate the measures and to determine the extent to which the questions could be answered easily. **Method :** We conducted several analyses to assess the construct validity of the questionnaire (1) An analysis of whether the two groups responded differently to particular items in the instrument (2) A summation of the items on which the two groups differed (3) A Cronbach's alpha computation to determine if the abuse and neglect items constituted a single construct of a particular type of abuse. **Results :** Respondents in the 'known abuse' group answered yes to more items on abuse and neglect than those known not to have experienced abuse, regardless of gender, education level, or marital status. We investigated the risk factors for abuse and found that minorities were more likely to experience abuse than Caucasians. Individuals with one or more ADL or IADL limitations were more than twice as likely to have experienced abuse compared with those with no such limitations. The odds of abuse for individuals who were depressed was more than four times higher than for those not depressed. Having experienced abuse during childhood was associated with a heightened risk of experiencing abuse as an older adult. **Conclusion :** The questions could be answered by the respondents, and the measures in the instrument were validated. **Keywords :** elder abuse prevalence

SS25 116-R
LONG TERM CARE POLICY: CROSS-NATIONAL COMPARISON

SS25 116-R-1
MEETING THE WORKFORCE NEEDS OF THE LONG TERM CARE POPULATION
Edward F. LAWLOR (*Dean, The Brown School, Washington University in St. Louis, USA*)

Introduction : Numerous U.S. national commissions and studies have documented problems of a workforce shortage, high turnover, poor training, and poor quality of care from professionals and paraprofessionals in long term care. These problems will be exacerbated by demographic changes, increasing chronic conditions, and potential reductions in family and community supports for a rapidly aging population. Because the majority of formal long term care expenditures come from public sources, it is important that public policy addresses these workforce shortfall and composition problems. No "market" solutions to training and populating the long term care workforce are in sight. **Method :** Using data from the U.S. Department of Labor Bureau of Labor Statistics, Health Resources Administration, long term care industry sources, and state administrative data, this study constructs four analytic scenarios to estimate different workforce size and composition implications of alternative institutionalization, community and family supports, and long term care eligibility criteria. **Results :** Dramatic differences in the size, composition, and cost trajectories of the long term care workforce result from choices of institutional/professional/quality/and eligibility determinations for service. The hardest and most consequential policy choices will arise in choices about care composition and staffing for dementia and the growing prevalence of serious chronic conditions. **Conclusion :** Federal and state governments, families, and long term care consumers all bear the cost and poor quality consequences of the absence of workforce policy. The paper concludes with proposals for Medicare,

Medicaid, and other public financing alternatives for workforce development. **Keywords :** Policy, Long-term Care

SS25 116-R-2
LONG TERM CARE POLICY IN THE UNITED STATES: THE LAST GREAT HEALTH POLICY CONUNDRUM
Timothy MCBRIDE (*The Brown School, Washington University in St. Louis, USA*)

Introduction : The problems of access, cost containment, and quality have been facing the long-term care (LTC) system in the U.S. for decades. Paradoxically, these problems remain even after the passage of health reform in the U.S., and are becoming more acute with retirement of the baby boom generation. **Method :** This paper uses data from the Health and Retirement Study (HRS) over time (from 1998-2010) to explore the needs for LTC as well as how elders meet these needs through community-level and institutional sources. Using descriptive and multivariate methods to measure how demand for LTC has changed in the U.S. over time, the paper explores the relationship between individual, socioeconomic, and supply-level variables and the utilization of LTC services over time. **Results :** There has been a significant change in the way U.S. elders obtain formal LTC services over the last decade. In general, elders have shifted along the LTC continuum from nursing homes to less intensive formal or informal care. Nevertheless, the cost of these services remains very high, and the burden of LTC costs remains a key problem. **Conclusion :** The U.S. recently passed significant health reform in 2010 to deal primarily with problem of access to care for the uninsured under age 65. The access, cost and quality issues facing the LTC sector remain as they have for decades, and paradoxically an attempt to begin to deal with these problems contained in the Affordable Care Act was put on hold. **Keywords :** Long-term Care Policy

SS25 116-R-3
THE IMPACT OF LONG-TERM CARE INSURANCE IN JAPAN
Naoki IKEGAMI¹, Tomoaki ISHIBASHI², John Creighton CAMPBELL³ (*1. School of Medicine, Keio University, Japan; 2. Department of Health Policy & Management, Keio University School of Medicine, Japan; 3. Political Science, University of Michigan, USA*)

Introduction : Public long-term care (LTC) insurance was implemented in Japan in 2000. The amount of benefits is set according to seven eligibility levels. There is a ten percent copayment, plus some hotel costs in institutional care. Cash benefits are not available because the objective lay in decreasing the family's care burden. The program was projected to expand as new providers, including for-profits, were allowed entry. Consumer choice of providers is the main mechanism for quality control. **Method :** Impact analysis of government data using an internationally comparative framework. **Results :** From 2002 to 2010, the monthly number of users increased 1.8 times, and as a proportion of the population 65 and over, from 9.9% to 14.3%. The share of HCBS (home and community-based services) increased from 57.5% to 67.3% but the composition of services, two-thirds day care, two-fifth home-helpers, and one tenth respite care has remained the same. But in institutional care, hospital based inpatient care has decreased from 12 to 6%, while the proportion in Alzheimer's group homes and private nursing homes has increased from 2% to 11%. The increase in annual expenditures is less than the number of users: 1.4 times between 2002 and 2010 with the ratio of HCBS expanding from 26.2% to 35.7%. **Conclusion :** The government has tried to contain costs by changing the composition of institutional care and limiting

benefits for those requiring only light care. However, more radical reforms may be needed to maintain the sustainability of the program.
Keywords : Long term care, Japan, cross-national comparison

SS25 116-R-4

REBALANCING LONG TERM CARE IN HONG KONG

Terry LUM¹, Ernest CHUI², Vivian LOU¹, Mandy LAU³ (1. *Social Work and Social Administration & Sau Po Centre on Ageing, The University of Hong Kong, Hong Kong*; 2. *Social Work and Social Administration, The University of Hong Kong, Hong Kong*; 3. *Sau Po Center on Ageing, The University of Hong Kong, Hong Kong*)

Introduction : Hong Kong is aging very fast. Approximately, 14% of its population were 65 year or older in 2011. By 2030, 1 in every 4 people in Hong Kong will be aged 65 and over. The dominating mode of long term care (LTC) in Hong Kong is residential care with community care as supplement. Our center was appointed by the HK Government to conduct a comprehensive review of the LTC system in HK in 2010. We will present findings from this study in this presentation. Method : We reviewed all LTC policy documents and administrative data. We conducted a survey with 4,000 people to assess their LTC needs and preference. We also conducted focus groups with stakeholders. Results : The LTC system in HK is imbalance. The ratio of public spending between community care and residential care was \$1.0 to \$6.7 in 2010-11. In 2010-11, there were 24,746 publicly funded residential vs. 7,098 community care places. About 6.8% of all residents age 65 years or older were in nursing home. While there is still a long waiting list (more than 26,000 people) for government funded residential care, very few older people want to move to nursing home. We found that the government policies provide a strong incentive for family members to send their elderly family members to nursing home. We proposed a LTC voucher system for the HK Government to rebalance the LTC system. Conclusion : The HK Government accepted our recommendation and will implement a pilot LTC voucher system in 2013. Keywords : Long term care, Voucher, Hong Kong

SS25 123-C

TEACHING NURSING HOMES: PAT, PRESENT AND FUTURE

SS25 123-C-1

TEACHING NURSING HOMES: PAST, PRESENT AND FUTURE

Paul R. KATZ¹, John E. MORLEY², Sabine Von PREYSS-FRIEDMAN³, Daniel SWAGERTY⁴ (1. *Geriatrics, Baycrest Health Centre and University of Toronto, Canada, Canada*; 2. *Geriatrics, St. Louis University, USA, USA*; 3. *Geriatrics, University of Washington, USA*; 4. *Geriatrics, University of Kansas, USA*)

The Teaching Nursing Home (TNH) has remained conceptually appealing over the last several decades but remains difficult to operationalize and sustain. The role of individual disciplines in creating the link between research, education and clinical care remains ill-defined. This symposium seeks to highlight the core elements of TNHs including evaluation metrics and models of University affiliations that are predictive of success. Objectives of the session include: 1. Review of historical trends in the context of new governmental sponsored models (i.e. Province of Ontario) of Centres for Learning Research and Innovation. 2. Review of successful research models and the link to quality improvement initiatives. 3. Highlighting approaches to the integration of research, care and education through enhanced interprofessional competencies and 4. Review of successful educational modalities based on learner needs,

experience and length of exposure to nursing home setting. Presenters are internationally recognized nursing home specialists with expertise as researchers, clinicians and educators. Replication of successful TNH models is key to sustaining a competent and dedicated professional workforce with academic credibility. Keywords : Nursing home, education, research

SS25 123-C-2

KEYS TO SUCCESSFUL RESEARCH IN THE NURSING HOME

John E. MORLEY (*Geriatric Medicine, Saint Louis University, USA*)

Overall research in the nursing home is relatively rare compared to other health care venues. The most common areas researched are pressure ulcers, fractures, weight loss, restraints, delirium, polypharmacy and behavioral disturbances. Most intervention articles are small care best practice type articles. There is a paucity of multisite randomized controlled trials. Studies showing the efficacy of education on improving care are also lacking. Research in nursing homes has a cost to the nursing home (which needs to be reimbursed) and also raises a variety of ethical issues. Keys to conducting successful research include: a) Obtaining administration, staff and family/resident support; b) Design and pilot the project carefully and at highest scientific standards; c) Train staff to perform research tasks and reward them for their participation; d) Make the need for surrogate consent clear; e) Make sure all costs are covered; f) Provide feedback on outcomes to all involved; and g) Consider using SQUIRE (<http://squire-statement.org>) guidelines for quality improvement projects. Research in the nursing home is desperately needed and can be highly rewarding for all involved. Keywords : Nursing Home

SS25 123-C-3

USING QUALITY IMPROVEMENT TO ENHANCE INTERDISCIPLINARY COMPETENCIES

Sabine VON PREYSS-FRIEDMAN (*Medicine, Division of Gerontology and Geriatric Me, University of Washington, USA*)

Quality Improvement is an integral part of Long-Term Care. The Centers for Medicare & Medicaid Services (CMS), an agency within the US Department of Health & Human Services responsible for administration of several key federal health care programs is currently piloting new models of quality assessment and process improvement (QAPI). Integrating Quality Improvement projects into the LTC setting enables learners to collect and evaluate data critically, do root cause analysis of quality problems and integrate available evidence and best practice models into clinical practice. Quality improvement is an excellent teaching tool for learners of different disciplines, such as nursing, dietary services and Geriatric Medicine Fellows. Examples of successful rapid cycle improvement processes from different disciplines will be presented. Keywords : Long-Term Care

SS25 123-C-4

TEACHING NURSING HOMES: PAST, PRESENT AND FUTURE: NH RESIDENTS

Daniel SWAGERTY (*Department of Family Medicine, American Medical Directors Association, USA*)

Introduction : NH residents, with their wide spectrum of care needs, offer an ideal substrate upon which the basic principles of geriatric care can be demonstrated. Despite significant frailty, NH residents remain quite heterogeneous and provide health care professionals significant opportunity to enhance physical and psychological function and to positively impact on quality of life. Method : A trainees

experience in a TNH is dependent on a number of variables including the learner's needs and expectations, duration of the exposure, availability of role models and characteristics of the NH resident population. The trainees experience is also linked to the specific teaching modalities employed in the NH setting. These modalities may vary from traditional didactic and apprenticeship approaches to simulation labs, role modeling and distance learning. Results : Interprofessional and team based competencies are key targets regardless of specialty focus. Conclusion : Research is desperately needed which will provide insights into the targeting of educational approaches based on the mandates specific to a given profession. Priority must also be given to studying the impact of training on the development of a competent long term care workforce and on resident based quality measures. Keywords : Teaching Nursing Home

SS25 124-R

ADDRESSING END-OF-LIFE CARE ISSUES: A GLOBAL PERSPECTIVE ON RESEARCH, POLICY AND PRACTICE

SS25 124-R-1

PREFERENCES REGARDING END-OF-LIFE CARE AMONG OLDER ADULTS IN SINGAPORE

Chetna MALHOTRA¹, Terry FLYNN², Assad FAROOQUI³, Marcel BILGER³, Eric FINKELSTEIN¹ (1. *Lien Centre for Palliative Care, Duke-NUS Graduate Medical School, Singapore*; 2. *Centre for the Study of Choice, University of Technology, Australia*; 3. *Program in Health Services and Systems Research, Duke-NUS Graduate Medical School, Singapore*)

Introduction : Understanding end-of-life (EOL) care preferences is important for policymakers and EOL service providers. The objective of this paper was thus to quantify the EOL care preferences among community-dwelling Singaporeans aged 50 years and above using a stated preference conjoint survey. Method : A conjoint survey was administered to 522 older adults who were asked to choose between two hypothetical EOL care scenarios as a result of advanced cancer. The scenarios were described through 7 attributes with between 2 and 4 levels for each: severity of pain, amount of care required from family-members or friends, expected length of survival, quality of health care experience, expected cost of treatment from diagnosis to death, source of payment, and place of death. Ten hypothetical scenarios were presented to each respondent. Conditional logistic regression was used to estimate relative intensity of preferences. Results : Respondents showed a strong preference toward spending money from their own Medisave (a health savings account) account and were most averse to paying from family member's out-of-pocket. There was a higher willingness to pay to avoid being in severe pain and to be able to die at home compared to paying for treatments to extend life by one additional year. Conclusion : These findings have implications for health insurance design, quality standards for EOL care, pain management, and other EOL care policies in Singapore. Keywords : End-of-Life Care, Preferences

SS25 124-R-2

END-OF-LIFE CARE-RELATED PREFERENCES, COMMUNICATION, PRACTICE AND THE LAW IN ISRAEL

Sara CARMEL (*Center for Multidisciplinary Research in Aging, Ben-Gurion University of the Negev, Israel*)

Introduction : End-of-life care in Israel will be presented through findings of a number of studies. Method : Studies were conducted on preferences for use of life-sustaining treatments in various illness conditions of older persons, the general public, and physicians.

Results: Results of comparative analyses between doctors and patients, and differences in preferences of various population groups will be portrayed. Conclusion : We will present conclusions, legal developments and practical implications. Keywords : End-of-life care, policy, physician practice

SS25 124-R-3

END-OF-LIFE CARE FOR PERSONS WITH DEMENTIA

Iva HOLMEROVA¹, Hana VANKOVA² (1. *Faculty of Humanities, Charles University in Prague, Czech*; 2. *CELLO, Faculty of Humanities and The 3rd Medical Faculty, Charles University in Prague, Czech*)

Introduction : Dignity is stipulated by many international documents as a principal human right. The presentation will be concentrated on importance of dignity support in dementia care along the trajectory of the syndrome of dementia including terminal stages. Method : Consensus on care for persons with dementia. Results : Two consensus on dementia will be presented: Strategy of care for persons with dementia suggested by the Czech Alzheimer Society (responsive support or P-PA-IA, care responding to needs of persons with dementia) and consensus on palliative care for persons with dementia of Alzheimer Europe. Conclusion : Alzheimer Europe set up a working group in 2007 to look at the practical issues linked to the good care of people dying with/from dementia. Recommendations on palliative care for persons with dementia were written in the context of ongoing consultation with Alzheimer Europe's member associations, reflecting available literature and international documents. Strategy P-PA-IA - care and support of persons with dementia has been a result of many discussions in the Czech Alzheimer Society, workshops and meetings of our contact points during the recent three years. We have consulted also staff members in different institutions and organisations in our country and abroad (in Austria, Germany, Norway, Switzerland etc). Experience with deployment of the P-PA-IA strategy in Long Term Care institutions in the Czech Republic will be discussed. Supported by the grants NT11325 and NT13705 of the Ministry of Health of the Czech Republic. Keywords : dementia, palliative care, dignity

SS25 124-R-4

THE END-OF-LIFE CARE AND ROLES OF PROFESSIONALS IN NINE COUNTRIES

Kanao TSUJI (*President, Life Care System, Japan*)

Introduction : The issues surrounding the end-of-life care in contemporary Japan is not limited to terminal cancer cases. Care for patients with communication difficulties due to dementia, especially the issue on provision of artificial nutrition, is also becoming a big challenge. The presenter proposes that influencing factors behind these issues include not only the asymmetrical availability of information between professionals and patients/families but also other factors such as differences in professional philosophy, view of life and death, and national system. Through analyses of data, the presenter shows how not only the country itself but also profession and view on life and death affect the judgment of professionals. Method : This survey was administered to doctors, nurses, caregivers, social workers and others in Japan, United States, France, United Kingdom, the Netherlands, Israel, Czech Republic, South Korea, and Australia. We viewed two common clinical cases to see their choices in treatment and what they thought was ideal. At the same time, we asked about laws and regulations for end-of-life care to the collaborating organizations in each country. Results : Data were drawn from a sample of 2,117 physicians, nurses, and caregivers from 9 countries (Australia, Czech

Republic, France, Israel, South Korea, Netherlands, UK, USA and Japan) in 2010-2011. The presenter also shows that differences across countries can be categorized into 3 groups: European countries, Japan and South Korea, and Czech. Conclusion : These findings suggest the necessities for interdisciplinary efforts in the end-of-life care and for establishment of common base for mutual communication. Keywords : end-of-life care, international comparison, death and dying

SS25 125-C

CENTENARIAN STUDIES NETWORK: AN INTERNATIONAL COLLECTION OF STUDIES -LEARNING FROM OUR SIMILARITIES AND DIFFERENCES

SS25 125-C-1

PHENOTYPE CONSIDERATIONS WHEN ASSESSING EXCEPTIONAL LONGEVITY IN HUMANS

Nir BARZILAI¹, Sofiya MILMAN², Jill CRANDALL² (1. *Medicine & Genetics, Albert Einstein College of Medicine, USA*; 2. *Medicine, Albert Einstein College of Medicine, USA*)

Introduction : We hypothesize that people with exceptional longevity may harbor genetic factors that protect them from age-related diseases. Method : Phenotyping this group is important for three reasons: 1) Identification of a phenotype that leads to candidate gene approach; 2) Establish phenotype after discovery by an un-biased approach; 3) Identification of major environmental interactions that may contribute to longevity. Results : We will demonstrate examples for these considerations such as the identification of the phenotype of increased HDL cholesterol in families of centenarians lead to the discovery of a longevity genotype for HDL; discovery of GH/IGF-1 mutations, phenotypic expression and environmental factors in centenarians. Conclusion : We conclude that detailed phenotyping of individuals with exceptional longevity is central for establishing inferences based on genetic discoveries. Keywords : Centenarians, phenotype

SS25 125-C-2

DEMOGRAPHY AND BIOMEDICAL CHARACTERISTICS OF SUPERCENTENARIAN IN JAPAN

Nobuyoshi HIROSE, Yasumichi ARAI (*Department of Internal Medicine, Keio University, School of Medicine, Japan*)

Introduction : Once centenarian was considered to be a human model of healthy aging. However, the number of centenarian is exponentially increasing and the function of the increasing centenarians is usually low. Base on these finding, we think that the real human model of healthy aging is supercentenarian. The investigation of supercentenarian is quite difficult, because of their small numbers. We accumulate the data of over 60 centenarians. Here we present the demography and biomedical characteristic of supercentenarian in Japan. Method : we use the data of national census for the demography of supercentenarian. We visited 25 supercentenarians and check their function and medical record. We also draw the blood for biochemical and genetic research. Results : The number of supercentenarian is increasing from 5 in 1991 to 78 in 2010. The ratio of male to female in 2010 is 1 to 25. The increase of supercentenarian is due to the increase of female supercentenarian. The probability of men to become supercentenarian is approximately 1 out of 400,000. However, the probability of women to become supercentenarian is 1 out of 20,000. The medical history of supercentenarian shows that they usually do not contract chronic diseases. As the example of healthy supercentenarian, the data of the oldest man in Japan will be presented. Conclusion : The supercentenarian is increasing due to the increase of female supercentenarians. They usually do not contract chronic diseases.

These extremely long-lived people is the best candidate for whole genome sequencing to identify the longevity genes. Keywords : supercentenarian , woman, model of healthy aging

SS25 125-C-3

CENTENARIANS UP REGULATE THE EXPRESSION OF MICRO-RNAS

Jose VINA¹, Consuelo BORRAS¹, Eva SERNA¹, Juan GAMBINI¹, Kheira MOHAMMED¹, Juan Antonio AVELLANA², Angel BELENGUER², Leocadio RODRIGUEZ-MANAS³ (1. *Department of Physiology, University of Valencia, Spain*; 2. *Servicio de Geriatria, Hospital de La Ribera, Spain*; 3. *Department of Geriatrics, Hospital Universitario de Getafe, Spain*)

Introduction : Centenarians not only have an extraordinary longevity, but also show a compression of morbidity. They preserve the capacity of maintaining homeostasis, and this is the reason for them to reach such a long life. We hypothesized that centenarians should be extremely well regulated at molecular level, and studied their microRNA expression profile, because microRNAs are directly involved in the regulation of gene expression. Method : We compared microRNA expression profiles of 33 centenarians, 80 octogenarians and 80 young individuals, by analysing the expression of 15,644 mature microRNAs and, 2,334 snoRNAs and scaRNAs in peripheral blood mononuclear cells. Results : Principal component analysis showed that centenarian microRNA expression profile was similar to that of the young individuals, but different from octogenarians. Moreover, centenarians show an up-regulation of the expression of 102 microRNAs when compared to octogenarians and only one down-regulated, and even when compared to young individuals, 7 microRNAs are up-regulated and none down-regulated. Conclusion : Centenarians up-regulate the expression of small non-coding RNAs like microRNAs and scaRNAs. This may explain their exceptional ability to maintain homeostasis even in extreme aging. Acknowledgements: This work was supported by grants SAF2010-19498, ISCIII2006-RED13-027, PROMETEO2010/074, 35NEURO GextGent and EU Funded COSTB35 and CM1001. This study has been co-financed by FEDER funds from the European Union. Keywords : Small non-coding RNA, Extreme longevity, Regulation of transcription

SS25 125-C-4

MISSENSE MUTATIONS ON BPIFB4 ASSOCIATE WITH HUMAN LONGEVITY AND HAVE BENEFICIAL EFFECTS ON ENDOTHELIAL VASCULAR FUNCTION

Annibale PUCA, Carmine VECCHIONE (*Medicine, University of Salerno/ITB-CNR, Italy*)

Introduction : The genome of exceptionally long-lived individuals (LLIs) is thought to be enriched/depleted in polymorphisms that influence aging, which is associated with progressive reduction in nitric oxide and impairment of endothelial function. Method : Previously identified genetic risk variants were validated across two additional populations, followed by testing the effect of mutated proteins on vascular function. Results : Using a recessive model, a missense mutation in bactericidal/permeability-increasing (BPI) fold-containing family B member 4 (BPIFB4) was the only variation found consistently associated with human longevity in sets of individuals from Germany (1,628 LLIs vs 1,104 younger controls: OR=1.43; 95% CI=1.12-1.80; p=0.0037, Bonferroni adjusted p=0.015) and the USA (1,461 LLIs vs 526 younger controls: OR=1.62; 95% CI=1.15-2.27; p=0.0053; meta-analysis on German- and US-American-set: OR = 1.49; 95% CI=1.22-1.81; p<1x10⁻⁴) during a replication attempt

conducted on the top four missense polymorphisms or taggers identified previously in the Southern Italian Centenarian Study (OR=2.42; CI=1.56-3.77; p=5.8x10⁻⁵). The mutation significantly enhanced endothelial vasorelaxation; this effect was coupled with activation of endothelial nitric oxide synthase, through phosphorylation on Ser1177. Moreover, expression of the mutated protein in vessels of heterozygous methylenetetrahydrofolate reductase knockout mice rescued the impaired nitric oxide-induced vasorelaxation encountered in these mice. Conclusion : Mutations in BPIFB4 are associated with longevity and may represent a new focus for therapies aimed at reducing vascular endothelial dysfunction. Keywords : Centenarians, Nitric Oxide, Vasorelaxation

SS25 125-C-5

ACCELERATED AGEING OF THE BRAIN FROM 70 TO 101 YEARS OLD

Zixuan YANG, Wei WEN, Melissa SLAVIN, John CRAWFORD, Perminder SACHDEV, Charlene LEVITAN, Henry BRODATY (Centre for Healthy Brain Ageing (CHeBA), School of Psychiatry, University of New South Wales, Australia)

Introduction : Understanding changes of brain structure in exceptional longevity is crucial to differentiate normal versus pathological ageing and disclose the secrets of preserved cognition. We aim to examine the effect of age on cerebral atrophy and cognition in a very elderly sample. Method : 499 non-demented subjects (283 females, age range=70.4-101.1 years) with brain MRI were selected from our two study cohorts. Volumetric segmentation of grey matter (GM), white matter (WM), total brain volume (TBV), intra-cranial volume (ICV) and hippocampal volume was performed. Cognition was measured by Mini-Mental State Examination (MMSE) and then divided into high (>27/30) and low-performance groups (≤27/30). Results : Regression analysis showed a linear decrease in TBV/ICV ratio and hippocampal volume with age while controlling for gender, education, MMSE, APOE ε4 status and ICV. A significant non-linear effect of TBV/ICV ratio was also shown, indicating a greater rate of decline among older subjects. Older age, together with a better MMSE performance, were significantly associated with an increase in GM/WM ratio. A significant relationship between a higher TBV/ICV ratio and high MMSE performance was only observed in younger participants (<80 years old); whereas the significant relationship between hippocampal volume and MMSE scores remained constant across the eighth to eleventh decades of life. Conclusion : Our study is the first to show an accelerating pattern of cerebral atrophy from 70 - 101 years old. Results suggest that the brain structure-cognition relationship in exceptional longevity is different from younger elderly, and hippocampal volume may be a stronger neuroimaging marker of cognition than general atrophy. Keywords : exceptional longevity, cerebral atrophy, cognition

SS25 125-C-6

LONGEVITY BLUE ZONES: A FIRST ATTEMPT TO COMPARE LONGEVITY BETWEEN DIFFERENT POPULATIONS

Michel POULAIN¹, Gianni PES² (1. IACCHOS, Universite catholique de Louvain, Belgium; 2. Department of Clinical and Experimental Medicine, Universita degli Studi di Sassari, Italy)

Introduction : The concept of Longevity Blue Zone (LBZ) has been defined as a rather limited geographical area where people share the same lifestyle and environment and whose exceptional longevity has been validated convincingly. This study is a first attempt to compare longevity across the four LBZs identified so far: Sardinia, Okinawa,

the Nicoya peninsula in Costa Rica and the island of Ikaria in Greece. Method : The apparent longevity of a population can be measured by a number of indicators. The Centenarian Prevalence (CP), i.e. the number of centenarians reported to the total resident population, largely used in the literature, is sensitive to biases owing to migration and changes in fertility. More reliable indicators are the Life tables (cohort life table and period life table), the Extreme Longevity Index (ELI), i.e. the proportion of newborns in a given municipality who reach age 100, and the Centenarian Rate (CR), i.e. the ratio between centenarians and the persons who were 60 years old 40 years earlier in the same population. Results : As a preliminary result of our investigations we confirm the exceptional level of male longevity in the Sardinian LBZ and female longevity in Okinawa. Conclusion : We observed that LBZ populations are geographically and/or historically isolated and characterized by a traditional lifestyle including intense physical activity beyond age 80, a reduced level of stress and large family support for the oldest olds. These people have succeeded in creating a delicate balance between the benefits of the traditional lifestyle and those of modernity (increased wealth, better medical care). Keywords : Longevity Blue Zones

SS25 125-C-7

CENTENARIAN STUDIES NETWORK: AN INTERNATIONAL COLLECTION OF STUDIES -LEARNING FROM OUR SIMILARITIES AND DIFFERENCES

Paola SEBASTIANI (Biostatistics, Boston University, USA)

Introduction : There is strong evidence that genetics is a major factor for extreme survival and centenarian studies are ideal to discover genetic variants that predispose to extreme lifespan. Method : We analyzed genome wide genotype data from approximately 2,000 subjects enrolled in the New England Centenarian study to identify rare and common variants associated with extreme longevity. Both linkage analysis of sib-pairs concordant for extreme longevity and association studies of multiple generations were used to identify new longevity associated variants and chromosomal regions that should be enriched of rare longevity variants. Meta-analysis of results published from other longevity and healthy aging studies were used for replication. Results : The analysis confirmed known longevity associated variants, such as SNPs in APOE, but also identified new loci in several chromosomes that should be targets for focused sequencing. Conclusion : Centenarian studies are ideal for discovering genes associated with longevity, and collaborations from multiple studies is needed to discover longevity variants that are robust across different populations. Keywords : centenarian, genetics

SS25 125-C-8

CENTENARIAN STUDIES NETWORK: AN INTERNATIONAL COLLECTION OF STUDIES -LEARNING FROM OUR SIMILARITIES AND DIFFERENCES

Thomas PERLS¹, Nir BARZILAI², Perminder SACHDEV³, Chalene LEVITAN³, Gian PESS⁴, Nobuyoshi HIROSE⁵, Paola SEBASTIANI⁶, Jose VINA⁷, Gil ATZMON⁸, Annibale PUCA⁹ (1. Medicine and Geriatrics, Boston Medical Center & Boston University School of Medicine, USA; 2. Institute on Aging Research, Einstein College of Medicine, USA; 3. Sydney Centenarian Study, University of New South Wales, Australia; 4. Department of Medicine, University of Sassari, Italy; 5. Division of Geriatric Medicine, Department of Internal Medicine, Keio University School of Medicine, Japan; 6. Department of Biostatistics, Boston University School of Public Health, USA; 7. Department of Physiology, Faculty of Medicine, University of Valencia, Spain; 8. Institute on Aging Research, Einstein College of Medicine, USA; 9. Neurology, IRCCS

MultiMedica and Universita degli Studi di Salerno, Italy)

Introduction : The Centenarian Studies Network (CSN) is a group of 7 centenarian studies and associated scientists from the USA (Ashkenazi Jewish and New England Centenarian Studies), Australia, Sardinia, Japan, Spain and Italy. **Method :** Investigators from the CSN will provide 10 minute presentations according to the following topics: The ideal phenotype panel for the study of exceptional survival: 1) Health related behaviors (Nir Barzilai) 2) Neuropsychological and MRI assessment (Perminder Sachdev & Charlene Levitan) 3) Demographic study (Gianni Pes) 4) Physical, functional and biochemical assessment (Nobu Hirose) **Genetic findings:** 1) GWAS meta-analysis (Paola Sebastiani) 2) micro-RNA findings (Jose Vina) 3) Cross-ethnic comparisons (Gil Atzmon) 4) Functional variants and possible pathways (Annibale Puca). **Results :** Results for the above 8 topics will be presented. **Conclusion :** Centenarian studies must pool their rare resources if they can expect to produce large enough samples for robust findings and it is essential that genetic studies attempt to replicate and compare each other's results. In addition, this Centenarian Studies Network includes a multidisciplinary group of clinicians, geneticists, molecular biologists, and biostatisticians to effectively deal with the complexity of the many genetic and environmental factors that contribute to exceptional longevity. **Keywords :** centenarian, longevity, healthy aging

SS25 126-C

ARTHRITIS AND COMORBID CONDITIONS: IMPACT ON MANAGEMENT ACROSS THE GLOBE

SS25 126-C-1

ARTHRITIS AND COMORBID CONDITIONS: IMPACT ON MANAGEMENT

Sun CHUNG (*Rehabilitation Medicine, Seoul National University Hospital, Korea*)

Introduction : Recent advances in soft tissue imaging has enabled epidemiologists and clinical researchers to identify that relatively minor breakdown of soft tissue integrity not only causes common, self-limiting musculoskeletal pain, but also initiates a cascade of musculoskeletal deterioration that can lead to chronic pain and disability. Musculoskeletal pain and disability caused by life-long deterioration of soft tissues impose serious problems in a longevity society because a person with a longer life expectancy means longer suffering than one with a shorter life span. Successful management of lifelong, widespread, repetitive soft tissue breakdown is crucial to maintain the quality of life in modern longevity societies. **Method :** Early diagnosis is very important to detect which connective soft tissues is pathologic and underlying patho-mechanism. Even with recent advances in soft tissue imaging, it is still challenging to diagnose a soft-tissue lesion that is truly responsible for current symptoms because most of soft tissue lesions are very subtle and co-exist with many asymptomatic lesions. **Results :** A comprehensive approach to clinical problems is necessary to identify the source of pain accurately. Development in dynamic and/or functional evaluation will help to solve this challenge in the near future. **Conclusion :** Because soft tissue lesions are progressive with numerous injury-healing-reinjury cycles throughout a whole life, a treatment approach with one big operation may not be appropriate. Self management with a comprehensively designed exercise and postural correction will be the most appropriate way to facilitate healing processes and prevent re-injury. Minimally invasive local interventions can be used as adjunctive treatments. **Keywords :** arthritis, soft tissue, management,

SS25 126-C-2

SARCOPENIA, OBESITY AND FRAILITY: A TROUBLING TRIAD

Debra L. WATERS (*Preventive and Social Medicine, University of Otago, New Zealand*)

Introduction : Healthcare systems worldwide are vulnerable to the increasing prevalence of obesity, sarcopenia and frailty in older adults. These conditions, coupled with increasing longevity and rising health care costs, will challenge public health capacity in the future. Self-management of these chronic conditions, through appropriate interventions, will be critical for meeting this challenge. **Method :** Community-based and intensive life-style interventions have been used to combat the loss of physical function, frailty and sarcopenic-obesity in older adults. Results from evaluations of peer-led exercise programs in New Zealand and randomized controlled trials of life-style interventions in the US will be presented. **Results :** Community-based peer-led exercise classes in New Zealand have been shown to reduce frailty through improved, and maintained, physical function, while also reducing falls incidence. These long-running classes are both effective and sustainable, and need to be trialed in other settings. Intensive lifestyle interventions (exercise and diet) in the US, which achieve a 10% weight loss over 6 months, result in improved physical function, body composition, and decreased frailty in obese older adults. These results are encouraging, but research on long-term weight maintenance and translation into communities are needed. **Conclusion :** Peer-led exercise classes and life-style interventions appear to be promising self-management interventions that reduce the burden of physical disability and frailty related to obesity and sarcopenia in older adults. Coordinated efforts are needed to promote and translate these interventions, and while also evaluating their efficacy and cost effectiveness. **Keywords :** Sarcopenia Frailty Obesity

SS25 126-C-3

THE PUBLIC HEALTH IMPACT OF ARTHRITIS

Carol JAGGER (*Institute for Ageing and Health, Newcastle University, United Kingdom*)

Introduction : With continued increases in life expectancy, the key question is whether the extra years are spent healthy and free from disability. Major causes of disability in later life are chronic diseases such as stroke, coronary heart disease (CHD), dementia, and arthritis. We explore the public health impact of arthritis, compared to the other three diseases, by disability-free life expectancy (DFLE), a population health indicator which permits comparison of the impact of fatal and non-fatal diseases on disability on the same metric. **Method :** A dynamic macro-simulation model (SIMPOP) has been developed to estimate future numbers aged 65+ with disability to 2030 under different health/disease scenarios. Pathways between chronic disease, disability and death were modelled with data from the nationally representative MRC Cognitive Function and Ageing Study and then applied to the 1992 national population data to simulate the next two years and repeated to 2030. SIMPOP produces projections of absolute numbers with and without disability and DFLE. **Results :** Arthritis had the highest prevalence at baseline (53%). Although not the most disabling disease, arthritis had the greatest population attributable risk of disability, at around 25%. Scenarios for trends in incidence, risk factors and treatment of disease were devised from systematic reviews and applied in SIMPOP. This presentation focuses on the level of health improvements necessary to produce compression of disability over the next twenty years. **Conclusion :** Reducing the disabling effect of arthritis will have significant gains in years without disability in later life and could result in a compression of disability. **Keywords :**

disability-free life expectancy

SS25 126-C-4

ARTHRITIS AND COMORBIDITIES: INTERPLAY AND IMPACT ON MANAGEMENT

Lynne PARKINSON¹, Julie Ellen BYLES², Lynn FRANCIS²
(1. Health CRN, CQUniversity, Australia; 2. Research Centre for Gender Health and Ageing, University of Newcastle, Australia)

Introduction : Arthritis is a leading cause of disability, particularly in older people, but is often overlooked when impacts of chronic disease on health service use and health outcomes are considered. The majority of arthritis may not directly lead to increased mortality, however, these common, enduring conditions lead to significantly decreasing quality of life over time. Simply by virtue of being so common or, perhaps, due to common etiological pathways, arthritis is often associated with multiple comorbidities. We provide an overview of current international research into the impact of arthritis on management and health outcomes for three comorbidities (cardiovascular disease, asthma, diabetes), and present data from older Australian women as a case study. Method : A literature review will be presented, and data from older participants (born 1946-51) in the Australian Longitudinal Study on Women's Health. This project explores the development of cardiovascular disease, asthma, and diabetes in relation to development of arthritis; the degree to which this order of development explains health care use; and how having arthritis impacts on treatment (hospitalisations, medicines use) for other conditions. how arthritis impacts on management for three selected comorbidities (cardiovascular disease, asthma, diabetes). Results : There are many patterns of comorbidity development in relation to development of arthritis; with order of development explaining some patterns of health care use. Arthritis can impact on treatment for other conditions. Conclusion : It is imperative that arthritis is not overlooked in health care settings as both a cause of disability in its own right and as a serious comorbidity. Keywords : arthritis, comorbidity, management, hospitalisations, medicines

SS25 127-C

DEFINING SARCOPENIA: ASIAN PERSPECTIVES

SS25 127-C-1

SARCOPENIA: EPIDEMIOLOGY AND PREVENTION IN JAPAN

Takao SUZUKI (Res. Inst, NCGG, Japan)

Introduction: The European Working Group on Sarcopenia (EWGSOP) developed a practical definition for age-related sarcopenia with the algorithm based on measurements of gait speed, grip strength and muscle mass. However presentation and clinical attributes of sarcopenia in older Asian adults may differ. We would like to introduce the prevalence of sarcopenia of the elderly in Japan according to different definition of this age-related condition. Method : A total of 5,104 elderly people aged 65 and over living in the Obu city participating to the OSHPE were assigned to the study for estimating the prevalence of sarcopenia and establishment for the prevention of sarcopenia. They were underwent whole-body dual energy X-ray absorptiometry (DXA) for estimation of muscle mass. Among these participants, 4,811 elderly could be examined all of measurements for diagnosis of sarcopenia. Results : Regarding to the estimation of prevalence of sarcopenia in OSHPE, (1) according to the definition and algorithm proposed by EWGSOP, it was calculated as 8.0%(387/4811), but (2)when removed the measurement of gait speed partly because only 3.4% (174/4811) was less than 0.8m/s and partly

because gait speed is likely to be the indicator of the frailty rather than of sarcopenia, the prevalence was calculated as 7.8% (376/4811). All of these 376 elderly persons were included in the 387 elderly diagnosed as sarcopenia by the algorithm of EWGSOP. Conclusion : This study has revealed that the algorithm for age-related sarcopenia particularly among the community dwelling elderly persons should be considered and modified in the Asian perspective. Keywords : Sarcopenia, Community- elderly,

SS25 127-C-2

EPIDEMIOLOGY AND ASSOCIATED FACTORS OF SARCOPENIA IN CHINESE ELDERLY

Tiemei ZHANG¹, Ping ZENG², Sinan WU², Yiwen HAN¹, Yi ZHANG², Yan ZHANG¹, Enyi ZHANG¹, Jian LI³ (1. Cell Biology, Beijing Institute of Geriatrics, China; 2. Epidemiology, Beijing Institute of Geriatrics, China; 3. Biochemistry, Beijing Institute of Geriatrics, China)

Introduction : To investigate Sarcopenia-related information for diagnosis of sarcopenia in Chinese elderly. Method : Changing of muscle mass, detected by BIA, and muscle strength with aging was analysis from two separated national cross-section survey. Data related to physical performance and associated factors of sarcopenia was collected in communities population aged over and above? 60 years with 5000 individuals from 6 areas in China. Results : The decline of handgrip strength was about 4% every five years initiated from 35-years old in men and 40-years old in women; the decline rate increased to 16.4% and 14.5% after 70-years in men and women, respectively. Muscle mass, determined by BIA, changed with aging also. The differences of muscle mass and muscle strength was found between Chinese and Caucasian. The relationship between change of gait speed with aging and functional limitations and difficulties was discussed. Factors of income, disease history and life style associated with sarcopenia-related symptoms and sign. Conclusion : Sarcopenia-related symptoms and sign closely related with quality of life in Chinese elderly. A suitable diagnostic criteria, which should be differed from that for Caucasian, for sarcopenia in Chinese should be realized. Keywords : Sarcopenia, Chinese,Diagnosis

SS25 127-C-3

PREVALENCE OF SARCOPENIA AND SARCOPENIC OBESITY ABOVE 60 YEARS OLD KOREAN BASED ON EWGSOP GUIDE

Kwang-min KIM¹, Yunhwan LEE², Yoon-sok CHUNG³, Duck-joo LEE¹, Kyu-nam KIM¹, Yong Jun CHOI¹ (1. Department of Family Medicine, Ajou University School of Medicine, Korea; 2. Department of Preventive Medicine and Public Health/ Institute on Aging, Ajou University School of Medicine/ Ajou University Medical Center, Korea; 3. Department of Endocrinology and Metabolism, Ajou University School of Medicine, Korea)

Introduction : Sarcopenia is an important factor of functional impairment related to aging. This study is conducted to investigate the prevalence of sarcopenia and sarcopenic obesity above 60 years old using The European Working Group on Sarcopenia in Older People (EWGSOP) guide. Method : Korean men (232) and women (268) aged 60 years or older were analyzed from peoples who visited Ajou University Hospital Health Promotion Center to make annual or biannual health examination. Sarcopenia was defined by the presence of both relative skeletal muscle mass loss below 2 SD of the gender-specific mean for healthy young adults plus the presence of low muscle function (strength or performance). Relative skeletal muscle mass was represented by the appendicular skeletal muscle mass

adjusted by height and body weight. Sarcopenic obesity was considered present in sarcopenic participants whose waist circumference was more than or equal to 90 cm for men and more than or equal to 85 cm for women, respectively. Results : The prevalence of sarcopenia using methods by EWGSO in this study population was 11.2% for men and 0.7% for women by height-adjusted definition and 15.9% for men and 7.5% for women by weight-adjusted definition. The prevalence of sarcopenic obesity was 9.5% for men and 6.3% for women by weight-adjusted definition but 1.3% for men and 0.4% for women by height-adjusted definition respectively. The prevalence of sarcopenia increased with age for men but for women only when applied with weight-adjusted definition. Conclusion : The prevalence of sarcopenia and sarcopenic obesity differs by gender and definition criteria. The height-adjusted definition may tend to underestimate the prevalence of sarcopenia and sarcopenic obesity. Keywords : Prevalence, sarcopenia, sarcopenic obesity

SS25 127-C-4

SARCOPENIA IN TAIWAN AND ITS ASSOCIATION WITH COGNITIVE FUNCTION

Liang-kung CHEN¹, Li-kuo LIU¹, Wei-ju LEE², Li-ning PENG¹
(1. Center for Geriatrics and Gerontology, Taipei Veterans General Hospital, Taiwan; 2. Department of Family Medicine, Taipei Veterans General Hospital Yuanshan Branch, Taiwan)

Taiwan has become an aging country in 1993, and is estimated to become an aged country in 2017, which makes Taiwan one of the fastest aging countries in the world. Sarcopenia has been described as a phenomenon of age-related skeletal muscle loss, which was mainly a description of morphologic changes in the beginning. However, the decline of muscle strength has been recognized as a key feature of sarcopenia, which formulate the modern definitions of sarcopenia. The epidemiological study regarding to sarcopenia in Taiwan is scarce and the most optimal diagnostic criteria for sarcopenia remained uncertain. Nevertheless, in I-Lan Longitudinal Aging Study (ILAS), we clearly identify a strong association between reduced muscle mass, physical performance and poorer cognitive function. All those declines in physical and cognitive function were significantly associated with older age. Moreover, the brain MR imaging for the study subjects disclosed a high prevalence of subcortical arterosclerotic encephalopathy (SAE), i.e. white matter lesion, among sarcopenic subjects. White matter lesions were considered closely associated with cardiometabolic risk factors, and this association was also clearly shown in ILAS. In conclusion, more studies are needed to establish outcome-based sarcopenia definitions in Taiwan, and the association between aging, skeletal muscle loss, reduced physical performance, declined cognitive function, the presence of SAE and higher cardiometabolic risk deserve further investigations to explore the pathophysiology of sarcopenia. Keywords : Sarcopenia

SS25 206-R

QUALITY MANAGEMENT OF LONG-TERM CARE FACILITIES IN ASIA

SS25 206-R-1

QUALITY INDICATORS OF NURSING HOMES IN HONG KONG: OBSERVATIONS AND IMPLICATIONS

Vivian W.Q. LOU¹, Chi Wai KWAN², Iris CHI³ (1. Soc Work & Soc Admin, Sau Po Centre on Aging, The University of Hong Kong, Hong Kong; 2. Statistics and Actural Science, The University of Hong Kong, Hong Kong; 3. Social Work, University of Southern California, USA)

Introduction : Nursing homes in Hong Kong play a significant role in

helping frail older adults with their nursing, personal, and social needs. Ever since 2000, seven nursing homes in Hong Kong have been conducting assessments of their residents on an annual basis by using the Chinese version of the Minimum Data Set - Nursing Home (MDS-NH) 2.0. The present study aimed at examining the care quality of nursing homes by using quality indicators (NHQIs). Method : Data from residents from seven nursing homes were assessed with MDS-NH2.0 (a total of 8204 assessments) and then used to calculate a series of quality indicators as guided by the MDS2.0 manual. Results : Areas that recorded comparatively low prevalence of NHQIs included new fractures (0.53%), symptoms of depression without antidepressant therapy (1.02%), fecal impaction (0.65%), urinary tract infection (0.81%), dehydration (0.06%), hypnotic use more than two times in the last week (2.68%), and low-risk residents with pressure ulcers (0.84%). Areas that recorded comparatively high prevalence of NHQIs included occasional or frequent bladder or bowel incontinence without a toileting plan (78.9%), little or no activity (27.4%), moderate to severe pain (27.0%), low-risk residents who lost control of their bowels or bladders (26.7%), use of nine or more different medications (18.6%), and residents who have become more depressed or anxious (18.5%). Conclusion : Findings of the present study showed both merits and weakness of care provided by nursing homes. Discussion will be made corresponding to areas of care that showed needs of improvement. Keywords : quality of care, nursing home, Hong Kong

SS25 206-R-2

QUALITY INDICATORS OF NURSING HOMES IN SEOUL

Jia LEE (College of Nursing Science, Kyung Hee University, Korea)

Introduction : Since the long-term care insurance has begun in 2008, the number of nursing homes has increased in South Korea resulting in quality management issues. The national health insurance corporation evaluated long-term care facilities and home care services every other year. The purpose of this study was to identify quality of long-term care facilities in Seoul district. Method : The study employed a retrospective design. Data were extracted from year 2011 evaluation materials of 561 long-term care facilities registered at Seoul headquarter, national health insurance corporation. A total of 98 indicators (19 of administration, 24 of environment and security, 10 of right and responsibility, 40 of service providing process, & 5 of service result) were used to evaluate the facilities. Results : Areas having quality issues were; regular meetings with staff or committees, staffing, health examination, and employee benefits from the administration session; infection control, hospice, counseling space, security devices, and disaster training from the environment and security session; counseling and meeting with customers, and contract and bill provision from the right and responsibility session; assessment, infectious disease examination, need identification, care planning, service provision, bath care, diaper change, indwelling catheter management, pressure ulcer management, recreation program, community activities, restraint, physical therapy, physician examination, dementia prevention, medication management, and case management from the service providing process session; satisfaction survey, class improvement, and elimination improvement from the service result session. Conclusion : Quality improvement programs should be developed for each area having quality issues based on facility scale and staffing size. Keywords : quality of care, long-term care, Seoul

SS25 206-R-3

CAN CONTINUOUS, INTER-GENERATIONAL COOPERATION POSITIVELY IMPACT THE QUALITY OF LIFE OF ELDERLY ALZHEIMER'S SUFFERERS?

Ryoko ROKKAKU (*School of Health Sciences, Tokyo University of Technology, Japan*)

Introduction : In Japan, interaction between children and senior citizens has been decreasing, particularly with dementia sufferers. Inter-generational interventions have been attempted internationally. An early study, (Tokyo Gerontological Synthetic Lab, 2004) focused on 'inter-generational social contribution programs' and Kamei (2010) qualitatively revealed a care process to "facilitate daytime, inter-generational exchanges in urban environments". Alzheimer's-targeted research finds (1) environmental changes, sickness, and improper caregiving combine to confuse Alzheimer's sufferers, predisposing them to psychiatric symptoms and behavioral disorders; (2) communities do not understand or interact well with Alzheimer's-suffering neighbors; and (3) guidelines exist for Alzheimer's treatment. However, proof of non-drug therapy effectiveness is lacking. **Method :** **Purpose:**This study questions inter-generational cooperation's impact on elderly Alzheimer's sufferers' quality of life. Reporting on the first year of a continuous, two-year intervention (2012.6-2014.6), a target group of elderly patients diagnosed with Alzheimer's disease attend day care services in two locations within city A: **Intervention group:** 10 patients participate in an inter-generational program with children. **Control group:** 10 patients forego intervention. **Analysis:**interview, FAST,HDS-R,ADL,ADCS-ADL . Behave-AD,mood condition assessment is ABS (The affect balance scale),QOL-AD (Quality of Life-AD). **Results :** **Expected results:**Inter-generational cooperation should help maintain and improve Alzheimer's sufferers' quality of life: 1. On-going interaction with children stimulates their mental functions such as cognition, emotion, motivation, and vitality. 2. Experiencing the role of a life-mentor to the children, their self-esteem can be maintained. 3. The interaction improves understanding of Alzheimer's disease in the community. **Conclusion :** Given these results, the program should be continued, followed by modeling inter-generational cooperation to clarifying its effect on Alzheimer's. **Keywords :** inter-generational cooperation, Alzheimer's sufferers, the quality of life

SS25 207-R **EMERGENT MIDDLE EAST GERIATRIC MEDICINE**

SS25 207-R-1
THE MIDDLE EAST ACADEMY OF MEDICINE OF AGEING
Hashim Hasan BALUBAID (*Internal Medicine, King Abdulaziz Medical City, Saudi Arabia*)

Introduction : A serious disparity exists between the growing ageing population and the number of health care providers being trained to meet the unique health care needs of older adults. This problem is both in developed and developing world. The key to alleviating the shortage, according to researchers, is for medical schools to lead the change in giving geriatric medicine the attention it deserves, cultivating programs where there are none, improving existing ones. There is a major deficiency in the number of physicians trained in geriatrics, in addition to limited paramedical personal trained in the field. The Middle East Academy for Medicine of Ageing was founded in 2002 to stimulate the development of health care services for older people in the region. It was established by a number of professors and teachers from the Middle East and Europe. The Model of MEAMA was taken from the European Academy for Medicine of Ageing (EAMA). The mission of MEAMA is to create a hub for education and training in the field of ageing in the Middle East. **Method :** powerpoint presentation. **Results :** powerpoint presentation.

Conclusion : powerpoint presentation. **Keywords :** hhb

SS25 207-R-2
HEALTH CARE SERVICES FOR THE OLD MIDDLE EAST POPULATION
Salwa Abdulla ALSUWAIDI (*Geriatrics, Dubai Health Authority, United Arab Emirates*)

Introduction : Health Care Services for the Old Middle East Populations The world is experiencing a major demographic transformation globally and the Middle East is not an exception of the same. Today, about two third of all older people are living in the developing world; mainly Asia, and particularly China and India. **Method :** In the Arab countries the number of elderly is increasing due to the improvement in health care services as well as the eradication of most of the infectious diseases that was causing early death. Middle Eastern countries have certain cultural, social and economic characteristics in common with similar aspiration and this affect how to view the elderly and their needs. **Results :** Geriatric Medicine is a relatively new branch of medicine in the Middle East that has recently started getting attention. However some Middle East countries lack geriatricians and others have highly specialized geriatric clinics! The general insufficient numbers of trained geriatricians and gerontologists among health professionals seriously undermines the ability of the country's health care system to adequately assess, treat, and rehabilitate the growing aging population. **Conclusion :** The aim of this oral presentation is to introduce the audience to the different health care services available in the Middle East countries as well as the challenges and opportunities facing health care services for the elderly in the Middle East. **Keywords :** Middle East, Geriatric, Services

SS25 207-R-3
GERIATRICS IN QATAR
Marwan RAMADAN (*Geriatrics, Hamad Medical Corporation, Qatar*)

Introduction : The number of elderly is fast increasing in Qatar and the region. This brings out many problems for the governments and for healthcare. What is being done? **Method :** Statistics obtained from official sources and the national strategy for the elderly. **Results :** The number of elderly is increasing substantially in Qatar and the region. The age of survival has gone over 70 when it was around 50, few decades ago. The number of elderly needing long term care is skyrocketing. The government is trying to deal with the problem and has produced a national strategy. **Conclusion :** The future of the elderly in Qatar should be fine due to the commitment of the state to their health. Problems will still exist though. **Keywords :** Qatar, elderly

SS25 207-R-4
INITIATING A GERIATRIC RESEARCH NETWORK IN THE GULF REGION
Abdulrazak Bachir ABYAD (*Geriatric, Middle East Academy of Ageing, Lebanon*)

Introduction : There is a substantial research need in the ageing field in the Middle-East. Research is an essential prerequisite in developing the speciality further in the area, and in developing evidence-based practice. Therefore the Middle East Network on Ageing Research (MENAR) was established. In addition the Middle East network on elderly care services MENECS and Middle-East Association on Aging and Alzheimer's - MEAAA The aim of these research networks is to develop Geriatrics and Gerontology Research. **Method :** The main reason for selecting this instrument is the fact that it is easy to apply in

the community and it is a good. Introduction to the various instruments of InterRAI. Results : The goals of the study include among others collecting data on the elderly living in the community in the Middle East, in addition by using this instrument to be able to compare various elderly community in the region and comparing the region to the rest of the World. We were granted the permission to use the instrument for research from InterRai. Conclusion : During the last Middle East Academy for Medicine of Ageing MEAMA meeting in Doha ?Qatar several countries from the gulf region showed interest to replicate the community study in their own countries including Dubai, Sultanate Oman, Riyadh, and maybe Bahrain. We hope that, with these studies, we will be able to compare elderly within the region and internationally. In addition, we aim at making an MEAMA interRAI database for research and from all these efforts it will be possible to start InterRAI-Middle East. Keywords : Emergent Geriatric Middle East

SS25 208-R

THE ACSM SYMPOSIUM: IMPROVING QUALITY OF LIFE AND PROMOTING PHYSICAL ACTIVITY FOR OLDER ADULTS—INTERNATIONAL PERSPECTIVES

SS25 208-R-1

US INITIATIVES TO PROMOTE PHYSICAL ACTIVITY: MEETING CHALLENGES OF AN AGING NATION

Marcia ORY (*Health Promotion & Community Health Sciences, Texas A&M University, USA*)

Introduction : The American College of Sports Medicine (ACSM), a membership organization of 45,000 members and certified professionals from 90 countries around the world, is dedicated to helping people worldwide live longer, healthier lives. This presentation will discuss some of the College's initiatives that are particularly relevant to global aging. Method : ACSM has established a Strategic Health Initiative on Aging (SHAI) to focus attention on professional education issues, programming, partnership engagement, and identifying research-related opportunities related to promoting physical activity in the aging population. Results : This presentation will discuss several SHAI initiatives, including the National Institute on Aging's Go4Life public information campaign targeted directly at older adults, the Exercise is Medicine Campaign directed at health care professionals, and the availability of screening tools (e.g., Easy For You) that assist both older adults and their care providers to identify the most appropriate exercises based on underlying conditions. Conclusion : There is worldwide recognition of the importance of physical activity in health promotion and disease prevention efforts throughout the life-course. National strategies for promoting physical activity in older adults should be multi-level with attention directed toward the public and well as health care providers. Keywords : American College of Sports Medicine, Strategic Health Initiative on Aging, Physical Activity

SS25 208-R-2

THE CHALLENGES AND OPPORTUNITIES FOR THE TRANSLATION OF EVIDENCE-BASED ACTIVITY PROGRAMS

Chae-hee PARK (*Sport and Healthy Aging, Korea National Sport University, Korea*)

Introduction : For many seniors, aging is associated with chronic disease and functional decline leading to disability and low quality of life. Insufficient participation in physical activity is known to shorten the life span, increase morbidity/ motility, and undermine quality of

life, general well-being, and prospects for independent living. According to WHO, physical activity is the single most efficient means by which seniors can influence their own health and functional capacities and, therefore, sustain a high quality of life in old age. Method : Evidence-based physical activity programs developed and tested in academic research settings have become the gold standard in producing measurable health benefits and positive outcomes for seniors. An important national health promotion priority is to encourage the adoption of evidence-based programs at the community level to improve quality and ensure the safety and effectiveness of physical activity programming. Results : Programs such as Healthy Moves Aging Well, Fit & Strong, and Standing Strong were developed, tested, and reviewed with the goal of improving interventions provided to older adults for greater health benefits. Evidence-based programs usually includes a researched rational for the intervention, a well-defined program structure and timeframe, required staffing needs and skills, specific facility and equipment requirements, and program evaluation tools to measure program quality and health outcomes. Conclusion : The speaker will discuss some of the challenges and opportunities associated with the translation of evidence-based activity programs in community settings, focusing on adaptations that would need to be made for international adaptation. Keywords : Evidence-based physical activity programs, Health Promotion, Seniors

SS25 208-R-3

AUSTRALIAN RECOMMENDATIONS FOR PHYSICAL ACTIVITY FOR OLDER PEOPLE: DEVELOPMENT, IMPLEMENTATION AND ONGOING CHALLENGES

Keith HILL¹, Jane SIMS² (*1. School of Physiotherapy, Curtin University, Australia; 2. Healthy Ageing Research Unit, Monash University, Australia*)

Introduction : Although recommendations for physical activity levels and type have been available for many years for adults, there have criticisms that a single set of guidelines may not be directly relevant for younger and middle aged adults as for older adults. This presentation reports development of the Australian recommendations for older people. Method : Existing guidelines and consensus statements, systematic reviews, meta-analyses and research articles were reviewed. Draft recommendations were circulated to stakeholder agencies and to an expert advisory group. Results : Five recommendations were developed, that align with the current National Physical Activity Guidelines for adults, but address additional issues relevant to older people. The Australian Government launched the recommendations in 2009. However, there has been limited systematic approach to population level implementation, and data suggest levels of physical activity among older Australians remain low. Factors influencing low uptake, and potential application internationally will be discussed. Conclusion : Physical activity recommendations for older people provide a useful focus for this important population group, but require a sustained implementation plan to be likely to influence low physical activity participation rates among older people. Keywords : Physical activity, guidelines, older people

SS25 209-C

CLINICAL DIAGNOSIS IN GERIATRICS

SS25 209-C-1

CLINICAL DIAGNOSIS AND IMPORTANCE OF INFECTIOUS DISEASES IN ELDERLY PATIENTS

Chang Oh KIM (*Internal Medicine, Yonsei University College of Medicine, Korea*)

Introduction : Infectious diseases frequently present with atypical or asymptomatic features in elderly. Serious infections may be heralded by nonspecific declines in functional or mental status, or anorexia with decreased oral intake. Recent studies have implicated human cytomegalovirus (HCMV) infection as a possible etiologic pathogen causing cardiovascular disease. Essential hypertension is a major risk factor for CVDs. We evaluated the relationship between HCMV antibody status, and hypertension and functional status among elderly. **Method :** Patients aged ≥ 65 years were prospectively enrolled from March 2011 to February 2012 at a 2,000-bed university hospital. We collected data including CD4+ and CD8+ T-lymphocyte count, and functional status by measuring basic activities of daily living and instrumental activities of daily living for all patients. In addition, HCMV IgG levels were analyzed using enzyme-linked fluorescence assay. **Results :** During the study period, 103 patients, who were admitted for treatment of infections or other diseases, were enrolled. Multivariate analysis showed that body mass index and HCMV IgG antibody titers were independent factors associated with hypertension in elderly patients. In univariate linear correlations, HCMV antibody levels were positively correlated with systolic blood pressure levels, CD8+ T lymphocyte count, and IADL scores. In addition, CMV IgG titers were inversely associated with estimated glomerular filtration rate. These four variables remained independently significant in multivariate correlation analysis. **Conclusion :** These findings may provide insight into the important role of HCMV in the pathogenesis of essential hypertension and decreased functional status in the elderly. **Keywords :** elderly patients, infectious diseases, functional status

SS25 209-C-2

MANAGEMENT OF COMORBIDITIES IN THE ELDERLY PATIENTS WITH HEART FAILURE

Kwang-il KIM (*Department of Internal Medicine, Seoul National University College of Medicine, Seoul National University Bundang Hospital, Korea*)

As the population continues to age, a growing proportion of elderly patients present with multiple coexisting medical conditions. Multimorbidity in the elderly requires more intensive diagnostic work-up and is associated with unexpected in-hospital events. As a result, multimorbidity is the major contributor to the increased medical costs among the elderly. In addition, multimorbidity is significantly associated with higher mortality, increased disability, declines in functional status, and a lower quality of life (QOL). Heart failure is one of the common medical conditions in the older patients and is a major cause of morbidity and mortality. Heart failure in older patients may also be difficult to treat because of the multiple comorbidities, the presence of polypharmacy, and a greater prevalence of adverse drug effects. Heart failure can be caused by many different cardiovascular diseases such as hypertension, coronary artery disease, valvular heart disease, and arrhythmia. Furthermore, heart failure is the commonly associated with other medical condition including COPD, chronic kidney disease, anemia, and malnutrition. These comorbidities contribute to the poor clinical outcome of heart failure in the elderly patients. Accordingly, effect management of the comorbidities is required for the optimal care of the elderly patients with heart failure. In this talk, I will present the clinical significance of common comorbidities in the elderly heart failure patients, and then briefly introduce the recent advances in the management of comorbidities in older patients with heart failure. **Keywords :** Aged, Heart failure, Comorbidity

SS25 209-C-3

CLINICAL DIAGNOSIS AND IMPORTANCE OF

MUSCULOSKELETAL DISEASES IN ELDERLY PATIENTS

Jung Soo SONG (*Department of Rheumatology, Department of Internal Medicine Chung-Ang University Medical school, Korea*)

Introduction : Musculoskeletal disorders are among the most common problems affecting the elderly people. With age, musculoskeletal tissues show increased bone fragility, loss of cartilage resilience, reduced ligament elasticity, loss of muscular strength, and fat redistribution decreasing the ability of the tissues to carry out their normal functions. The loss of mobility and physical independence resulting from arthropathies and fractures can be particularly devastating in this population, not just physically and psychologically, but also in terms of increased mortality rates. In this presentation, clinical diagnosis and importance of common musculoskeletal diseases in Elderly patients will be discussed. **Method :** It is important that physicians be familiar with musculoskeletal disorders that are seen more frequently in or are unique to this population, know the differences between elderly-onset and younger-onset disease, and be prepared to treat their elderly patients with strategies different from those used for younger patients. Common musculoskeletal diseases in elderly include osteoarthritis, rheumatoid arthritis, osteoporosis, gout, pseudogout, fibromyalgia, polymyalgia rheumatica, and septic arthritis. **Results :** For proper diagnosis, elderly patients with musculoskeletal complaints should be evaluated with a thorough history, comprehensive physical and musculoskeletal examinations, radiologic examinations and laboratory testing. **Conclusion :** Elderly patients have various causes of musculoskeletal symptoms. Accurate diagnosis and careful treatment considering polypharmacy, comorbidity, drug interactions, optimal drug dosage, and drug side effects are essential for enhancing quality of life in elderly patients. **Keywords :** musculoskeletal diseases, elderly

SS25 209-C-4

CLINICAL DIAGNOSIS IN NEUROSCIENCE; TARGET FOR PRECLINICAL SPORADIC ALZHEIMER'S DISEASE

Dehua CHUI¹, Liying PIAO², Hui ZHANG², Weizhong XIAO² (*1. Neuroscience Research Institute, Health Science Center, Peking University, China; 2. Neurobiology & Neurology & Neuroscience research Institute, Health Science Center, Peking University, China*)

Introduction : One of the most important neurodegenerative diseases is Alzheimer's disease (AD). Cognitively normal elderly individuals without complaints or objective evidence of cognitive decline may have neuropathological changes in the brain consistent with the diagnosis of AD, indicating that there is a preclinical stage of the disease. **Method :** A deficit in the coordination mechanism of the central executive may be a preclinical marker for the early detection of AD due to the E280A presenilin-1 gene mutation. Preclinical diagnosis of Alzheimer's disease using biomarkers has become an area of great interest for both clinicians and researchers because, among other advantages, this would increase the response to new disease modifying drugs. A preclinical stage of AD (PCAD) has been described in which subjects show no overt clinical manifestations of AD but demonstrate significant AD pathology at autopsy. **Results :** The genetic biomarker, apolipoprotein E (apoE) $\epsilon 4$, and on certain neuroimaging biomarkers, delineating the extent and distribution of amyloid-beta ($A\beta$) deposits in the brain, that can be useful in identifying cognitively normal people who are at enhanced risk of developing PCAD. The core AD biomarkers, A β and phosphor-tau, on different methods and modalities of assessing them w e.g., cerebrospinal fluid analysis and PET imaging and on their diagnostic and predictive value in PCAD. **Conclusion :** The most opportune time for preventive intervention in AD is early in its PCAD. **Keywords :** geriatrics, diagnosis, clinical

medicine,

SS25 210-C

COGNITIVE FUNCTION IN OLDER POPULATIONS: RESULTS FROM LONGITUDINAL STUDIES OF AGEING IN EUROPE AND ASIA

SS25 210-C-1

AGE-TRAJECTORIES OF COGNITIVE FUNCTION AND THEIR PREDICTORS AMONG OLDER ADULTS IN ENGLAND

Paola ZANINOTTO (*Epidemiology and Public Health, UCL, United Kingdom*)

Introduction : At older ages cognitive capability is a key factor in functioning and independence. It is known that cognitive functioning declines with age, therefore it is important to know the determinants and consequences of cognitive impairment/decline. The aim of this study is to explore age-trajectories of cognitive function and influences on them over six year time (2002-03 to 2008-09) among older adults participants of the English Longitudinal Study of Ageing. **Method :** Latent growth curve models and ageing-vector graphs are used to describe both individual differences and average population age-trajectories in cognitive function measured by memory and executive function. **Results :** The mean cognitive function at baseline is 41, which declines by 6 points per each additional wave of the study. Cognitive function declines more rapidly for older individuals, for females, for people without educational qualification and those in the poorest wealth. Factors that have a negative impact on cognitive function are depression, difficulty with instrumental activities of daily living, diabetes, increased body mass index, cigarette smoking. Daily alcohol consumption has a positive effect on cognitive function. **Conclusion :** Cognitive function is poorer for older than younger respondents and declined more rapidly in women, in people from low socioeconomic groups, those with poor physical health, psychological health and poor health behaviors. **Keywords :** memory, executive function, older ages

SS25 210-C-2

EARLY-LIFE CIRCUMSTANCES AND COGNITIVE FUNCTIONING DYNAMICS IN LATER LIFE

Chiara DAL BIANCO¹, Christelle GARROUSTE², Omar PACCAGNELLA³ (*1. Department of Economics and Management, University of Padua, Italy; 2. Institute for the Protection and Security of the Citizen, European Commission - Joint Research Centre, Italy; 3. Department of Statistical Sciences, University of Padua, Italy*)

Introduction : The association between early life conditions and cognitive changes in old age is not yet well documented. This paper aims at enriching the literature evaluating and comparing across many European countries the influence of early-life circumstances on cognitive functioning in later life. **Method :** We exploit life-history data on childhood socioeconomic status at the age of 10 and educational attainments collected in the SHARELIFE survey, as well as longitudinal cognitive test performances collected over time by the SHARE surveys. In particular, the focus is on the verbal fluency test, which consists of naming as many distinct animals in one minute, and the 10 word-list-learning test, which is a standardized modified version of the Rey's Auditory Verbal Learning Test-RAVLT. **Results :** Exploiting the longitudinal dimension of the data, we plan to document the evolution over time and across countries of the association between the cognitive abilities of respondents and the

social environment where they grew up. We study whether there is any correlation between these aspects of individuals' life history and the changes/declines over time of the cognitive functioning. Regardless the time span between the data collection, low correlations between cognitive declines and childhood socio-economic conditions appear. **Conclusion :** Direct relationships between childhood characteristics and late cognitive skills are weak, while potential indirect relationships between childhood characteristics and late cognitive skills (e.g. through educational attainment levels) need to be further investigated. This may suggest a role of education policies in explaining the observed differences across countries and over time. **Keywords :** Childhood conditions, Cognitive decline, SHARE survey

SS25 210-C-3

UNDERSTANDING GENDER DIFFERENCES IN COGNITION AMONG THE ELDERLY IN CHINA: EVIDENCE FROM CHARLS

Xiaoyan LEI¹, James SMITH², Xiaoting SUN¹, Yaohui ZHAO¹ (*1. National School of Development, Peking University, China; 2. Labor and Population Group, Rand Corporation, USA*)

Introduction : Cognitive ability is essential to many domains of life, including income and health. At older ages in many Asian societies, women have a cognitive deficit compared to men. Since they typically live longer than their husbands they may be at a particular deficit when widowed. **Method :** In this paper, we use the CHARLS baseline data collected in 2011-12 to examine the reasons for the female cognitive deficit using a new sample of middle aged and older Chinese respondents. Modeled after the American HRS, CHARLS is a national representative survey of the Chinese population ages 45 and over. We will relate both these cognition scores to individual schooling, urban residence, family and community levels of economic resources, and height and examine cohort specific changes by gender in the cognition outcomes of both Chinese women and men. **Results :** We find strong gender differences in cognition that become smaller with each new birth cohort in the 45+ age range. **Conclusion :** Education explains a significant part of the female cognitive disparity which is also larger in rural areas. The amount of resources both in the family as well as the community plays a significant role. **Keywords :** Cognition, Education, China

SS25 210-C-4

WORK EXPERIENCE AND COGNITIVE FUNCTION AMONG KOREAN ELDERS

Sung-il CHO¹, Hyorim LEE¹, Soong-nang JANG², Heeran CHUN³, Susan PARK⁴ (*1. Graduate School of Public Health, Seoul National University, Korea; 2. College of Nursing and Nursing Science Research Institute, Choong-Ang University, Korea; 3. Department of Medical Information and Administration, Jungwon University, Korea; 4. Institute of Health and Environment, Seoul National University, Korea*)

Introduction : Cognitive function includes several domains such as memory, attention, language, and spatiality. Throughout the life course, certain types of work more strongly require specific domains of cognitive function, and thus may lead to different trajectories during the period of age-associated decline. This study explored the association between lifetime work experiences and the patterns of cognitive function among Korean middle-aged and elderly people. **Method :** Data was used from Korean Longitudinal Study of Aging (KLoSA) including 3,985 men and women aged over 55 years. Cognitive function was assessed by Korean version of MMSE (Mini-Mental State Exam). Lifetime patterns of work experiences were

categorized into 13 groups by combining the duration, continuity (continuous vs. intermittent), job categories (mental vs. manual; complex vs. simple), regularity (regular vs. irregular), and changes of job categories over time. Multiple regression analysis was conducted to assess the effect of work patterns on cognitive function. Results : Continuous regular work experience in mental work was significantly associated with higher ability at memory and language ($p < 0.01$), and continuous manual work or mixed irregular work was associated with generally lower cognitive function ($p < 0.05$). When there was change in job categories, more complex work during the middle age was associated with better cognitive function in the later period. Conclusion : Specific experience in certain time windows in the life course appeared to have relatively stronger influence on later patterns of cognitive decline. Keywords : cognitive function, occupation, life course, MMSE

SS25 211-R
IDENTITY, POLICY AND CHANGE: EXAMINING THE THEORETICAL IMPLICATIONS OF THEMES ARISING FROM NATIONAL CONTEXTS AND INTERNATIONAL DISCOURSE

SS25 211-R-1
MIGRATION, WORK AND AGE IN AUSTRALIAN PUBLIC POLICY

Simon BIGGS (*Social & Political Science, University of Melbourne, Australia*)

Introduction : Perceptions of older people are changing both nationally and internationally, with policy developments that emphasise the value of older workers and the extension of working life to accommodate a longer life-course. For national economies older workers produce benefits of increasing tax dollars and personal savings and reduce claims on the state through pensions. In terms of migration, affluent older adults bring assets and skills generated elsewhere into the host economy. Nations that create barriers to older migration, such as is currently the case for Australia, run the risk not only perpetuating age discrimination, but failing to take advantage of population change in a global context. Method : Critical textual analysis. Results : Key narratives plus boundaries and overlaps between discourses are identified. Their relationship to global trends and policies of nation states are compared. Conclusion : Perceptions of older people are changing both nationally and internationally, with developments that emphasise the value of older workers. While internal Australian Government policy emphasises the contribution of older citizens, this has not been reflected in migration policies. In terms of migration, older adults bring assets and other benefits generated elsewhere into the host economy, as skilled workers or as active retirees. Nations that create barriers to older migration run the risk of perpetuating age discrimination and failing to adapt to global population trends. Keywords: migration, policy, workers Keywords : migration, policy, workers

SS25 211-R-2
ON THE THRESHOLD OF OLD AGE - A COMPARISON BETWEEN TWO COHORTS

Antti KARISTO¹, Ilkka HAAPOLA² (*1. Department of Social Research, University of Helsinki, Finland; 2. Palmenia Centre of Continuing Education, University of Helsinki, Finland*)

Introduction : The post-war Baby Boom was exceptionally strong in Finland, and, since then, the boomers have been very visible in Finnish society. Now, most of them have retired and they are on the threshold of a young old age. Their pension years are expected to be different

from those of earlier birth cohorts. But are they? This is what we are going to study with the help of the longitudinal data that describes the ageing of three birth cohorts. Method : Two birth cohorts - the baby boomers (born in 1946-50) and the cohort born ten years earlier - will be compared, at a similar age, when they were 62-66 years old (in 2002 and 2012 respectively). Life chances to make life choices will be compared, as well as real participation in different cultural and social activities. Results : We have just begun the data analysis, and the first results show that there are considerable differences between the two birth cohorts. Baby boomers' possibilities to live an active life in terms of health, material and non-material resources are better than among the cohort born in the late 1930s. However, this is not so much reflected in actual life styles. Conclusion : Because the results are just tentative, definite conclusions cannot be made at the moment. In the presentation, they will be made in terms of the generational characteristics of the compared groups, as well as by looking critically at the public discourses around old age (such as discourses on active ageing and third age). Keywords : baby boomers, generational effects, discourses on ageing

SS25 211-R-3
ACTIVE AGEING AND SINGAPORE'S BABY BOOMERS
Mui Teng YAP (*Institute of Policy Studies, Lee Kuan Yew School of Public Policy, National University of Singapore, Singapore*)

Introduction : Life expectancy among Singapore's elderly has improved significantly over the 40+ years since the country's independence, along with that of the general population. Longer life expectancy along with delayed onset of degenerative disease and disability are causes for celebration. While there is concern about the "burden" of eldercare in the face of smaller families sizes and smaller proportions of working age population (due to persistent below-replacement fertility), and the coming of ("old") age of the large cohorts of baby boomers born around 1947-64, attention is also being turned to the more positive aspects, to successful or active ageing. The Council for Third Age (C3A) was established in 2007 to champion active ageing in Singapore. Policies to prolong work life and programmes aimed at promoting health and social wellbeing at the community level are also instituted. A project to create age-friendly urban environment is being piloted. Method : literature review and secondary data analysis. Results : A study in 2007 show that Singapore's baby boomers want to prolong their work life and remain socially engaged even as they continue to expect their family to care for them (though in a different way from current elderly). Conclusion : Baby boomers, the new elderly, are likely to be more self-reliant, have more spending capacity and are more likely to want to remain active in old age, hence policies and programmes to promote active ageing are moves in the right direction. Keywords : Active Ageing; Baby boomers; Singapore

SS25 211-R-4
IS "ACTIVE AGEING" MORE THAN "LIVE LONGER, WORK LONGER" ? EUROPEAN ATTEMPT'S TOWARDS "SOCIAL PARTICIPATION" AND "INDEPENDENT LIVING" THROUGH THE BELGIAN LENS

Thibault MOULAERT (*IACCHOS, National Fund for Scientific Research & Universite Catholique de Louvain, Belgium*)

Introduction : European institutions have considered "active ageing" as a policy answer to rethink ageing population since 1990's. If the 1999 momentum opens a theoretical avenue for a holistic vision of "active ageing", policy translation reduced it to "working longer" during the 2000's. Ten years later, 2012 European Year of Active Ageing and

Solidarity between Generations (EY2012) keeps “work longer” at the agenda but adds two other avenues for “active ageing” : “social participation” and “independent living”. Method : Financed by the Belgian Social Security for supporting the Belgian version of EY2012, we collected all belgian applications of 'active ageing' policies in early 2012. Results : The three different avenues for “active ageing” illustrates a specific national context characterized by a high institutional complexity. We show that a) “working longer” options are still numerous and mainly institutionally organized, b) “social participation” opens the more avenues for the “holistic” translation of “active ageing” with a special interest for the empowerment of older people via the emergence of a specific “Federal Consultative Board for Seniors” (Conseil Consultatif Federal des Aines) at the occasion of EY2012, many actions from older citizen groups like the Flemish Elderly Council (the Vlaamse Ouderenraad) to consider “active ageing” as a “win-win” strategy showing the diversity of elderly’s activities and the Walloon Region’s inspiration from “Age Friendly Cities” by WHO as a renewed option to organize local government policies towards ageing population, c) “independent living” refers to little innovative measures. Conclusion : Conclusion focusses on challenges and social conditions for an 'active ageing' reform. Keywords : active ageing ; Belgium ; public policies

SS25 212-R

HAPPY LIVING IN DARKNESS! LIGHTING IN OLD AGE IS RELATED TO THRIVING AND HEALTHY AGEING IN 75 YEAR OLD NORWEGIANS

SS25 212-R-1

LIGHTING OLD AGE: AGE-RELATED VISION CHANGES REQUIRE INCREASED LIGHTING AND UNIVERSAL DESIGN

Osp EGILSDOTTIR¹, Helle K FALKENBERG², Gunnar HORGEN², Grethe EILERTSEN³ (1. Faculty of Health Science, Buskerud University College, Norway; 2. Department of Optometry and Visual Science, Buskerud University College, Norway; 3. Department of Nursing Science, Buskerud University College, Norway)

Introduction : The growing ageing population emphasizes the importance of healthy ageing. Arranging for the elderly to stay in private housing as long as possible may result both in significant social economic effects, and improved quality of life. Because of normal age changes, most elderly have reduced eyesight and need more light. However little is known about how they consider how lighting affects everyday tasks and thriving. The objective of this talk is to discuss: 1) normal age-related vision changes; 2) lighting in the homes of elderly, including the apparent limitations in international standards and 3) how optimal vision in relation to lighting can reduce the risk of accidents at home and lead to better quality of life. Method : In addition to our study, an overview of research related to the objectives will be presented. Results : In our study we investigated the effect of optimizing the indoor light levels on vision, health and ADL. We found that thriving is high, in spite of living in the dark well below recommended light levels. Qualitative interviews reveal that participants have not increased the light levels necessary to maintain the ability to perform several everyday tasks. However, they have adjusted their behavior by no longer performing visually demanding tasks in the evening. The intervention showed that thriving is even higher with optimal lighting. Conclusion : We conclude that there is limited awareness of how lighting affects the ability to perform ADL, and that there is a need for further research on how to universally design lighting in private housing. Keywords : lighting, vision, ageing

SS25 212-R-2

HAPPY LIVING IN DARKNESS: THE INDOOR LIGHTING AT HOME IN RELATION TO ACTIVITIES OF DAILY LIVING AND HEALTH - A DESCRIPTIVE STUDY

Grethe EILERTSEN¹, Gunnar HORGEN², Tor Martin KVIKSTAD³, Øsp EGILSDOTTIR⁴, Helle FALKENBERG⁵ (1. Department of Nursing Science, Buskerud University College, Norway; 2. Department of Ophthalmology and Visual Science, Buskerud University College, Norway; 3. Department of school of business and social sciences, Buskerud University College, Norway; 4. Department of Nursing Institute, Buskerud University College, Norway; 5. Department of Ophthalmology and Visual Science, Buskerud University College, Norway)

Introduction : To describe the ambient indoor lighting, and how lighting relates to health, activities of daily life (ADL) and well-being among healthy 75-year olds living at home. Method : 112 residents born in 1934 participated with informed consent. All had normal vision (Snellen VA > 0.7) and did not receive any public health care. Self-reported visual and general health (SF-36) and the ability to perform ADL in regards to lighting were measured using a questionnaire. Lighting levels were measured in several rooms and compared to home lighting standards. A subsample of 20 participated in qualitative interviews. Results : The results showed that the ambient indoor light levels in the homes of healthy 75 year olds are surprisingly poor, and significantly below recommended lighting levels for senior living. Those with higher income had better lighting levels than those with low income. Participants perceive their visual and general health to be good, and are unaware of any problems related to lighting and everyday tasks. The interviews reveal that although participants are thriving, most describe some change in behaviour of performing ADL. Women in particular, report indoor lighting to be insufficient for certain tasks such as ironing or sawing. Despite living in darkness, 75 year olds are happy, healthy and thriving. However, interviews reveal that everyday tasks have been sacrificed in regard to lack of lighting. Further, they have little awareness of how light levels will affect vision and ADL in the future. Conclusion : To ensure healthy ageing at home, information on how to optimize ambient indoor lighting is needed. Keywords : aging, lighting, vision

SS25 212-R-3

HAPPIER LIVING IN THE LIGHT: THE EFFECT OF OPTIMIZING THE INDOOR LIGHTING ON ACTIVITIES OF DAILY LIVING AND HEALTH - AN INTERVENTION STUDY

Helle K; FALKENBERG¹, Gunnar HORGEN¹, Tor Martin KVIKSTAD², Osp EGILSDOTTIR³, Grethe EILERTSEN³ (1. Department of Optometry and Visual Science, Buskerud University College, Norway; 2. School of Business and Social Sciences, Buskerud University College, Norway; 3. Department of Nursing Science, Buskerud University College, Norway)

Introduction : To investigate the effect of optimized ambient lighting in the living room related to abilities of performing ADL and quality of life. Method : From the participants in the baseline study, 30 single and co-habitant men and women (equally divided) were selected. Self-reported visual and general health and ability to perform ADL in regards to lighting were measured before and after the four month intervention period (same questionnaire as in baseline). The intervention optimized the ambient lighting in the living room by providing new lamps and a lighting control system. The participants chose one of three preset light levels (normal, medium, low) and kept a diary. Finally, participants assessed the intervention answering eight

questions. Results : The participants were very happy with the increased lighting, and that it improved quality of life. They reported using higher light levels, which increased comfort. As they now perform more visually demanding tasks, they realized their vision had been poor. The lighting control system was easy to use and they cherished the different preset levels, and pointed out that it is imperative that such systems are universally designed. Conclusion : Improved lighting has a positive effect on healthy aging at home. There is a lack of knowledge and awareness of the effect of lighting on vision and ability to perform ADL in healthy seniors. Even this relatively basic intervention, show that, universally designed lighting and control systems can be easily achieved and lead to better quality of life. More attention on regular eye examination is needed. Keywords : lighting, ageing, vision

SS25 213-S

LIVEWELL: DEVELOPING INTERVENTIONS TO IMPROVE HEALTH AND WELLBEING IN LATER LIFE

SS25 213-S-1

THE LIVEWELL PROGRAMME: AN INTEGRATED SUITE OF INTERVENTIONS TO PROMOTE HEALTH AND WELLBEING IN LATER LIFE

Paula MOYNIHAN¹, Claire CLELAND¹, Ben HEAVEN², Nicki HOBBS², Jose LARA¹, Alan GODFREY¹, Elizabeth EVANS¹, Suzanne MOFFATT², Martin WHITE³, Lynn ROCHESTER¹, Falko SNEIHOTTA³, Thomas MYER⁴, John MATHERS¹ (1. *Institute for Ageing and Health, Newcastle University, United Kingdom*; 2. *Institute for Health and Society, Newcastle University, United Kingdom*; 3. *IHS/FUSE UKCRC Centre for Translational Research in Public Health, UK, Newcastle University, United Kingdom*; 4. *Institute of Neuroscience, Newcastle University, United Kingdom*)

Introduction : Dietary choices, physical activity and social relationships influence health and wellbeing in later life but there is little evidence about interventions which produce appropriate changes in such behaviours. The LiveWell programme aims to: (i) develop and pilot an integrated suite of interventions to improve the health and wellbeing of people in the retirement transition, and (ii) develop a panel of outcome measures. We report the prototype of an integrated suite of interventions, with a focus on personalisation tools and interventions to promote Mediterranean dietary patterns. Method : Integration of four methodologies: (i) systematic reviews (n=3), (ii) qualitative study using methods of grounded theory, (iii) co-design workshops (n=3), (iv) expert consultation event; (v) pilot testing of interventions. Results : Drawing on the evidence of three methodologies (i-iii above) we produced a prototype personalisation tool designed to: (i) collect relevant personal information from service users, (ii) assist retirement planning and (iii) set achievable goals, (iv) provide feedback on progress towards goals. We have produced prototype tools in each behavioural domain (Mediterranean diet, physical activity, social relationships). In the Mediterranean dietary domain tools were designed to assist with budgeting and shopping for food, meal planning, and running cooking groups with a focus on socialisation and acquisition of skills. An expert consultation event assisted with the identification of suitable outcome measures to test the emerging suite. Conclusion : Interventions developed through the LiveWell programme hold promise as an effective, acceptable and evidence-based means of improving health and wellbeing in later life. Keywords : Health promotion; Wellbeing; later life; behaviour change; intervention, Mediterranean dietary pattern

SS25 213-S-2

NARRATIVES ON RETIREMENT TRANSITIONS, LATER LIFE, AND WELLBEING: IMPLICATIONS FOR INTERVENTION DEVELOPMENT

Ben HEAVEN¹, Martin WHITE², John MATHERS³, Suzanne MOFFATT¹ (1. *Institute of Health and Society, Newcastle University, United Kingdom*; 2. *Institute of Health and Society, Newcastle University; Fuse, UKCRC Centre for Translational Research in Public Health, United Kingdom*; 3. *Institute of Ageing and Health, Newcastle University, United Kingdom*)

Introduction : Retirement transitions are increasingly diverse. Nevertheless, significant changes to behaviours associated with health outcomes are typical. The LiveWell programme aims to improve health and wellbeing in later life, by intervening as people make transitions into retirement. Social relationships, physical activity and diet all influence health and wellbeing, but there is little evidence about: (i) which social components to target; (ii) how wellbeing is defined by people around retirement; and (iii) how to effectively intervene to improve wellbeing in each domain. Method : Mixed-methods: systematic review; qualitative study (n=52) using focus groups (n=7), interviews (n= 25) and methods of grounded theory. Results : Provision of explicit 'social roles' can improve health and wellbeing for those looking for structure or purpose in retirement. However roles should be tailored to meet the needs of different populations. Resources cited in the literature such as good health, wealth, and rewarding social relationships underpin wellbeing in later life. However the 'capability' to mobilise resources to achieve outcomes was key in participants' accounts of wellbeing-in-practice. Wellbeing was experienced through the capacity to enjoy life, plan and respond confidently to challenges, rather than a static state of contentment. 'Later life' was conceptualised as a period of decline in an uncertain future. Conclusion : Health and wellbeing in retirement can be promoted through role-provision for those who want a role. Assistance with building capability to achieve desired outcomes, in addition to accumulation of resources, may be an effective intervention strategy. Short term benefits should be emphasised in addition to longer-term outcomes. Keywords : Wellbeing, Intervention, Later Life

SS25 213-S-3

INTEGRATING EVIDENCE WITH CO-DESIGN METHODS TO DEVELOP PROTOTYPE INTERVENTIONS IN LATER LIFE

Nicola HOBBS¹, Ben HEAVEN¹, Gemma TEAL², Claire CLELAND³, John MATHERS³, Falko SNEIHOTTA¹, Martin WHITE¹, Paula MOYNIHAN³ (1. *Institute of Health & Society, Newcastle University, United Kingdom*; 2. *Glasgow School of Art, Glasgow School of Art, United Kingdom*; 3. *Human Nutrition Research Centre, Newcastle University, United Kingdom*)

Introduction : The LiveWell programme aims to develop pragmatic and acceptable interventions to improve the health and wellbeing of people in the retirement transition. Co-design methods promote service user involvement maximising opportunities to develop acceptable and usable interventions. A co-design process should be informed by the behavioural and social evidence base for interventions to ensure that the generated design ideas are theoretically sound. Method : Through information integration from qualitative research and systematic reviewing, researchers accumulated evidence for service opportunities and effectiveness of interventions in the retirement transition. Effective behaviour change techniques and modes of delivery of interventions were identified. Three workshops were conducted using co-design methods. Co-designers were potential intervention-users, deliverers, commissioners and researchers. The workshops involved

persona-building, brainstorming and storyboarding new ideas for possible interventions using a variety of prompts informed by the evidence base. Developing ideas, prototyping and integrating the evidence base occurred iteratively. Results : Key emerging design themes were intervention personalisation through identification of needs and desires, and the role of a mentor in identifying resources and setting goals. Integration of design ideas and prototyping was achieved through structured opportunities for discussion and a diversity of interactive methods. Conclusion : Co-design methods integrated multiple sources and types of data, generating design recommendations for theoretically sound and evidence-based interventions. Intervention prototypes will be tested for acceptability and feasibility with older adults. The resulting interventions are more likely to be adopted by intended target groups. Keywords : co-design, behavioural intervention, retirement

SS25 213-S-4

CHARACTERISING THE HEALTHY AGEING PHENOTYPE

Jose LARA¹, Alan GODFREY², Elizabeth EVANS², Ben HEAVEN³, Laura BROWN⁴, Evelyn BARRON¹, Lynn ROCHESTER², Thomas D. MEYER⁵, John C. MATHERS¹ (1. *Human Nutrition Research Centre, Institute for Ageing and Health, Newcastle University, United Kingdom*; 2. *Clinical Ageing Research Unit, Institute for Ageing and Health, Newcastle University, United Kingdom*; 3. *Institute of Health & Society, Newcastle University, United Kingdom*; 4. *Psychology Department, Research Institute for Health and Social Change, Manchester Metropolitan University, United Kingdom*; 5. *Institute of Neurosciences, Newcastle University, United Kingdom*)

Introduction : Given the biological complexity of the ageing process, there is no single, simple and reliable measure of how healthily someone is ageing. Intervention studies need a panel of measures which capture key features of healthy ageing. Our focus is on outcome measures which can be deployed in community-based, lifestyle interventions such as those we are developing in the LiveWell Programme. We adopted the concept of the "Healthy Ageing Phenotype" (HAP) to frame our research. We aimed i) to identify the most important features of the HAP and ii) to identify tools for measurement of those features. Method : We reviewed the literature on assessment of healthy ageing. We aimed to identify both the most important features of the HAP and tools which could be used for their measurement. Our focus was on outcomes which are expected to change with age, may be responsive to lifestyle interventions and with evidence for strong association with ageing-related phenotypes including morbidity, mortality and, lifespan. Results : The HAP is multidimensional and may be characterised by measurement of markers of physiological and metabolic health, physical capability, cognitive function, social wellbeing, and psychological wellbeing. Within LiveWell we are currently selecting core features of the HAP and identifying tools for their measurement. Conclusion : A minimum set of measures to characterise the HAP is proposed. Such set of measures may have wider utility and could facilitate comparisons across diverse study designs and populations. LiveWell is funded by the Lifelong Health and Wellbeing programme, which is a Cross-Research Council initiative in partnership with Health Departments. Keywords : Healthy ageing phenotype, biomarker, intervention studies

SS25 214-S

COMBINING CAREGIVING AND EMPLOYMENT: THE END OF FAMILY SOLIDARITY / FILIAL PIETY? OR ITS REINCARNATION?

SS25 214-S-1

COMPARING WORKING CARERS' RECONCILIATION STRATEGIES IN 4 EUROPEAN CARE REGIMES

Monika REICHERT¹, Andreas HOFF² (1. *Institute of Sociology, University TU Dortmund, Germany*; 2. *Department of Gerontology, Zittau/Goerlitz University, Germany*)

Introduction : An increasing number of international researches address the importance of the reconciliation of elder care obligations and employment. However, there is still a lack of knowledge on conflicts, strategies and effective instruments to enable the combination of work and care in the light of different care regimes. The aim of this paper is to present the empirical findings from the international research project "Carers@Work": Between Job and Care? Conflict or Opportunity?" (funded by the Volkswagen Foundation) with partners in Germany, Italy, Poland and the United Kingdom. Special emphasis is put on problems, strategies and most effective measures inherent to both work and care for older individuals. Method : In all, 226 semi-structured interviews with working carers were conducted in the participating countries. Important data and information regarding working carers and the key themes of the interviews - especially the strategies working carers use to combine work and care - are compared in a cross-national perspective. Results : The empirical findings show that country-specific socio-political and cultural framework conditions play an important role regarding strategies working carers use to reconcile work and care. Therefore, welfare state policies respectively care regimes in individual countries may support and/or supplement caregivers in different ways, generating different outcomes for the individual, the society and the economy. Conclusion : Against the background of different welfare and care regimes the project "Cares@work" provides specific recommendations for companies and social policy how to help individuals to better reconcile work and family care. Keywords : combining work and care, family solidarity

SS25 214-S-2

WORKING CARERS IN EUROPEAN SURVEY DATA

Jolanta PEREK-BIALAS¹, Andreas HOFF² (1. *Institute of Statistics and Demography, Warsaw School of Economics/Jagiellonian University Cracow, Poland*; 2. *Division of Social Sciences, Zittau-Goerlitz University of Applied Sciences, Germany*)

Introduction : There is an urgent need - due to population ageing and so shrinking and ageing workforce - to design, implement and monitor adequate policy in many European countries focused on reconciliation of employment and elderly care. The aim of such policy is to support those who work and at the same time they are caregivers. To suggest specific solutions there is a need to have proper analysis which could be based on accurate, updated and comparative data on working caregivers: their current work and care situation, possibilities and restrictions related both work and care. Method : There are more and more studies and surveys in Europe which include this topic like: EUROFAMCARE, SHARE, Carers@Work and others which will be used in analysis to match information from various sources but also to identify missings which should be imputed. Results : Analysis revealed a lot of significant results as for example most of the caregivers are carrying out their caring tasks on daily basis, which certainly hinders their flexibility and deprives them of free time, causing stress and so - based on employers' opinions - the working caregivers 50+ rather than choose sick leaves and reduction of working time. Conclusion : A set of recommendations not only for researchers of ageing but also for policy makers will be given, not only suggestions for existed surveys, but also as solutions of new surveys

designed at the European level, but with an option to be comparable beyond the Europe. Keywords : working caregivers survey

SS25 214-S-3

DYNAMICS OF RECONCILING WORK AND CARE: LONGITUDINAL EVIDENCE FROM THE KOREAN RETIREMENT AND INCOME STUDY

Seung-min PARK (*Oxford Institute of Population Ageing, University of Oxford, United Kingdom*)

Introduction : This research analyses the dynamics of reconciling work and care of working women by exploiting the Korean Retirement and Income Study. Method : The research analyses the dynamics of two groups (those who care for either grandchildren or parents) according to working types. Results : [working and caring for grandchildren](1)the overall rate of caring for grandchildren is low and it decreases across time(2)the rate of either stopping or decreasing working time due to caring for grandchildren decreases across time(3)the overall rate of receiving payment for caring for grandchildren is small and it decreases across time.[working and caring for parents](1)the vast majority of working women do not care for their parents and the decreasing trend continues across time(2) the ratio of either stopping work or decreasing working time due to caring for parents decreases across time. Conclusion : [working and caring for grandchildren](1)working women are less likely to care for grandchildren across time(2)working women do not give up or cut working time to care for grandchildren, rather they balance working and caring for grandchildren(3)traditional norms indicating that caring for grandchildren should not be paid work but an obligation among family members do not decrease across time.[working and caring for parents](1)the practice of traditional norms regarding caring for parents decreases across time(2)working women do not give up work or cut working time to provide care for parents instead balancing work with caring for parents. In conclusion, policy implications are suggested. Keywords : Work, Care, Korean Retirement and Income Study

SS25 216

KOREAN RED GINSENG FOR LONGEVITY

SS25 216 -1

KOREAN RED GINSENG FOR REJUVENATION OF CHRONIC ATROPHIC GASTRITIS

Ki Baik HAHM (*Department of Gastroenterology, CHA University of Medicine and Science, Korea*)

Gastric cancer is one of troublesome cancers world-widely as well as Korea, affecting 20-50/100,000 cancer death annually, in spite of remarkable programme to detect early gastric cancer as well as endoscopic treatment. Helicobacter pylori infection has been implicated in either the development of precancerous lesion, chronic atrophic gastritis or gastric cancer, but whole eradication of bacteria was not the answer to prevent gastric cancer. However, tackling the way to chronic atrophic gastritis has been generally considered to be effective alternate to prevent gastric cancer, for which nutritional rejuvenation can be anticipating intervention. In this symposium, how Korean red ginseng can alleviate H. pylori-associated gastritis and the molecular or clinical evidence Korean red ginseng imparted ameliorated result of rejuvenated atrophy,, a precancerous lesion of gastric cancer. Furthermore, Korean red ginseng has shown augmented eradication rates of H. pylori with conventional triple therapy. Though extensive clinical trial will be needed to draw evidence-based outcome regarding these benefits of Korean red ginseng, quite high level of

preclinical and in vivo data signified the rejuvenating action of gastric atrophy, a very target of chemoprevention with a natural product.

SS25 216 -2

EFFECT OF KOREAN RED GINSENG ON SENILE TESTICULAR DYSFUNCTION

Si-kwan KIM¹, Yu-jin WON¹, Young-kyu SHIN¹, Seock-yeon HWANG² (*1. Department of Life science, College of Biomedical & Health Science, Konkuk University, Korea; 2. Department of Biomedical Laboratory Science, College of Applied Science and Industry, Daejeon University, Korea*)

The root of Panax ginseng improves testicular function both in humans and animals. However, the molecular mechanism by which ginseng exerts this effect has not been elucidated. Male Sprague-Dawley rats were divided into three groups: Young rat control group (YC, 4 months), aged-rat control group (AC, 12 months) and KRG-WE treated aged-rat group (G-AC, 200 mg/kg b.w.). KRG-WE was administered orally for 4 months. Number of sperm, Sertoli cells and germ cells and the Sertoli Cell Index decrease in the testis of AC relative to YC. However, those parameters were completely restored in G-AC. Changes in protein expression in rat testis in response to Korean red ginseng-water extract (KRG-WE) were identified using 2-dimensional electrophoresis (2-DE) and MALDI-TOF/TOF MS. A proteomic analysis identified 15 proteins that were differentially expressed between AC and G-AC. Out of these, the expression of glutathione-S-transferase (GST) mu5, glutathione reductase (GR) and glutathione peroxidase (GPx) were significantly up-regulated in G-AC. Lipid peroxidation (LPO) levels, antioxidant enzymes namely superoxide dismutase (SOD), catalase (CAT), activities and non-enzymatic antioxidants such as reduced glutathione (GSH), vitamin C and E levels were investigated to elucidate the antioxidant efficacy of G-AC. These results suggest that the administration of Korean red ginseng enhances testicular function in aged rats by elevating GPx and GST activity, thus resulting in increased glutathione and preventing LPO intestis. Overall, serum sex hormone levels were improved by treatment with KRG-WE. In particular, expression levels of receptors for FSH and LH in G-AC group were significantly up-regulated to almost normal. Keywords : Korean red ginseng, Aged rat testis, Enzymatic and non-enzymatic antioxidant activity, Steroid hormone

SS25 216 -3

WHAT DO HEALTHCARE PROVIDERS NEED TO UNDERSTAND ABOUT KOREAN RED GINSENG?

Gyeongho HAN (*Korea Ginseng Research Institute, Korea*)

Introduction : Ginseng is the root of Panax ginseng C.A. Meyer, which has been used as tonic, prophylactic and restorative agent as a medicinal plant in Korea for thousands of years. In addition, not a few Korean and Chinese ancient medical books referred to the benefits and prescription of ginseng. There are two different ways of processing ginseng: white ginseng, the root is peeled and dried in the sun, which bleaches it white. Red ginseng is steam-processed ginseng which is manufactured without being peeled but steamed and subsequently dried for several weeks. Ginseng is cooked and gelatinized to increase the number of ginsenosides remarkably by the steaming process. While a total of 32 ginsenosides have been found in red ginseng, a total of 25 ginsenosides in white ginseng. There are differences of effects on human health between red ginseng and white ginseng. Method : Red Ginseng has been proved to have multiple pharmacological effects such as immunomodulation, preventing cardiovascular diseases, neuroprotection, anticancer and antifatigue by showing the various solid scientific evidences. It has been identified

that red ginseng possess the multiple constituents such as polysaccharides, polyacetylenic compounds, peptides and other chemical constituents. These non-ginsenosides have been investigated as the bioactive materials in red ginseng as well as ginsenosides. Korea Ginseng Institute has conducted several clinical studies to acquire more reliable data about the red ginseng, and pharmacological effects of it has been investigated by advanced biochemical and molecular biological techniques. The Korea Food and Drug Administration has certified five health claims of Korean Red Ginseng as the health functional food: 'Supports Immune System', 'Enhances Physical Energy', 'Improves Memory Ability', 'Helps Blood Circulation' and 'Provides Antioxidation Effects'.

SS25 216 -4

CLINICAL EFFECT OF KOREAN RED GINSENG ON CLIMACTERIC DISTURBANCE

Seok Kyo SEO, Byung Seok LEE (*Department of Obstetrics and Gynecology, Yonsei University College of Medicine, Korea*)

Introduction : For many years, women have used herbal extracts to relieve menopausal symptoms. Recent research results have been mixed regarding the efficacy of these approaches. In addition, the actions of herbal preparations have not been sufficiently investigated, and there are limited data regarding the safety of these preparations. Method : Red ginseng (RG) has been widely used to treat diseases such as cancer and cardiovascular disease in East Asian countries, especially Korea, China, and Japan, for the past 2,000 years. Previous studies have shown that RG is effective against the psychological and emotional symptoms that are common in postmenopausal women. However, no clinical study has investigated the efficacy of RG as an alternative therapy for postmenopausal women. Results : We investigated the effects of RG on menopausal symptoms and cardiovascular risk factors in postmenopausal women. We also investigated the anti-proliferative effects of RG extracts on endometrial stromal, and epithelial cells to confirm safety. Our study demonstrated menopausal symptomatic responses and significant changes in some cardiovascular markers. Serum estradiol levels were not influenced by RG supplementation. RG extracts inhibited cell proliferation in endometrial stromal, and epithelial cells. These results suggest that RG could be an attractive herbal dietary supplement for relieving menopausal symptoms and conferring favorable effects on markers of cardiovascular disease in postmenopausal women. In addition, RG could also be safely used in postmenopausal women.

SS25 217-B

LONGEVITY GENES

SS25 217-B-1

GADD45 IS THE KEY PLAYER IN AGEING AND LONGEVITY OF DROSOPHILA AND MAMMALS

Alexey MOSKALEV, Ekaterina PLYUSNINA, Mikhail SHAPOSHNIKOV (*Molecular radiobiology and gerontology, Institute of biology of Komi Science Center of Ural division of RAS, Russia*)

Introduction : There is a relationship between various cellular stress factors and aging. Gadd45 proteins stand at the crossroad of the cell fates by controlling the balance between DNA repair, eliminating (apoptosis) or preventing the expansion of potentially dangerous cells (cell cycle arrest, cellular senescence), and maintaining the stem cell pool. However, the biogerontological aspects have not thus far received sufficient attention. Method : Data obtained with using of standard Drosophila gerontological and genetical approaches, RNASeq,

RT-PCR, bioinformatics tools (Ingenuity, MetaCore, R packages DESeq and GoSeq). Results : Our data revealed an increase of *Drosophila melanogaster* lifespan due to D-GADD45 overexpression in the nervous system as well as the role of D-GADD45 in oxidative, thermal and genotoxic stress resistance. We conducted RNASeq of transcriptomes of flies with conditional overexpression of D-GADD45 and observed differential expression of some evolutionary conservative longevity genes. We also analyzed the pathways and modes of action by which Gadd45 members are involved in aging, longevity and age-related diseases in mammals. Conclusion : Although further wide-scale research is warranted, it is becoming increasingly clear that Gadd45s are highly relevant to aging, age-related diseases and to the control of life span, suggesting them as potential therapeutic targets in age-related diseases and pro-longevity interventions. Keywords : GADD45, stress-response

SS25 217-B-2

INDY MUTATIONS MAINTAIN FLY HEALTH AND HOMEOSTASIS

Blanka ROGINA¹, Ryan P. ROGERS¹, Nicola NERETTI², Pei-yu WANG³, Stephen L. HELFAND²

(*1. Genetics & Developmental Biology, University of Connecticut Health Center, USA; 2. Department of Molecular Biology, Cell Biology and Biochemistry, Division of Biology and Medicine, Brown University, USA; 3. Neurodegeneration Laboratory, Institute of Neuroscience, National Chengchi University, Taiwan*)

Introduction : Indy (I'm not dead yet) encodes the fly homolog of a mammalian transporter of the Krebs cycle intermediates. Mutations in the Indy gene extend life span of the fruit fly. In addition, decreased expression of two of the worm Indy homologs extend worm longevity. INDY is predominantly expressed in places where intermediary metabolism takes place suggesting that INDY has a role in metabolism. Method : We determined survivorships, starvation resistance, weight, egg production and mobility of control and Indy mutant flies on high and low caloric food. We examined longevity of Indy206 heterozygous flies in genetic backgrounds of Hyperkinetic1, short- and long-lived Luckinbill lines. We backcrossed old and new Indy alleles into yw genetic background and determined their longevity. Results : We found similarities in the physiology of calorie restricted flies with Indy mutant flies on high calorie diet; similarities include lower weight, egg production, decreased starvation resistance and increased spontaneous physical activity and increased mitochondrial biogenesis. The Indy206 heterozygous allele extends life span in different genetic backgrounds. Several new Indy heterozygous alleles extend longevity in yw background. Conclusion : Our data suggest that Indy mutations create genetic calorie restriction and extend longevity by a similar mechanism. Indy206 heterozygous flies live longer in a number of genetic backgrounds. In addition, several new Indy alleles live longer in yw background conferring the role of the Indy mutation in longevity. Keywords : *Drosophila melanogaster*, Indy

SS25 217-B-3

NEURONAL GENES IN LIFESPAN CONTROL: LESSONS FROM DROSOPHILA

Elena G. PASYUKOVA¹, Alexander V. SYMONENKO¹, Natalia V. ROSHINA¹, Mikhail V. TROSTNIKOV¹, Ekaterina R. VESELKINA¹, Anna V. KREMENTSOVA², Olga Y. RYBINA¹ (*1. Laboratory of Genome Variation, Institute of Molecular Genetics of Russian Academy of Sciences, Russia; 2. Department of Biochemistry and Physical Chemistry of Biological Processes, Emmanuel Institute of Biochemical Physics of Russian Academy of Sciences, Russia*)

Introduction : One of the organ systems that play a major role in maintaining homeostasis and regulating aging and longevity is the nervous system. Earlier, we have shown that several genes involved in regulation of neuron development and specification affect lifespan. These genes encode transcription factors and are known to be most important during embryogenesis. We supposed that their involvement in lifespan control could be based on both alterations in their own expression and their effects on expression of other genes. **Method :** Longevity, reproduction and locomotion were evaluated in lines with mutations in shuttle craft, escargot, inscrutable, abrupt, Lim3 and some other Drosophila genes. Real-Time PCR was used to measure gene expression on different stages of development and in adults of different age. The functional meaning of natural variation in the regulatory region of Lim3 gene was assessed in experiments with cell culture and transgenic flies. **Results :** We demonstrated that 1) embryonic transcription of neuronal genes can be associated with changes in adult longevity; 2) neuronal genes interact with each other, both in lifespan control and in regulation of transcription; 3) polymorphisms found in natural population and associated with longevity determine the level of transcription of the relevant genes. **Conclusion :** Our findings indicate that genes affecting early development of the nervous system could influence longevity of Drosophila adults through alteration of gene expression and genetic interactions. This work was supported by RFBR grants #12-04-01182 and #12-04-31529, RAS Program “Wildlife: Current State and Development” and Ministry of Education and Science of RF grant #8593. **Keywords :** Longevity neurons transcription

SS25 217-B-4

GENE NETWORK STABILITY AND AGEING

Peter O. FEDICHEV (*Research Director, Quantum Pharmaceuticals, Kosmonavta Volkova 6A-1205, Russia*)

Introduction : There is a growing number of examples among the very different animal species yielding ever increasing number of animals exhibiting what can be called a negligible senescence. The age dynamics of mortality data followed by the recent transcriptomics studies, suggest that the genetic networks of at least some of the animals can extremely stable on very long time scales. On the contrary, most of the animals including humans show an exponential increase of mortality with age, which could be a signature of underlying genetic regulatory network instability. **Method :** In this work we show that there may be two distinctly different types of aging. To do that we provide a minimalistic, possibly the simplest mathematical model of aging in a genetic network and analyze the gene expression levels stability in the presence of environmental or metabolic perturbations. **Results :** Under a very generic assumptions we establish a possibility of a dynamic instability associated with the gene network connectivity, leading to exponential accumulation of the genome regulation errors and, subsequently, to a very fast aging in organisms where the efficiency of the reparation systems is insufficient to correct errors. On the other end of the spectrum the model predicts existence of organisms capable of boosting the repairs strong enough to stabilize the gene network and establish a very different aging dynamics, much closer to that observed in naked mole types. **Conclusion :** The model lets us analyse the roles of various genes in lifespan extending experiments with model organisms and prioritise targets for future pharmacological interventions. **Keywords :** mechanisms of ageing, longevity genes, system biology of ageing, gene network stability

SS25 217-B-5

INVESTIGATION OF THE ROLE OF GENES OF

EPIGENETIC REGULATION AND OF TUMOR SUPPRESSOR IN AGING AND LONGEVITY ON THE DROSOPHILA MELANOGASTER MODEL

Mikhail SHAPOSHNIKOV¹, Leonid OMELYANCHUK², Sergey KOPYL², Anna LUKINA³, Alexey MOSKALEV⁴ (*1. Laboratory of Molecular Radiobiology and Gerontology, Institute of Biology, Komi Science Center of RAS; Syktyvkar State University, Russia; 2. Laboratory of Genetics of the cell cycle, Institute of Molecular and Cellular Biology, SB RAS, Russia; 3. Institute of Natural Sciences, Syktyvkar State University, Russia; 4. Laboratory of Molecular Radiobiology and Gerontology, Institute of Biology, Komi SC, UB RAS; Syktyvkar State University, Russia*)

Introduction : The revealing of evolutionarily conserved genes that may affect aging process is a priority of biogerontology. The products of Polycomb and Trithorax group genes are implicated in regulation of many processes associated with aging: epigenetic regulation of gene expression, regulation of stem cell self-renewal and in cancer development. Tumor suppressor genes are involved in insulin signaling and may participate in the control of longevity also. The purpose of this study is to determine the role of genes controlling epigenetic regulation of gene expression and tumor suppressors in the mechanisms of aging and longevity on the Drosophila model. **Method:** We investigated the effects of mutations in Polycomb, Trithorax and tumor suppressor genes on lifespan and stress resistance of Drosophila. **Results :** We found that mutations in genes Su(z)2, z, asx, trx, and brm increased the age of 90% mortality ($p < 0.05$) in heterozygous males (by 40-80%) and females (by 50%). Mutations in tumor suppressor genes ex, ft, hem, hyd, gd caused a reduction of median life span (by 13-46%) and the age of 90% mortality (by 11-33%) in heterozygous flies of both sexes ($p < 0.001$). Mutations in genes Su(z)2, z, asx, Psc, sxc, trr and Trl increased the resistance of males and females to heat shock ($T = 34^{\circ}\text{C}$) and oxidative stress (20 mM paraquat), but decreased the resistance to starvation. **Conclusion :** Thus the genes of epigenetic regulation and tumor suppressors involved in the modulation of longevity and stress resistance. This work was supported by the Presidium of the Russian Academy of Science, grant number 12-C-4-1019. **Keywords :** epigenetic regulation, tumor suppressor, longevity

SS25 217-B-6

STRESS-RESPONSE GENES IN LIFESPAN REGULATION AND FORMATION OF LONG-TERM EFFECTS INDUCED BY IONIZING IRRADIATION IN DROSOPHILA MELANOGASTER

Ekaterina PLYUSNINA, Lyubov SHILOVA, Alexey MOSKALEV (*Laboratory of Molecular Radiobiology and Gerontology, Institute of Biology, Komi Science Center, Ural Branch of RAS, Russia*)

Introduction : The purpose of this research was to study the role of genes of DNA break recognition (ATM, ATR), base and nucleotide excision repair (PCNA, XPC, XPF, Gadd45), double-strand break repair (BLM, Rad50, Rad51, Rad54), and apoptosis (p53, Gadd45) in the lifespan regulation and formation of specific long-term effects of gamma-irradiation in Drosophila melanogaster. **Method :** We estimated the lifespan of wild-type Canton-S flies and flies with mutations of stress-response genes under different irradiation conditions: 1) without irradiation; 2) chronic exposure by low 40 cGy dose rate during preimaginal developmental stages; 3) acute exposure by 30 Gy dose rate after imago eclosion; 4) successive irradiation by both doses. In addition, we studied the age-dependent dynamics of stress-response gene expression after chronic low-dose irradiation using qRT-PCR method. **Results :** In contrast to the wild-type Canton-S strain, chronic 40 cGy gamma-irradiation didn't induce the hormetic

effect in flies with mutations in stress-response genes. Radioadaptive response to acute 30 Gy irradiation was less expressed in flies with mutations in PCNA, Rad50, Rad51, Rad54 genes compared with wild-type flies, and was absent in flies with ATM, ATR, XPF, XPC, Gadd45, BLM, p53 mutations. The expression levels of investigated genes were increased by 1.5-2.6 times after chronic low-dose irradiation. High activity was persisted in ATM, PCNA, XPF, BLM genes during *Drosophila* lifetime. Conclusion : The obtained results demonstrated that investigated components of cellular stress signaling pathways are involved in the lifespan modulation in response to ionizing irradiation, and in the formation of long-term biological effects such as radioinduced hormesis and adaptive response. Keywords : Stress-response genes, gamma-irradiation

SS25 223-C

THE NATIONAL AUDIT OF DEMENTIA: QUALITY IMPROVEMENT IN THE ACUTE HOSPITAL

SS25 223-C-1

NATIONAL AUDIT OF DEMENTIA IN ENGLAND AND WALES

Peter CROME (*Primary Care and Population Health, University College London, United Kingdom*)

Introduction : The majority of patients in acute hospitals are older people and at least 30% have dementia or other cognitive impairments. It is a priority to improve the care of this group of patients who are at greater risk of complications and prolonged hospital stay. Method : The study involved 99% of acute hospitals in England and Wales. The experience of the treatment of people with dementia was reviewed by case-note inspection (n=7934) and an organisational check list (n=210). A smaller number of hospitals submitted staff and relative questionnaires, environmental and organization checklists. Practice was measured against standards developed from existing legal requirements and clinical guidelines. Results : No hospital met all of the standards considered essential. There was a major gap between what hospitals said they did and practice identified by case-note review. Care pathways for dementia patients were infrequently in place. Access to timely psychiatry support was limited. Inadequate training and staffing levels were reported. Recommendations were made on: care pathways, the appointment of clinical leads, improved assessment, nutrition, training, the environment and staffing. The observations identified that there were elements of person-focused communication underpinning best practice. Conclusion : Overall the results were disappointing and indicate there is much scope for improvement. Key to success will be accepting that the treatment of patients with dementia is, and will increasingly be, core business for acute hospitals. A second round of the audit is now underway and initial results suggest that progress has been made. Making hospitals (and all health services) dementia-friendly is a key priority. Keywords: Dementia, Quality improvement, Hospital

SS25 223-C-2

A NATIONAL AUDIT OF PERSON-CENTRED CARE FOR PEOPLE WITH DEMENTIA IN HOSPITAL

John YOUNG¹, Rosemary WOOLLEY², Mary GODFREY³, Jill HOYLE⁴ (*1. Academic Unit of Elderly Care and Rehabilitation, Bradford Teaching Hospitals NHS Foundation Trust / University of Leeds, United Kingdom; 2. Academic Unit of Elderly Care and Rehabilitation, Bradford Teaching Hospitals NHS Foundation Trust, United Kingdom; 3. Academic Unit of Elderly Care and Rehabilitation, Bradford Teaching Hospitals NHS Foundation Trust / University of Leeds, United Kingdom; 4. Division of Medicine,*

Bradford Teaching Hospitals NHS Foundation Trust, United Kingdom)

Introduction : Real time care observations are particularly helpful to inform quality improvements for people with dementia who may not be able to reliably self-report. We wished to include such observations in a national audit of dementia care in hospitals but there were no existing observation tools suitable for use. Method : Based on a literature review and consultations with hospital staff and older people, we developed a qualitative observational tool called 'PIE' (to look at the 'Person', their 'Interactions' with staff and the immediate 'Environment'). The aim was to help hospital staff understand patients' experiences in real time and to develop action plans to improve person-centred practice in their wards. It was successfully piloted in seven NHS Trusts, then used by ward staff with 608 patients in 43 Trusts (105 wards) for the National Audit. The data was qualitatively analysed to compare and contrast the findings between and within hospitals. Results : Clear descriptions of day-to-day ward care were reported. The concept of person-centred care was poorly understood by staff. Only five wards provided evidence of sustained person centred care practices. Importantly, the staff observed in the audit lacked the necessary communication skills to support person centred care. Conclusion : Improving the communication skills of staff working with people with dementia may be a simple and practical route to improving person centred care practices. Keywords : dementia; hospitals; audit

SS25 223-C-3

THE DEMENTIA CARE IN HOSPITALS PROGRAM - A STATEWIDE DEMENTIA AWARENESS AND COMMUNICATION PROGRAM LINKED TO A BEDSIDE ALERT FOR COGNITIVE IMPAIRMENT

Mark William YATES¹, Meredith THEOBALD², Michelle MORVELL³ (*1. Geriatric Medicine, Deakin University, Ballarat Health Services, Australia; 2. Subacute Medicine, Ballarat Health Services, Australia; 3. Cognition Service, Ballarat Health Service, Australia*)

Introduction : The Dementia Care in Hospitals Program (DCHP) is an all of hospital education program linked to a unique bedside graphic alert, the Cognitive Impairment Identifier (CII). It has been shown to improve the awareness of and communication with hospitalised people with cognitive impairment (CI). It was designed and tested at Ballarat Health Services in 2004 with the support of people with dementia, their families and the Alzheimer's Association. In 2006 it was re-tested in 7 other hospitals. This program has now been introduced to 22 public hospitals. With grant funding from the BUPA Foundation the DCHP had now been re-evaluated in three private acute hospitals. Method : The original evaluation compared carer perception, staff confidence and practice change. Introduction of the DCHP. Further roll-outs evaluated staff confidence with care. The recent re-evaluation in the private sector assessed transferability, staff and carer perception and risk exposure such as falls, medication error and requirement for one-on-one staffing. Results : The original study found 80% of staff with daily or weekly patient contact reported the CII and education had improved their practice and 40% reported it had improved their response to carers. Carer satisfaction shifted positively by 23.6%. Subsequent roll-outs have demonstrated improved staff confidence. Data from the private sector re-evaluation will be completed in March 2013 and presented. Conclusion : The use of a bedside graphic to alert hospital staff to CI, when linked to an all of hospital education program, is acceptable to people with dementia and carers and improves care and patient safety. Keywords : Hospitals, Dementia,

Quality

SS25 223-C-4

DEMENTIA AND THE FUTURE OF THE ACUTE HOSPITAL

Kenneth ROCKWOOD (*Department of Medicine, Dalhousie University, Canada*)

Introduction : Despite a burgeoning elderly population, acute-care hospitals still view as normative the patient with single system illness, who can give a good history, enjoys uncomplicated social circumstances and can perform as a self-actualized participant in decision making about care. Most older people with dementia challenge each of these key assumptions, especially when they are acutely ill. This symposium considers how the acute hospitals cope now and what options they have to make care better. Conclusion : The concluding presentation will discuss implications for the science and practice for dementia care. Keywords : Dementia, Acute Care

SS25 224-R

TOWARDS ASIAN PACIFIC LONG-TERM CARE CERTIFICATE

SS25 224-R-1

TOWARDS ASIAN PACIFIC LONG-TERM CARE CERTIFICATE

Kathryn Lenzner BRAUN¹, Takeo OGAWA², Cullen HAYASHIDA³, Tri Budi RAHARDJO⁴, Thelma KAY⁵ (*1. Ha Kupuna Center for Native Hawaiian Elders, University of Hawaii, USA; 2. Social Work, Kumamoto Gakuen University, Japan; 3. Kupuna Education Center, Kapiolani Community College, USA; 4. Center for Aging Studies, Universitas Indonesia, Indonesia; 5. Senior Advisor, Ministry of Community Development, Youth and Sports, Singapore*)

Introduction : Asian and Pacific population ageing has progressed at rapid speed, so the percent and number of older adults in the region have grown considerably. Along with this is an increasing need for long-term care for the elderly. The traditional ethic of filial piety is still honored, but families cannot meet all the long-term care needs for the growing number of elderly. Method : A new long-term care system must be constructed, and it will require a quality workforce for long-term care. Every country is constructing its own domestic system of long-term care, with different standards for worker training and competency. Results : Some countries in the Asia-Pacific region are confronting difficulties recruiting enough domestic workers for long-term care. Thus, they are recruiting foreign long-term care workers, and the international migration of the elder care workforce is a big issue in Asia/Pacific. To ease migration of care workers, the harmonization of their qualifications and training standards should be discussed internationally. The dialogue for the harmonization of worker qualifications should be based on the competence in long-term care for the elderly and standardized gerontological knowledge and skills. Conclusion : This issue should be of concern not only to policy makers and teachers of the care workforce, but also more researchers should focus on this international long-term care agenda. Keywords : immigration, elder care, workforce

SS25 224-R-2

FRAMEWORK FOR THE ANALYSIS OF TRAINING PROGRAMS FOR LONG-TERM CARE

Takeo OGAWA (*Faculty of Social Welfare, Kumamoto Gakuen University, Japan*)

Introduction : The need to secure LTC workers from international labor markets will be intensified in order to prepare for aging world.

However, standardization of the quality of LTC workers in international labor markets has not yet been implemented. The quality and quantity of LTC worker training vary by country, so this agenda has yet to achieve shared recognition among policymakers and business managers. The training programs for long-term care in each country should be harmonized in order to maintain the quality of LTC workers and to facilitate their international mobility. Method : Targeted training programs are Japanese, Korea, China, Hawaii and German one. Some programs focus on trainings for informal care givers, and other programs focus on training for paid workers. Each training program is compared around some issues. Especially, the training period and the ranking system is compared with each others. Results : There are big differences between training programs for LTC workforce internationally. As each country has its own strategy for recruiting long-term care workforce, it is very hard to integrate it into the standardization of training programs. Then, differences of training period should be harmonized in the international certificate system at least. It needs to utilize the ranking system, in which the long-term care competence will be evaluated on the knowledge and skills. Conclusion : Gerontological world, including researchers, policy makers, service providers, and communities will have to take responsibilities for establishing a systematic training program for long-term care workforce, whichever paid workers or non-paid care givers. Keywords : Long-term Care Work Force, Training Program, Certificate

SS25 224-R-3

TRAINING PROGRAM FOR THE ELDER CARE WORKFORCE IN SINGAPORE

Thelma KAY (*Former Senior Advisor, Ministry of Social and Family Development, Singapore*)

Introduction : Singapore is ageing rapidly and by 2030, one fifth of the population is projected to be over 60. This demographic trend will be compounded by smaller household sizes, an increase in the older old requiring more care, and an increased chronic disease burden. Care is provided through the "many helping hands" approach with the family as the first line of support, followed by the community and the government. However, with the realization that the family will be less extended, more care provided at the community level will be needed. Method : An analysis of elder care needs and the measures being taken to address elder care workforce requirements will be provided. Conclusion : As the issue of an eldercare workforce will be increasingly urgent, it is important that timely measures be taken to produce caretakers at the appropriate levels and with the requisite level of skill and training. With initiatives ranging from whole of government policies, innovative and alternative work arrangements, competency and capability improvements, and use of technology, Singapore's programme for an eldercare workforce would strive to meet the needs of its ageing population. Keywords : care workforce, community-based care,

SS25 224-R-4

TRAINING PROGRAM FOR THE ELDER CARE WORKFORCE IN INDONESIA

Tri Budi W. RAHARDJO (*Centre for Ageing Studies, University of Indonesia, Indonesia*)

Introduction : As people age, the proportion of with middle and heavy disabilities increases. Government policy in Indonesia emphasizes three generation under one roof, with the assumption that the family will take care of older persons, particularly when they get frail. However, there is a tendency of increasing number of working young

women, which leads to limitations of family care givers. Hence, and eldercare workforce for is highly needed. Method : We analyzed data from the Survey 2010 and Basic Health Research of 2007. Results : Findings indicated that the level of participation among older persons in the community is very high (80%), while the participation in workplace is about 55 %. On the other hand, it found that the level of disability is also high (70% with light, 27.1% middle, and 2.9% heavy disability. Most of care givers in Indonesia are untrained, particularly family care givers. Recently, caregiver training has been offered by some foundations. Training for the trainers is also conducted by Integrated Geriatric Team of National and Province Hospitals. In addition, In addition, HelpAge Indonesia, under supervision by HelpAge International and HelpAge Korea has been regularly conducting Care Workforce Training in collaboration with hospitals. The curriculum includes theory and practice. Conclusion : Since the quality of training is relatively sufficient to international standards, there is an opportunity to send the caregivers abroad. To accelerate the quantity and quality of caregivers in Indonesia, it is recommended that future training program be conducted at the grassroots level by Primary Health Care institutions following international standards. Keywords : Care Work Force, Training for the Trainers, Grassroots Level of Training

**SS25 224-R-5
TRAINING PROGRAMS FOR DIRECT CARE LONG TERM CARE WORKERS IN HAWAII: ISSUES AND DIRECTIONS FOR CHANGE**

Cullen T HAYASHIDA (*Kupuna (Elder) Education Center, Active Aging Consortium in Asia Pacific (ACAP) and Kapiolani Community College, USA*)

Introduction : Hawaii's challenges related to the training of direct care workers reflect those of the USA where there is rapid population aging, smaller family size and chronic and growing worker shortages. Low pay, lack of a progressive career ladder, educational barriers between credit and non-credit programs and regulatory barrier abound. This report address two areas of progressive policy changes that are underway. First, paraprofessional direct care workforce development is addressed by creating a multi-level approach for entry training to address skills competency and career articulation. Second, online continuing education training for small residential homes. Method : This presentation reports on its experiences with the Schmieding Model for Direct Care Worker training. This model addresses the need to training at the entry level and trains workers in an articulated multi-level approach using a well-designed competency based curriculum used in several states in the USA. The Schmieding Model has the ability to create educational pathways into specialty tracks. Second, efforts was made to convert training into an online format. Results : This report will document the numerous issues and challenges that the Center has encountered for these two training initiatives. These include regulatory, cultural and marketing considerations. Conclusion : Over the next 5 years, there will be a on-going challenge to expand the Center's efforts at improving the efficacy of the training of direct care paraprofessional worker both for entry into the field and for continuing education. Increasingly, these workers are being recognized as the primary workers that will be caring for an increasingly frail and disabled population. Keywords : Direct Care paraprofessional training, competency, standardization

**SS25 226-C
UNDERGRADUATE AND POSTGRADUATE TEACHING IN MEDICINE FOR OLDER PATIENTS: THE CURRENT SITUATION AND IMPLICATIONS FOR FUTURE**

DEVELOPMENT, LESSONS FROM TWO EUROPEAN COUNTRIES

**SS25 226-C-1
ARE WE TEACHING BRITISH UNDERGRADUATES WHAT THEY REALLY NEED TO KNOW ABOUT AGEING?**

Adrian G BLUNDELL, Adam L GORDON (*Department of Health Care of Older People, Nottingham University Hospitals NHS Trust, United Kingdom*)

Introduction : The 1st UK National Survey of Undergraduate of Teaching in Ageing and Geriatric Medicine was conducted in 2008 and revealed shortcomings in undergraduate teaching in ageing and geriatric medicine in the UK. We are currently conducting the 2nd UK national survey and look forward to presenting these to the IAGG in 2013. Method : As with the previous iteration, learning outcomes from the British Geriatrics Society Recommended Curriculum for Medical Undergraduates were mapped to the guidance of the UK General Medical Council and used to compile an electronic questionnaire covering the whole curriculum which was hosted online. All 31 UK medical schools were invited to respond. For each outcome, we asked whether and how it was taught and examined, the disciplines involved in teaching and the amount of time devoted to teaching. Only teaching delivered to all students was included. Results : Previously we found that common presentations, the geriatric giants, were taught in most medical schools but only 8/21 learning objectives were taught - and none examined - in all schools. Elder abuse was taught formally in only 8/17, pressure ulcers in 14/17, social ageing in 9/17 schools, cellular ageing in 7/17 and physiology of ageing in 9/17. These represent important deficiencies. We will present to conference the findings of the second iteration currently in progress and describe trends in teaching over time. Conclusion : Teaching in geriatric medicine in the UK has previously been shown to be deficient. We will, at this symposium, describe trends over time and consider their implications for teachers. Keywords : Ageing, Geriatric medicine, Teaching, Assessment

**SS25 226-C-2
DEMENTIA IN THE UK MEDICAL CURRICULUM: REFLECTIONS ON PAST, PRESENT AND FUTURE RESEARCH**

Ellen TULLO (*Newcastle NIHR Biomedical Research Centre in Ageing, Newcastle University, United Kingdom*)

Introduction : Dementia is an increasingly common condition and all doctors, in both hospital and community care environments, must be prepared to competently manage patients with this condition. It is unclear whether medical education about dementia in the UK, or elsewhere, is currently fit for purpose in this respect. Method : Review of national and international policy documents followed by an electronic questionnaire sent to UK medical schools to survey and evaluate the nature of dementia-specific teaching and learning for medical students. Results : Review of policy documents suggested that shortcomings in dementia care are affected, in part, by shortcomings in dementia education. 23/31 UK medical schools responded to the survey. All provided some dementia-specific teaching but this focussed more on knowledge and skills than behaviours and attitudes. Assessment of dementia-specific learning outcomes was inadequate. There was a widespread failure to adequately engage the multidisciplinary team, patients and their carers in teaching, presenting students with a narrow view of the condition. Conclusion : Although most UK medical schools currently teach about dementia, a number of shortcomings were identified. Based upon these, we recommend:

embedding dementia as a core curriculum topic, evaluating attitudes and behaviours towards people with dementia, assessing dementia-specific learning outcomes, and involving people with dementia and their carers in teaching. Keywords : dementia, undergraduate medical education, attitudes

SS25 226-C-3

AN AXIS OF OLD AGE MEDICINE - TEACHING DUTCH DOCTORS ACROSS THREE SPECIALTIES ABOUT THE MEDICINE OF OLDER PEOPLE

Jos SCHOLS (*Dept. GP and Dept. HSR, Maastricht University, Netherlands*)

Introduction : Western societies show a demography of more and more elderly people. In addition, the number of frail and disabled old people throughout the total care chain (community care - care homes - hospitals) is growing as well. The main trend is to keep frail elderly in their own home living environment as long as possible. Next to working on improving the quality of medical care for the elderly, this requires also much more medical and multidisciplinary collaborative working throughout the care chain. Method : Literature study and expert consultations to explore and describe the development and background of the rather unique Dutch medical axis for older patients as well as the relevant aspects of the postgraduate teaching programmes. Results : Since 1990, officially a medical axis for the elderly exists, consisting of General Practitioners, Nursing Home Physicians and Hospital Geriatricians. Initially, because they are educated separately, they indeed worked rather separately from each other. Currently, collaborative working becomes more visible. As intermediate between general practitioners and hospital geriatricians, nursing home physicians have evolved towards specialists in elderly care medicine, working not only in care homes but also more and more as consultants and supporting physicians for general practitioners in the community. In the three postgraduate teaching programmes attention for collaborative working is growing as well to ultimately achieve an increasingly better continuity of medical care in daily practice. Conclusion : The unique medical axis for frail and disabled elderly in the Netherlands with its related educational aspects may be an example for other countries. Keywords : medical axis, frail elderly

SS25 226-C-4

DEVELOPING A TAIWANESE FELLOWSHIP IN GERIATRIC MEDICINE: LESIONS SO FAR AND FUTURE DEVELOPMENTS

Li-Ning PENG (*Center for Geriatrics and Gerontology, Taiepei Veterans General Hospital, Taiwan*)

Introduction : Taiwan has become an aging country in 1993, and is estimated to become an aged country in 2017. Until 2004, the National Health Research Institute (NHRI) started to promote the training of geriatricians to cope with the need for geriatric health care professionals. Due to the lack of sufficient geriatric teaching resources, the NHRI invited the Mt. Sinai Medical School of New York to pilot a geriatric fellowship training program in Taiwan but the collaboration of Mt. Sinai Medical School ended in 2006 due to the limitation of funding support. Results : The Veteran Affairs (VA) Commission in Taiwan officially launched the geriatric service programs for training more geriatric healthcare professionals and was affiliated with the British Geriatrics Society and other international teaching resources since 2006. All trained geriatricians were working in various health care facilities. Till 2012, there were 9 certified geriatric fellowship training programs across different areas of the country. The success of Taiwanese VA geriatric fellowship training program has attracted

international attentions and has been reported to the British Geriatrics Society, IAGG regional meeting, and EUGMS annual meetings. In 2011, the training program extended to the Asian countries by hosting the Master Class on Ageing (MCA) of IAGG, attracting young geriatricians with research potentials to develop their research career. More MCAs have been held in Hong Kong and Beijing. Conclusion : The active development of geriatric training will facilitate Asian countries to face challenges of aging. Keywords : Taiwan, Geriatric training

SS25 305-S

AGING, HEALTH & TECHNOLOGY: EVIDENCE FROM ASIA

SS25 305-S-1

LIVING ARRANGEMENTS AND HEALTH SPENDING OF THE ELDERLY IN INDIA

Tannistha SAMANTA (*Humanities and Social Sciences, Indian Institute of Technology-Gandhinagar Ahmedabad, Gujarat, India*)

Introduction : Do multigenerational extended families have protective health effects on the elderly in India? Does household wealth mediate the relationship between co-resident elderly and their health outcomes? Demographic literature on health care access/spending of the elderly in developing countries remains scant because of the common assumption that they are provided for by their children, with whom overwhelming majority of the elderly reside. Method : Drawing data from the India Human Development Survey (2004-05)-a nationally representative, multitopic dataset of 41,554 households-findings from this study reaffirm the importance of multigenerational families to the elderly wellbeing while underscoring the "wealth effect" and providing indirect evidence of intra-household allocation of resources. Results : Drawing data from the India Human Development Survey (2004-05)-a nationally representative, multitopic dataset of 41,554 households-findings from this study reaffirm the importance of multigenerational families to the elderly wellbeing while underscoring the "wealth effect" and providing indirect evidence of intra-household allocation of resources. Conclusion : Drawing data from the India Human Development Survey (2004-05)-a nationally representative, multitopic dataset of 41,554 households-findings from this study reaffirm the importance of multigenerational families to the elderly wellbeing while underscoring the "wealth effect" and providing indirect evidence of intra-household allocation of resources. Keywords : health expenditure, family support, India

SS25 305-S-2

DETERMINANTS OF RECEIVING PAID HELP AMONG DISABLED ELDERLY PEOPLE IN TAIWAN

Li-jung Elizabeth KU¹, Li-fan LIU² (*1. Institute of Public Health, College of Medicine, National Cheng Kung University, Taiwan; 2. Institute of Gerontology, College of Medicine, National Cheng Kung University, Taiwan*)

Introduction : The elderly population in Taiwan is estimated to double from 10% in 2007 to 20% in twenty years' time. As the population ages, more elderly people will need some form of caregiving support and a greater demand for long-term care services. The objective of this study is to examine predictors of receiving paid help among disabled elders who stayed in their own homes in Taiwan. Method : Data were drawn from three waves of the Taiwan Longitudinal Study on Aging (TLSA) (1999, 2003, and 2007) to examine the receipt of help with activities of daily living (ADLs) in a nationally representative sample of Taiwanese elderly people aged 65 and older. Results : The increasing trend of receiving paid help may be supplemental to family

support and vice versa brought up the issue that social inequality of unmet care needs of disabled elderly. Factors associated with higher likelihood of paid help use included better socio-economic status and more ADLs. However, those living with spouse only were much less likely to use paid help than those living with adult children. Conclusion : Our finding of a positive association between higher socio-economic status and more paid help is in line with the literature on social inequalities of unmet health care needs. Findings also suggest that future long-term care (LTC) policy in Taiwan should focus more on providing elders who live alone or with spouse only additional caregiving resource. Keywords : family support, activities of daily living (ADLs), paid help

SS25 305-S-3

A COMPARISON OF SOCIOECONOMIC DIFFERENCE IN HEALTH AMONG OLD POPULATION IN INDIA AND KOREA

Soong-Nang JANG (*College of Nursing, Chung-Ang University, Korea*)

Introduction : Most of comparative studies of health have been produced from European countries and the US. Comparison study for Asian countries is rare and a few studies have only focused on race/ethnicity or immigrant as Asian in Western countries, with limited health outcome not general health status. We examine gender, age and educational level differences in health at ages 45 years and older in India and Korea. Method : We use the Korean Longitudinal Study of Ageing (KLoSA) for Korea and Longitudinal Aging Study in Asia (LASI) pilot data for India to examine gender, age and socioeconomic differences in self rated health, disability. Results : Women in Korea are more likely than men to have self rated poor health (OR 2.01), disabling including ADL difficulties (OR 1.45-2.94), and depressive symptoms (OR 1.45-3.35). On the other hand, Gender difference in self rated health was not detected for Indian middle aged men and women. Disparity of self rated health in India was similar level to Korean men and women (OR for Indian =1.12, OR for Korean = 1.40), and these differences are not eliminated by controlling gender, age and other covariates. While age difference of self rated health, disability were not quite severe in India, Korean middle aged men and women showed steeper gap between age groups in self rated health and disability rate. Conclusion : There is remarkable consistency in direction of educational differences in health across two countries, but gender difference is only detected in Korean population. Keywords : International comparison, Socioeconomic disparity

SS25 305-S-4

MOBILITY, CONSUMPTION AND WELL BEING IN THE LIVES OF OLDER ADULTS IN GUJARAT, INDIA

Michal ISAACSON¹, Tannistha SAMANTA², Lisa A. D'AMBROSIO¹, Joseph F. COUGHLIN¹ (*1. New England University Transportation Center & MIT AgeLab, MIT, USA; 2. Social Sciences, Indian Institute of Technology Gandhinagar, India*)

Introduction : The objective of this study is to gain a broad understanding of the day-to-day lives of older adults in India. Understanding that the behavior and the habits of this growing population will impact many realms of life this study proposes collecting a unique data set that will explore what those impacts may be. The study focuses on three main themes: mobility, consumption and well being. Method : This study uses a theoretical sample of 30 persons aged from 50 to 80 living in Ahmedabad, Gujarat that has been generated using a snowball technique, creating three groups of older adults. Three separate methods are employed to collect data on

each of the factors that this study examines. 1. Mobility ? data regarding mobility is collected using GPS technology. Participants carry GPS loggers with them for one week during which the logger will record their location. 2. Consumption ? Participants keep a diary that records activities that they take part in, services that they utilized and goods that they purchased. 3. Well Being ? The Gallup well-being index is administered as a measurement of personal well being. Results : As this is an on going study, results will be presented exploring the differences between household composition and mobility as well as between gender and the association between mobility and well-being. Conclusion : Mobility is a key factor in realizing roles both within the family and within society at large and is thus has a strong connection with culture, gender and household composition. Keywords : Mobility, Well-being, Consumption

SS25 306-R

THE SEOUL INSTITUTE SPECIAL SYMPOSIUM: AGING PEOPLE'S LIFE IN SEOUL -PAST, PRESENT AND FUTURE

SS25 306-R-1

AGING PEOPLE'S LIFE IN SEOUL-PAST, PRESENT AND FUTURE-

Min-Suk YOON (*Department of Future and Social Policy Research, The Seoul Institute, Korea*)

Introduction : Seoul is the largest city in Korea, and it is getting old. The population of adults over the age of 65 now consists of 10% of the population and it is expected to increase to over 20% by 2030. Older citizens in Seoul will become a significant portion of society. Method : This study was started from this point of view and tries to explain this issue by multidisciplinary study based on literature reviews and secondary analysis of available data. This analysis will try to show the past and present situation of aging peoples lives in Seoul. We will show you their life in a social, economic, financial, health, and physical activities perspective. Results : The contents of study by each field is presented as follows. Taken from the social aspect of elderly life of those who live in Seoul, we have used the data which was product by The seoul institute, such as the change in the elderly population and the change in the number of users of social welfare in order to predict the potential problems anticipated and suggest solutions for the future. We will also show you the life style of seoul's aging peoples by picture and other materials. Conclusion : Our analysis will conclude with thoughts on the future for the aging population in Seoul. Keywords : Seoul city life, Social and physical change

SS25 306-R-2

AGING PEOPLE'S LIFE IN SEOUL-PAST, PRESENT AND FUTURE-

Hye-kyung SUH (*Graduate School of Social Welfare, Hallym University, Korea*)

Introduction : Seoul is the largest city in Korea, and it is getting old. The population of adults over the age of 65 now consists of 10% of the population and it is expected to increase to over 20% by 2030. Older citizens in Seoul will become a significant portion of society. Method : This study was started from this point of view and tries to explain this issue by multidisciplinary study based on literature reviews and secondary analysis of available data. This analysis will try to show the past and present situation of aging peoples lives in Seoul. We will show you their life in a social, economic, financial, health, and physical activities perspective. Results : The contents of study by each field is presented as follows. Taken from the social aspect of elderly

life of those who live in Seoul, we have used the data such as the change in the elderly population and the change in the number of users of social welfare in order to predict the potential problems anticipated and suggest solutions for the future. In the case of physical activities, this study has analyzed the demand/supply dynamics analyzing the actual conditions and restriction factors in the need for sporting activities in the golden years. By examining these conditions, we not only promoted sporting activities for elders but also have suggested plans to support lasting participation in order to maximize the sustainability of the life style. Conclusion : Our analysis will conclude with thoughts on the future for the aging population in Seoul. Keywords : Seoul city life, Social and physical change

SS25 306-R-3

AGING PEOPLE'S LIFE IN SEOUL-PAST, PRESENT AND FUTURE

Eunye NOH (*Dept of Future and Social Policy Research, The Seoul Institute, Korea*)

Introduction : Seoul is the largest city in Korea, and it is getting old. The population of adults over the age of 65 now consists of 10% of the population and it is expected to increase to over 20% by 2030. Older citizens in Seoul will become a significant portion of society. Method : This study was started from this point of view and tries to explain this issue by multidisciplinary study based on literature reviews and secondary analysis of available data. This analysis will try to show the past and present situation of aging peoples lives in Seoul. We will show you their life in a social, economic, financial, health, and physical activities perspective. Results : This study has analyzed the demand/supply dynamics analyzing the actual conditions and restriction factors in the need for sporting activities in the golden years. By examining these conditions, we not only promoted sporting activities for elders but also have suggested plans to support lasting participation in order to maximize the sustainability of the life style. Conclusion : Our analysis will conclude with thoughts on the future for the aging population in Seoul. Keywords : Seoul city life, Social and physical change

SS25 306-R-4

THE EMERGENCE OF A NEW ELDER CARE DISCOURSE IN SEOUL

Wonjee CHO (*Translational Gerontology and Retirement Research Center, Seoul National University, Korea*)

Introduction : In South Korea, the family has traditionally been considered as the primary source for caring for a financially dependent or functionally impaired older adult. However, dramatic demographic changes and rapid industrialization and urbanization in Korean society, especially in Seoul, have led to changes in family size, family living arrangement, and family-related culture. Declines in multigenerational living arrangements and numbers of children contributed to weaken traditional cultural moral values and practices of parent-child relationship that obligated adult children to take primary responsibility for their aging parents. These socio-cultural changes continue to fuel interests in an issue of the responsibility for elder support - individual, social, or filial obligations toward older adults. Method : This study is to understand changes in needs and preferences of older people in relation to old-age support and eldercare in rapidly changing Seoul city by using data from Seoul Survey and Korean population households census. Results : The number of single-elderly and couple-elderly households has been constantly growing. The responsibility for elder support or care has gradually shifted from adult children to aging parents themselves in the absence of social support. Conclusion :

Through considering the issues caused by changing family attitudes and practice to old-age support and care, this study will portray the socio-cultural model for managing current and future challenges associated with parent-child relationship and elder care and for enhancing the quality of life in the later life in Seoul city. Keywords : Eldercare, old age

SS25 308-R

PROTECTING AND PROMOTING THE HEALTH AND HUMAN RIGHTS OF OLDER PERSONS: THE ROLE OF CIVIL SOCIETY AS AGENTS OF CHANGE IN MOVING TOWARDS A NEW CONVENTION ON THE RIGHTS OF OLDER PERSONS

SS25 308-R-1

PROMOTING THE PROCESS: HUMAN RIGHTS CONVENTIONS AS A TOOL FOR SOCIAL CHANGE

Ken BLUESTONE (*Age International, United Kingdom*)

Introduction : It can be argued that the highest expressions of international human rights legislation are UN Human Rights Conventions. Conventions set global standards and are legally binding for those countries that ratify them. Yet governments are only held accountable by their own citizens and civil society ensures these global standards can become a legal certainty at national level.

Method : Drawing on the experience of the creation and implementation of human rights conventions for women, children and people with disabilities, this paper will demonstrate that greater civil society involvement is part and parcel of creating greater legal certainty of the rights of older persons through a Convention.

Results : Civil society has a fundamental role to play in enshrining these legal standards. The process of bringing about a Convention on the Rights of Older Persons requires the fundamental involvement of civil society at a number of levels: 1) Awareness raising - do people know these rights exist?; 2) Political action - governments need to know that a Convention is necessary; 3) Accountability - a Convention must become a living legal tool at national level requiring the accountability of governments to its citizens.

Conclusion : The impact of a Convention on the Rights of Older Persons extends far beyond the legal standards it will set. Participation of civil society is an integral part of creating that legal standard and the bedrock for its implementation.

Keywords : Human Rights, Civil Society, Participation

SS25 308-R-2

ENSURING THE RIGHT TO HEALTH AND TO ENJOY LONGEVITY IN DIGNITY: A GLOBAL EFFORT

Lia Susana DAICHMAN (*ILC-Argentina and UN ILC-GA Representative, ILC-Global Alliance, Argentina*)

Older persons are important and valuable members of Society who are entitled to an effective and efficient Health Service and to promote not only Health but a minimisation of disability in later life. Providing many times "safe care" has been used as an excuse to sacrifice Older person's dignity and Human Rights. Relevant principles of good medical and social care for older people are: To promote good health in late life a-That health and social care delivery will be based on need rather than age and avoid Discrimination. b-The prevention of illness c-The reduction of disability. d-Involvement of older people in the management choices of their illness and decisions on future care, to support them while in hospital and in their own homes should help with the preservation of their Dignity , Autonomy and Respect. Keywords : Dignity

SS25 308-R-3

EFFECTIVE ADVOCACY BY AND ON BEHALF OF OLDER PERSON: INPEA SURVEYS STUDIES, EXPERIENCES AND LESSONS LEARNED

Susan SOMERS (*Secretary General, International Network for the Prevention of Elder Abuse (INPEA), USA*)

Recently there is a focus of attention towards a New Convention on the Rights of Older Person. However, while UN Conventions are agreed to by Governments, support cannot be build without the backing and advocacy of Older Persons, themselves. Professionals and para professionals as well as all Civil Society Organizations can play key roles in raising awareness and educating both individuals and policy makers that older persons right are being violated and deserve protection. Through a comparison of soft vs hard laws, delegates will come to understand the gaps in protection with respect to older persons. Delegates will learn what efforts being made at the Regional and National Levels towards an international instrument. Delegates will have the tools and information to join in the protection of the rights of older persons. Keywords : Human Rights of Older Persons

SS25 309-C

GOLDEN AGING FORUM: AGING IN PROPRIOCEPTION AND ROLES OF PROPRIOCEPTION IN REHABILITATIONS

SS25 309-C-1

CONFIDENCE IN MOBILITY OF OLDER ADULTS THROUGH THE PROPER ASSESSMENT AND REHABILITATION OF ANKLE PROPRIOCEPTION

Gahyun YOUN (*Department of Psychology, Chonnam National University, Korea*)

Introduction : Age related subtle deteriorations in proprioception and the effects of proprioception in rehabilitations for the patients with mobility limitations such as acute stroke and total ankle arthroplasty are not well understood, while the significance of proprioception in the normal aging and in the recovery process of those conditions is widely emphasized. Method : This symposium reveals subtle but significant changes in ankle proprioception that are evident in normal aging through the new assessing technique developed in the Baltimore Longitudinal Study of Aging (BLSA). Following two clinical studies performed in Chonnam National University examined the relationships between proprioception and rehabilitations. Results : Age-associated declines in ankle proprioception were found in older adults in the tasks of rotation detection and rotation tracking. Patients of total ankle arthroplasty showed deficit of motor control due to dynamic postural imbalance and ankle proprioception loss. Clinical study also showed that proprioception training can have improved effect on walking ability restoration in acute stroke patients compared to conventional balance training. Conclusion : Together these findings highlight the biomechanical roles of proprioception which are not only age-associated, but also strongly related with rehabilitation procedures. Keywords : Aging, Proprioception, Rehabilitation

SS25 309-C-2

SEX-SPECIFIC AGE-ASSOCIATION IN THE ANKLE PROPRIOCEPTION OF OLDER ADULTS: RESULTS FROM THE BALTIMORE LONGITUDINAL STUDY OF AGING

Seung Uk KO¹, Eleanor M. SIMONSICK² (*1. Mechanical Engineering, Chonnam National University, Korea; 2. Clinical Research Branch, National Institute on Aging (NIA/NIH), USA*)

Introduction : Proper functioning in ankle proprioception is essential

for normal gait and posture given that awareness of position and motion in the most distal segment of lower extremity is fundamental for feedback control in those activities. The aim of this study was to identify gender specific age-associations in ankle proprioception in older adults with custom-designed proprioception test instrument. Method : Testing protocol was based on passive and passive-to-active ankle rotational tasks from 289 participants (131 women) in the Baltimore Longitudinal Study of Aging (BLSA) who were between 51 to 95 years old. Threshold for detecting slow ankle angular movement in women and men were 0.97, and 1.13 degree, respectively, and were significantly higher with older age ($p < 0.001$, for both). Results : No age-association was found for ankle positional matching. Ankle tracking performance in women and men, in a cross-correlation coefficient were 0.91 and 0.89, respectively, and were lower with older age both in women and men ($p = 0.018$, and $p = 0.011$, respectively). Conclusion : Findings in the present study prompt future studies to determine whether these age-associated declines in ankle proprioception are still evident in the longitudinal study, and also how these specific declines of ankle performance are related with age-associated chronic disease such as knee or hip OA, and type II diabetes, thus affecting daily activities such as gait. Keywords : proprioception, aging, mobility limitation

SS25 309-C-3

EFFECT OF BIOFEEDBACK BALANCE TRAINING ON WALKING ABILITY IN ACUTE STROKE PATIENTS

Sam-Gyu LEE, Min-Keun SONG, Hyun-Sik YUN, Jae-young HAN, In-sung CHOI (*Department of Physical & Rehabilitation Medicine, Research Institute of Medical Sciences, Chonnam National University Medical School & Hospital, Korea*)

Introduction : Well-equipped biofeedback balance training (BBT) revealed positive effects on meaningful functional activities such as walking ability in elderly and chronic stroke patients. We aimed to evaluate the effect of BBT on walking ability in acute stroke patients. Method : Seventeen first-ever acute hemiplegic stroke patients were recruited. Nine patients were assigned to experimental group and eight patients were assigned to control group. All patients could walk under supervision or independently. Experimental group performed BBT using 3-dimension dynamic posturography system, which can provide visual biofeedback and quantify the proprioceptive sense and balance function. In experimental group, BBT was performed for 30 minutes a day, 3 days a week, for 2 weeks. In control group, conventional balance training (CBT) using balance board and weight shifting exercise program was performed, instead of BBT. NeuroRehabilitation program for all stroke patients was done for 30 minutes per session, two sessions a day, 5 days a week, for 2 weeks. Timed up and go (TUG) test and 10 meter walking test were conducted, and Berg balance scale (BBS) was evaluated in both groups before and after study program. Results : 1) TUG test, 10 meter walking test and BBS were not different between both groups before study program. After study program, Δ TUG test, Δ 10m-walking test and Δ BBS were more significantly improved in experimental group than control group, respectively ($p=0.022$, $p=0.023$ and $p=0.029$). Conclusion : BBT would be more effective to improve balance function and walking ability than CBT in acute stroke patients. Keywords : Stroke, Balance, Walking

SS25 309-C-4

STATIC AND DYNAMIC POSTURAL BALANCE AFTER SUCCESSFUL MOBILE-BEARING TOTAL ANKLE ARTHROPLASTY

Keun-Bae LEE (*Department of Orthopaedics, Center for Ageing and*

Geriatrics, Chonnam National University Medical School and Hospital, Korea)

Introduction : Osteoarthritis can affect normal locomotion and postural balance via a proprioceptive mechanism. And because arthroplasty can partially restore joint sensation and motion, it can also enhance motor coordination and functional stability. The purpose of the present study was to investigate static and dynamic postural balance after successful total ankle arthroplasty by using dynamic posturography. **Method :** Thirty patients (21 men, 9 women; mean age, 58 years) who underwent unilateral total ankle arthroplasty with a cementless mobile-bearing ankle prosthesis and 30 age- and sex-matched healthy control subjects were included. Using computerized dynamic posturography, sensory (sensory organization test [SOT]), and motor (limit of stability [LOS], rhythmic weight shift [RWS], and weight bearing) impairment assessments were performed at an average of 15 months after total ankle arthroplasty. **Results :** In the SOT, results of the SOT-2 test reflecting mainly proprioception showed no significant difference between patients and controls, but patients demonstrated significantly lower scores for SOT-4, -5, and -6 as a measure of dynamic postural balance and required more hip movement to maintain balance. In the motor-control tests, patients showed significantly lower measures in indices of LOS test except the mean reaction time and the forward/backward directional control and on-axis velocity of the RWS test. Weight bearing was observed asymmetrically in patients. **Conclusion :** Patients had a higher degree of dynamic postural imbalance and relied less on ankle strategy to maintain balance than controls. Also, patients showed the deficit of motor control ability as compared with age- and sex-matched healthy controls. **Keywords :** Postural balance, Ankle osteoarthritis, Total ankle arthroplasty

SS25 310-C
INFLAMMATORY BIOMARKERS AND FRAILTY: THE STATE OF THE ART

SS25 310-C-1
INFLAMMATION AND FRAILTY: WHAT LINK?

Tamas FULOP¹, Anis LARBI², Graham PAWELEC³, Janet MCELHANEY⁴ (1. Medicine, Universite de Sherbrooke, Canada; 2. Singapore Immunology Network (SIgN), Biopolis, A*STAR, Singapore; 3. Internal Medicine II, University of Tubingen, Germany; 4. Geriatric Research, IRSC, Canada)

Introduction : Age-associated frailty is a collection of clinical observations that still lacks consensus in the field of geriatrics, with no specific biomarkers identified yet and where controversies exist. The main reason is that we do not understand the patho-physiological mechanisms underlying frailty. One of the most often evoked mechanisms is inflammation due to the relationship between aging and low grade inflammation (“inflamm-aging”). **Method :** Revision of the literature in relation to the inflammatory markers (biomarkers) related to frailty. Measurement of the frailty index in 40 healthy elderly and 40 type 2 diabetic elderly subjects and correlate it to various inflammatory markers: pro-inflammatory cytokines, CRP and beta microglobulin. **Results :** Our data confirm the findings of the literature as the frailty index is strongly correlated to the inflammatory markers measured in our study. The literature revision showed that the most consensual pathophysiological pathway leading to frailty is the inflamm-frailty. Inflammatory parameters may serve as biomarkers for frailty. **Conclusion :** Frailty is partly caused or associated with systemic inflammation. Whether this is an independent process from aging is still unresolved as aging is also associated with inflamm-aging. Thus further studies are needed to unravel the exact relationship

between frailty and inflammation and determine the specificity of the inflammatory biomarkers. , biomarkers

SS25 310-C-2
INFLAMMATION AND FRAILTY IN A CHINESE POPULATION

Anis LARBI¹, Shwe Zin NYUNT², Anusha VASUDEV¹, Feng LIANG², Crystal Tze Ying TAN¹, Shamini AYYADHURY¹, Tze Pin NG² (1. Singapore Immunology Network (SIgN), A*STAR, Singapore; 2. Gerontological Programme, NUHS, Singapore)

Introduction : Frailty is limiting the autonomy of elderly individuals and may account as a co-morbidity. Because of its chronic and worsening characteristics, frailty should be considered as a major condition in the elderly that requires attention. Most of age-related conditions are associated with certain pro-inflammatory molecules suggesting an immunological component in chronic conditions. **Method :** Within the Singapore Longitudinal Aging Study (SLAS), we have stratified the elderly based on age, gender and frailty. A comprehensive clinical assessment enables an accurate stratification of these Chinese population based on nutrition, cognition, lifestyle and medical history. Additionally we investigated immunological history as well as SNPs profile of these individuals. Finally, we tested the level of a series of molecules associated with inflammation and metabolism. **Results :** We identified associations between frailty and sIL-4R, CCL7 and CCL1. These molecules are mainly produced by T cells suggesting an activation of the adaptive immune system. The fact that CD57+ gamma/delta T cells are also associated with frailty score confirms this assumption. The data also shows that frailty is more prevalent in demented individuals (MMSE<25). The association with other molecules will be discussed. **Conclusion :** We identified molecules significantly associated with frailty. The complexity of aging and the association with multiple conditions reinforce the necessity to stratify the elderly population further in order to better understand healthy aging vs. age-related diseases. **Keywords :** Inflammation , Genetics, Frailty

SS25 310-C-3
BIOMARKERS OF INFLAMMAGING: “BGRZB” IN INFLUENZA AND CHRONIC DISEASE PROGRESSION

Janet Elizabeth MCELHANEY (Medicine, Advanced Medical Research Institute of Canada, Canada)

Introduction : “Inflamming”, the chronic elevation of inflammatory mediators, appears to critically weaken the immune system as we age. Cytomegalovirus (CMV) persistently stimulates and exhausts the immune system, driving CD8+ T cells to a late stage or terminally differentiated (senescent) state. CD8+ T cells clear influenza from infected lung tissue. **Method :** We measured granzyme B (GrzB), a key component of this response, in resting and influenza-stimulated CD8+ T cells. **Results :** We observed that a high proportion of senescent CD8+ T cells accumulate with persistent CMV infection and abnormally express GrzB. This led us to the discovery of a biomarker called, “bGrzB”, the level of which increases with age and is 3-4 fold higher in CMV+ve vs. CMV-ve older adults. Older people with chronic lung disease (CLD) or heart failure (HF) also have increase levels of bGrzB. GrzB is co-localized with CD8+ T cells in atherosclerotic lesions in humans and leads to plaque instability by inducing apoptosis in vascular smooth muscle cells and by degrading the extracellular matrix. A similar role in the progression of CLD has been postulated. Our studies showing that in HF, GrzB is released from CD8+ T cells in the presence or absence of influenza, presumably due to the chronic inflammatory stimulus associated with

HF. Conclusion : In consequence, bGrzB may be a common thread between the immune dysfunction, the increased risk of complications from influenza and pneumonia, and progression of frailty in heart and lung disease in older adults. Keywords : Granzyme B, Older adults, Chronic Disease

SS25 310-C-4

INFLAMMATION AND FRAILTY: EVIDENCE FROM LONGITUDINAL DUTCH AGEING STUDIES

Andrea MAIER (*Gerontology and Geriatrics, University of Leiden, Netherlands*)

No Abstract

SS25 312-R

VISION AND HEARING IMPAIRMENTS IN OLDER PEOPLE ? WHO CARES?

SS25 312-R-1

IS THE VISION CARE PROVIDED TO NORWEGIAN NURSING HOME RESIDENTS ADEQUATE?

Helle K. FALKENBERG, Irene LANGEGGEN, Janne DUGSTAD (*Department of Optometry and Visual Science, Buskerud University College, Norway*)

Introduction : The Norwegian health care act requires all nursing homes to provide high quality health care, based on individual needs. We measured the vision and hearing of residents at Eikertun nursing home in order to assess whether the eye and ear care provided is adequate. Method : Vision was measured in 45 nursing home residents aged 70-101 years and 49 age-matched controls living at home. All performed with informed consent. Visual functions were assessed by an optometrist. 30 residents also had pure tone audiometry measured by an audiologist. Vision and hearing aids and/or referrals to an ophthalmologist/ENT specialist were provided as appropriate. Results: Nursing home residents suffer from dual sensory loss. Visual functions and pure tone hearing thresholds are impaired. 20 of the residents had not had an eye test during the last 5 years, 17 residents were visually impaired, and 18 were referred to an ophthalmologist. 30 residents were given new glasses. 27 residents had impairment hearing in one or both ears; only 3 of these had a hearing aid. All 30 residents were recommended a new hearing aid. Conclusion : Visual loss due to uncorrected refractive errors is a major cause of visual impairment in nursing home residents, and dual sensory loss is common. Our results indicate that the eye/ear health care could be improved by regular examinations to ensure appropriate vision and hearing aids. Moreover, skill development of nursing staff is necessary on how to recognize and care for patients with vision and hearing loss. Keywords : vision, hearing, ageing, dual sensory loss

SS25 312-R-2

HEARING LOSS IN THE ELDERLY - WHO CARES?

Jorunn SOLHEIM (*Ear-Nose-Throat Department, Lovisenberg Diakonale Hospital, Norway*)

Introduction : Because the elderly population is growing, the number of hearing-impaired persons and the need for appropriate audiological rehabilitation services to alleviate this impairment are increasing. Many elderly people experience particular difficulty because their hearing loss comes as an extra burden in addition to other health problems. Institutionalized elderly are a vulnerable group due to physical and mental impairment. Health professionals could be the ones who identify sensory loss, initiate intervention and ensure that

aids are being used among those receiving residential care, if they had more knowledge and skills. However, studies have shown that health professionals in nursing homes have limited knowledge of hearing loss and the use and maintenance of hearing aids. Method : In the present study, 220 health professionals working in nursing homes in Norway were asked to complete a questionnaire related to hearing loss in the elderly and practical use of hearing aids. Results : The results showed that none had sufficient knowledge of function and handling of hearing aids. Scarcely half knew how to place a hearing aid battery and 5% knew how long it would last. Almost 50% stated that they believed that institutionalized elderly likely became isolated due to hearing loss. Conclusion : A major challenge for audiological rehabilitation is facilitating the use of fitted hearing aids. The limited knowledge and skills of caregivers must be addressed in order to meet the needs of hearing-impaired elderly in residential facilities. Keywords : Elderly, hearing impaired, nursing home, audiological rehabilitation

SS25 312-R-3

CHANGES IN QUALITY OF LIFE AMONG OLDER SENSORY IMPAIRED PATIENTS - ONE YEAR AFTER A HIP FRACTURE

Else Vengnes GRUE (*Nursing and Health, Diakonhjemmet University College, Norway*)

Introduction : Persons who experience a hip fracture are at high risk of impaired quality of life. Our aim was to identify changes in health related quality of life (HRQOL) in patients with hip fracture one year after the incidence. Method : During 2004-2006 a number of 331 hip-fracture patients were recruited from two acute-care-hospitals. Inclusion criteria were age 65 years or older and admitted from own home. Information about pre-fractured period was collected retrospectively using the Inter Resident Assessment Instrument for Acute Care and Short-Form 12-Item Health Survey (SF-12) at day three post surgery. Follow-up assessment was done after one year. Results : Pre-fractured mean value on SF-12 Physical Health Composite Scores (PCS) and SF-12 Mental Health Composite Scores (MCS) was, 42.8 (SD 11.3) and 43.8 (SD 6.2) respectively. The PCS mean value, follow up, was lower [38.4 (SD10.7), $p < 0.001$] but not MCS mean value [44.5 (SD 6.3), $p = 0.153$]. Regression analysis showed that severe pain, inactivity, dependent in stair-climbing and outdoor-walking explained 21% of the variance of low (< mean value) PCS scores. The latter variable had also an impact on the MCS scores. Persons with dual sensory impairment had lower mean PCS score pre- and post fractured, 3.3, $p = 0.010$ and 4.3, $p < 0.001$ respectively. Conclusion : Interdisciplinary intervention programs aimed at providing adequate sensory and pain management, inspire and empower people with hip fracture to maintain daily activity and regain an active lifestyle, stair-climbing and walk outdoors may improve HRQOL. Keywords : Hip fracture, HRQOL, Sensory impairment

SS25 313-S

ON MODERATORS AND MEDIATORS: NEW STEPS IN THE UNDERSTANDING OF EXERCISE BENEFITS ON COGNITIVE AGING

SS25 313-S-1

EXERCISE AND COGNITION IN OLDER ADULTS: TESTING THE CARDIORESPIRATORY HYPOTHESIS WITH FUNCTIONAL NIRS

Cedric T. ALBINET¹, Kevin MANDRICK², Pierre Louis BERNARD², Stephane PERREY², Hubert BLAIN² (*1. CerCA, CNRS, University of Poitiers, France; 2. Movement to Health (M2H), Euromov, Montpellier-1 University, France*)

Introduction : This study examined whether cardiorespiratory fitness (high maximal oxygen uptake - VO₂max - level) in older women improves executive processes associated with a better prefrontal cortical functioning. To test this so-called cardiorespiratory hypothesis, we measured local hemodynamic parameters in the bilateral dorsolateral prefrontal cortex (DLPFC) of all the participants using functional near-infrared spectroscopy (fNIRS) during the execution of a Random Number Generation (RNG) task, involving executive processes. **Method :** Forty women (61-77 years) performed a progressive maximal exercise on an ergocycle with gas analyzer and were classified as aerobically fit (VO₂max = 29.8 ml/kg/min) or unfit (VO₂max = 20.1 ml/kg/min). All the participants performed the RNG task and a control counting task at two different rates paced by a tone. A two-channel NIRS device (NIRO-200, Hamamatsu Photonics) recorded simultaneously in the right and left DLPFC, variations in oxygenated hemoglobin (HbO₂) during the experimental and control counting tasks. **Results :** The results revealed that, whatever the rate, high fit participants scored better ($p < .05$) on the RNG task than unfit participants. Also, during the RNG task, unfit participants showed a significantly ($p < .05$) reduced HbO₂ level in the right DLPFC compared to the left DLPFC, while high fit participants showed a similar cortical activation in the bilateral DLPFC. **Conclusion :** These preliminary results could be interpreted as the ability for the high fit women to recruit additional brain resources for improving their cognitive performance. This will be discussed as a potential form of compensation according to recent models of neurocognitive aging. **Keywords :** VO₂max, Executive Functions, Cerebral oxygenation

SS25 313-S-2

THE MODERATING ROLE OF 3 GENETIC POLYMORPHISMS ON THE EXERCISE/COGNITION RELATIONSHIP IN THE ELDERLY

Michel AUDIFFREN¹, Cedric ALBINET¹, Nathalie ANDRE², Romuald BODIN³, Marie-Helene JACQUES³, Claude FERRAND⁴, Alain KITZIS⁵ (1. Sport Sciences, University of Poitiers / UMR CNRS 7295, France; 2. Sport Sciences, UMR CNRS 7295, University of Poitiers, France; 3. Social Sciences, University of Poitiers, France; 4. Psychology, University of Tours, France; 5. Biology, University of Poitiers, Poitiers University Hospital, France)

Introduction : Several epidemiologic studies conducted in North America and in Europe have shown that the regular practice of a physical activity, in opposition to a sedentary lifestyle, is associated with a reduced risk of developing neurodegenerative diseases such as Alzheimer Disease (AD). These results have been strengthened by cross-sectional and interventional studies, which have shown that physical activity slows down the decline of cognitive functions typically observed in normal and pathological aging and retards the onset of dementia. Apolipoprotein E (ApoE), brain-derived neurotrophic factor (BDNF) and catechol-o-methyltransferase (COMT) genotypes have also been associated with cognitive performance and AD in elderly. The principal aim of this study was to examine the interactive effects of these three genetic polymorphisms with lifestyle factors on cognition in older adults. **Method :** Retired older people (Age > 54 years; N > 300) from Poitou-Charentes (France) provided buccal cells sample to allow for assessment of the ApoE, BDNF and COMT genotypes, completed cognitive tests and physical activity questionnaires (Historical Leisure Activity Questionnaire). Primary outcome variables were the cognitive performances measured in the Stroop test, the Logic Memory test and the Letter Comparison task. Secondary outcomes were variables related to cognitive reserve and metacognitions. **Results :** Analyses of variance and regression analyses were conducted to examine the

association of physical activity with cognitive performance as a function of genotype profile and other moderators. **Conclusion :** The preliminary results from this study suggest an association between lifestyle factors related to physical activity and cognitive performance in older adults at most genetic risk for neurodegenerative disease. **Keywords :** Physical activity; Episodic memory; Executive function

SS25 313-S-3

BENEFITS OF EXERCISE TRAINING ON COGNITION AND QUALITY OF LIFE IN SEDENTARY AND FRAIL OLDER ADULTS

Louis BHERER (PERFORM Centre, Concordia University, Canada)

Introduction : An increasing number of studies have suggested that people should adopt physical activity and exercise as part of their lifestyle to alleviate the negative impact of chronic disease and aging on the body and mind. Studies with healthy senior suggest that physical exercise can help improve cognition and quality of life. Whether frail older adults can show such benefits remains to be documented. We assessed the impact of 3-month exercise training program on cognition and quality of life in sedentary and frail older adults. **Method :** Participants aged 61-89 years were assigned to an exercise-training group (3 times a week for 12 weeks) or a control group (waiting list). Frailty was determined by a complete geriatric examination using specific criteria. Pre- and post-test measures assessed physical capacity, cognitive performance, and quality of life. **Results :** Compared with controls, the intervention group showed significant improvement in physical capacity (functional capacities and physical endurance), cognitive performance (executive functions, processing speed, and working memory), and quality of life (global quality of life, leisure activities, physical capacity, social/family relationships, and physical health). Benefits were overall equivalent between frail and nonfrail participants. **Conclusion :** Physical exercise training leads to improved cognitive functioning and psychological well-being in frail older adults. **Keywords :** Physical exercise, Cognitive function

SS25 313-S-4

MODERATORS AND MEDIATORS OF EXERCISE-RELATED BRAIN PLASTICITY IN THE ELDERLY

Kirk ERICKSON¹, Louis BHERER² (1. Psychology, University of Pittsburgh, USA; 2. Montreal Geriatric Institute, University of Quebec, Canada)

Introduction : Physical activity has been associated with a reduced risk of dementia, enhanced executive function and episodic memory, and improved mood. Yet, only recently have the consequences of physical activity on neural systems been more thoroughly described in humans. In this talk I will review the effects of physical activity on brain health throughout the lifespan, with an emphasis on mediators and moderators of the effect. **Method :** A number of moderators and mediators have been examined including molecular factors like BDNF and inflammation as well as behavioral effects like sleep. We have also examined genetic moderators of the effect including BDNF and COMT polymorphisms and dietary factors such as omega-3 levels. **Results :** Through a series of studies we have found that both molecular pathways and behavioral pathways likely influence the ways in which exercise influences the brain. Specifically, changes in serum BDNF levels with one-year of exercise is correlated with changes in hippocampal volume. In addition, the BDNF polymorphism moderates the association between physical activity and working memory function. Finally, we find that plasma levels of omega-3 moderated the effect of physical activity on cognitive function. **Conclusion :** Our

studies indicate that several factors modify the effects of physical activity on cognitive and brain health throughout the lifespan and that mediators of the effect can be examined on multiple levels including molecular pathways and behavioral pathways (e.g. sleep). Keywords : physical activity, moderators, mediators

SS25 316-R

GLOBAL APPROACHES TO POLICY SUPPORTING WORK AND CARE IN LATE MIDDLE AGE

SS25 316-R-1

HARMONISATION OR DIVERGENCE IN EUROPE'S WELFARE SYSTEMS? IMPLICATIONS FOR POLICY ON FAMILYCAREGIVING

Sue YEANDLE¹, Madeleine STARR² (1. *Sociology and Social Policy, University of Leeds, United Kingdom*; 2. *Head of Innovation, Carers UK, United Kingdom*)

Introduction : This contribution will address the question of whether European welfare systems are converging or diverging in how they address growing care needs among their populations, which arise in large part as a result of population ageing. Method : It will review dimensions of social policy where approaches are becoming increasingly differentiated, and at common trends and patterns in support to older people and those who provide care for them within their families and neighbourhoods. The trends explored will include the tendency to involve both third sector (not-for-profit) organisations and private companies in the delivery of services to older people, both in domiciliary and residential settings, and the growing awareness that family members (and others who care unpaid for older people in their kin groups or communities) include many people of working age who need support - through public policy, accessible services, or flexibility at work - to reconcile their participation in paid work, or their ability to progress in their career, with the often unpredictable and sometimes temporary care needs they wish or need to meet. Results : The contribution will consider how and why the profile of family caregiving has risen up the policy agenda in the EU in the past decade, paying particular attention to the role of the supranational voluntary organisation Eurocarers in shaping policy thinking and debate at EU level, concluding with some reflections on the challenges of current economic conditions in Europe. Conclusion : The speaker will draw on her knowledge/membership of the 'Employers for Carers' group in presenting concluding remarks. Keywords : carers; employment; ageing

SS25 316-R-2

REFLECTIONS ON AUSTRALIAN AND NEW ZEALAND POLICY INITIATIVES IN THE INTERFACE BETWEEN WORK AND CARE

Kate O'LOUGHLIN¹, Hal KENDIG² (1. *University of Sydney, Australia*; 2. *Centre for Research on Ageing, Health and Wellbeing, The Australian National University, Australia*)

Introduction : Workforce participation and informal caregiving are central to global capacities to respond constructively to rapid population ageing yet they are inadequately researched and understood. This paper will review the impacts and uptake of national initiatives implemented by governments in both Australia and New Zealand (NZ) in the last five years to address the interface between work and care, particularly as they apply to carers in late middle age. These initiatives are intended to better support family carers to retain or regain access to paid work, while maintaining their caregiving roles as family members. Method : Consideration will be given to the five

objectives contained in the NZ Carers' Strategy (2008) and Five Year Action Plan including the 5th objective: 'Provide training and pathways to employment for carers'. The effects of the legislative amendment allowing employed family carers to request "flexible working hours" will also be reviewed. For Australia, consideration will be given to the six priority areas in the National Carer Strategy Action Plan (2011-2014), with particular emphasis on reviewing Priorities 3 and 6 which address carers' economic security and opportunities to participate in paid work and health and well-being respectively. Results : In combination, these policy initiatives and their outcomes raise questions about the effectiveness of each mechanism to modify the work-care interface in a meaningful way. To date, the strategies in both countries appear to have not gained much policy or practical traction, in terms of implementation or impacts. Conclusion : The utility of comprehensive carers' strategies needs to be critically assessed. Keywords : Caregiving, older workers, Australia/New Zealand

SS25 316-R-3

CARING IN THE FACE OF A RAPID CHANGING SOCIETY: POLICY IMPACT OF DEMOGRAPHIC AND ECONOMIC SHIFTS IN CHINA

Xiaomei PEI¹, Hao LUO¹, Dale YEATTS², Haowei WANG¹ (1. *Sociology, Tsinghua University, China*; 2. *Sociology, University of North Texas, USA*)

Introduction : This study examines the impact of demographic and economic transitions on intergenerational support within families and the implications for policies on social care in China. Specific focus is given to explore the expectations of family support for the aged and the reality of flows of care, resource allocation, sharing and obligations within Chinese families. Method : The study used selective national survey data to illustrate current gaps between social beliefs in family care and the reality. Regression analysis was used to examine factors such as family size, household income, migration of adult children, geographic location, etc... on financial transfer and reciprocal support between generations within families. A comparison of intergenerational support by region intended to identify the impact of economic development on intergenerational exchanges. Results : The analyses indicate increasing difficulties of maintaining close family ties, weakening of traditional beliefs in family care for aged members, and efforts to reconstruct intergenerational care under the impact of economic, social, and cultural transitions. Gaps between beliefs in family care and realities have been found to exist. Regional variation seems to point to the positive effect of economic development on intergenerational support. Conclusion : It has been confirmed by the evidence that traditional practice of family support for the age people is seriously challenged by the rapid demographic and economic changes in China. Implications for policy development are discussed and an attempt is made to theorize family relations of societies experiencing rapid modernization under the framework of intergenerational solidarity. Keywords : family care, social transition, internengational relation

SS25 316-R-4

CAREGIVING FOR OLDER PEOPLE IN CONTEXTS OF POVERTY IN SUB-SAHARAN AFRICA: RECOGNIZING AND ADDRESSING A 'CULTURAL LAG'

Isabella ABODERIN¹, Jaco Retief HOFFMAN² (1. *APHRC/ OIPA, APHRC / Oxford University, Kenya*; 2. *AUTHeR / OIPA, NWU / Oxford University, South Africa*)

Introduction : A small number of investigations of the realities of long-

term care for functionally dependent older persons in sub-Saharan Africa has recently emerged, highlighting the overwhelming role of informal care provided by family members of all ages, but often in middle- and old age. This paper critically examines the orientation and findings of this body of work with a view to distilling key implications for policy discourses and further research. Method : A systematic review of existing empirical research and content analysis of regional- and national-level policy documents on long-term care for older persons in SSA. Results : There is a marked disconnect between the realities of long-term care in contexts of poverty and dominant African policy discourses on this issue. Empirical evidence shows profound inadequacies in care provision, major economic, mental, and physical caregiver strain and a clearly emerging demand for formal care services. Official African policy discourses, which remain unconstested, continue to underline the 'asset' of traditional family care as part of a broader emphasis on customary African values as a bedrock for 'homegrown' development in the region. Conclusion : Research on long-term care of older people in SSA must engage critically and actively with the dominant African realities and discourses on the issue, in order to address the 'cultural lag' inherent in them, and to enable a proper debate on formal policy options to mitigate caregiver strain and care inadequacies. Keywords : Caregiving; poverty; sub-Saharan Africa

SS25 317-B **RISK PROFILE AND GENETICS IN HEALTHY AGING**

SS25 317-B-1 **LOW CARDIOVASCULAR DISEASE RISK PROFILE AND HEALTHY LIFESTYLE IN A MIDDLE AGED AND OLDER COHORT STUDY IN TAIWAN**

Marion M. LEE¹, Kiang LIU², Chu-chih CHEN³ (1. Department of Epidemiology and Biostatistics, University of California at San Francisco School of Medicine, USA; 2. Department of Preventive Medicine, Feinberg School of Medicine, Northwestern University, USA; 3. Institute of Population Health Sciences, National Health Research Institutes, Taiwan)

Introduction : To determine the association between cardiovascular disease (CVD) low risk profiles (LRP: untreated cholesterol < 200 mg/dL, untreated blood pressure < 120/80 mmHg, non-smoker, and no history of diabetes and myocardial infarction) and healthy lifestyle (HLF: body mass index < 25 kg/m², moderate physical activity, no or moderate alcohol drinking, higher healthy diet score) and CVD in elder Taiwanese aged 55 and above. Method : The study design is cross-sectional and the setting is community-based. The participants were 2935 community-dwelling adults aged 55 and older, who participated in the Healthy Aging Longitudinal Study in Taiwan (HALST). In this talk, the measurements were fasting plasma glucose, serum cholesterol (CHOL) and its subfractions, systolic/diastolic blood pressures (SBP/DBP), triglycerides, and BMI. Results : A total of 692 diseased subjects were identified, with 268 (9%) and 52 (<2%) subjects met the LRP and HLF criteria, and 48 and 8 of them had CVD, respectively. The mean (untreated) CHOL and SBP were higher in non-CVD participants aged 75 years and older (195.6 vs. 182.4 mg/dL and 131.7 vs. 125.9 mmHg, respectively). In contrast, the CVD prevalence decreased with the number of factors of HLF (including a higher psychosocial score of sum of social network and psychological health scores) and was consistent for all the age groups. Conclusion : Participants with HLF of non-obese, moderate physical activity, and well psychosocial functioning had lower CVD prevalence. However, the associations between CHOL < 200 mg/dL had reverse association with CVD for the individuals aged 65 and older, as well as

SBP/DBP < 120/80 mmHG for those aged 75 and older. Keywords : likelihood ratio; psychosocial; reverse association

SS25 317-B-2 **LIFETIME GENETIC RISK OF VARIOUS CANCERS PREDICTED BY GERIATRIC EXOME-WIDE ASSOCIATION STUDY OF 2306 CONSECUTIVE AUTOPSIED CASES IN TOKYO**

Masashi TANAKA¹, Motoji SAWABE², Tomio ARAI³, Seijiro MORI⁴, Masaaki MURAMATSU⁵, Makiko Naka MIENO⁶, Takuma TANAKA⁷ (1. Department of Genomics for Longevity and Health, Tokyo Metropolitan Institute of Gerontology, Japan; 2. Section of Molecular Pathology, Tokyo Medical and Dental University, Japan; 3. Department of Pathology, Tokyo Metropolitan Geriatric Hospital, Japan; 4. Department of Internal Medicine, Tokyo Metropolitan Geriatric Hospital, Japan; 5. Department of Molecular Epidemiology, Medical Research Institute, Tokyo Medical and Dental University, Japan; 6. Department of Molecular Informatics, Jichi Medical University, Japan; 7. Department of Computational Intelligence and Systems Science, Interdisciplinary Graduate School of Science and Engineering Tokyo Institute of Technology, Japan)

Introduction : Under the multistage carcinogenesis hypothesis, the accumulation of mutations in cancer stem cells is influenced by the combination of both genetic and environmental factors. To elucidate the molecular mechanisms underlying the gene-environment interaction in carcinogenesis, we analyzed organ-specific lifetime genetic risks of various cancers by performing a geriatric exome-wide association study (G-EWAS) at Tokyo Metropolitan Geriatric Hospital and Institute of Gerontology. Method : The subjects were 2306 consecutive autopsy cases with various geriatric diseases, collected from 1995 to 2012. We performed exome-wide functional SNP genotyping with HumanExome BeadChips (Illumina Inc.) by use of DNA extracted from kidneys. The average call rate was 99.8%. A total of 110M missense and nonsense SNPs were detected among 16,000 genes. Associations were analyzed by the Fisher exact probability tests according to the recessive, dominant, and additive models. Results : Because females and males were exposed to different lifestyle factors, we selected the top 30 SNPs with significance levels of $p < 5 \times 10^{-4}$ for each gender and phenotype. These selected genes harboring the risk or protective SNPs associated with geriatric diseases were subjected to gene ontology analysis. These analyses suggested that distinct pathways are involved in the development and expansion of cancers in different organs. Comprehensive probability tests for multiple rare variants in each gene will be useful for integrating the results from the various East Asian countries participating in the International G-EWAS Project. Conclusion : G-EWAS is expected to reveal novel molecular targets of therapeutics not only for various cancers but also for and neurodegenerative disorders. Keywords : exome-wide association cancer

SS25 317-B-3 **IDENTIFICATION OF GENETIC VARIANTS FOR SUCCESSFUL AGING AND RELATED PHENOTYPES IN HALST ELDERLY BASED ON METABOCHIPS**

Chao Agnes HSIUNG¹, I-chien WU², Wen-chang WANG¹, I-shou CHANG³ (1. Institute of Population Health Sciences, National Health Research Institutes, Taiwan; 2. Division of Geriatrics and Gerontology, Institute of Population Health Sciences, National Health Research Institutes, Taiwan; 3. National Institute of Cancer Research, National Health Research Institutes, Taiwan)

Introduction : Both genetics and environmental factors play important

roles in successful aging and related phenotypes. In this talk we will identify genetic variants for traits such as “successful aging” or physical functions using metabochips, which is a customized chip with around 200K probes based on existing informations related to metabolic or cardiovascular endpoints. Method : The subjects were 1828 elderly with age older than 65, collected from 2008 to 2012 in the HALST (Healthy Aging Longitudinal Study in Taiwan). We performed SNP genotyping with MetaboChip (Illumina, Inc.) The average call rate was above 95%. Associations were analyzed by the PLINK software. Successful aging includes 3 major components: low probability of diseases and disease-related disability, high cognitive and physical functional capacity and active engagement with life. Results : The analysis revealed an association of the SNPs on chromosome 11 with “successful aging”. The results hold after adjusting for age and gender. The p-values are $<7 \times 10^{-6}$. The genes harboring the SNPs associated with successful aging are studied by the Model-based Gene Set Analysis (MGSA) and compared with those associated with physical functions including hand grip strength, summary performance score, gait speed, 6-min walk distance, time up-and-go. The results will be replicated on independent samples. Conclusion : A few genetic variants were identified for successful aging and related physical functions in Taiwanese elderly population. Replications to other elderly populations are planned. Keywords : association, successful aging, metabochip.

SS25 318-S

PROMOTING MENTAL HEALTH AMONG CHINESE OLDER ADULTS IN TRANSNATIONAL COMMUNITIES: CHALLENGES AND INNOVATION

SS25 318-S-1

MENTAL HEALTH AMONG CHINESE OLDER ADULTS IN HONG KONG: THE ROLES OF SLEEP DISTURBANCE AND LIFESTYLE FACTOR

Doris YU, Diana LEE (*The Nethersole School of Nursing, The Chinese University of Hong Kong, Hong Kong*)

Introduction : Older adults are more susceptible and vulnerable to mental health problem such as mood disturbance and depression. With increased advocacy on primary health promotion, this study examined the association between potentially modifiable lifestyle factors (including sleeping pattern, daily physical activity level, sport and exercise habit, and hobbies) and mental health of community-dwelling older adults. Method : The study was based on secondary analysis of data from two community-based surveys. Data was obtained from a total of 1,387 Chinese older adults in Hong Kong. They were recruited from elderly community center in different geographic regions. Questionnaires on lifestyle factors, sleep pattern, mental health and depression were administered. Results : Over 56% of Chinese older adults (mean age: 76.3+/-7.2) reported poorer mental health and about 28% had depression. After adjusting for demographic and disease-related characteristics, poor sleeping pattern was found to independently predict a three-fold increase in depression among the Chinese older adults. On the other hand, maintaining physically active lifestyle, doing regular exercise, maintaining hobbies such as practicing Tai Chi and watching television, and participating in group-based leisure activities were found to protect the mental health of Chinese older adults. Conclusion : The results of this study suggested that an active lifestyle with hobbies and an improved sleep pattern are important to protect the mental health of Chinese older adults. Interventions which target at modifying these lifestyle factors are not only acceptable to Chinese older adults, but are also considered as incurring less cost as compared with other professional therapeutic

intervention. Keywords : Lifestyle factors, mental health, Chinese older adults

SS25 318-S-2

SOCIO-CULTURAL DETERMINANTS OF MENTAL HEALTH OF AGING CHINESE IN CANADA: CHALLENGES AND INTERVENTION STRATEGIES

Daniel LAI (*Faculty of Social Work, University of Calgary, Canada*)

Introduction : Research findings on aging immigrants in Canada have consistently indicated that this population is less mentally healthy than their Canadian born counterparts. This presentation aims to examine the key social determinants of mental health as indicated in research on aging Chinese in this country. Method : This presentation is based on a comprehensive search of published research results addressing the specific challenges and needs faced by aging Chinese Canadians. In addition, secondary data analysis was conducted based upon an earlier survey of a random sample of aging Chinese of 55 years and older in Canada (n=2,272). Mental health variables measured include general mental health measured by the SF-36 and depressive symptom, measured by the Chinese version of the Geriatric Depression Scale. Various multiple regression analyses were used. Results : The results indicated that financial adequacy, acculturation variables, and barriers to accessing health services were particularly significant factors affecting health of the respondents. The challenges and needs that are identified in research findings have resulted in an innovative coalition of community partnership launched a community-based mental health promotion program to address the mental health needs of the aging Chinese in a medium Canadian city for over ten years. Conclusion : It is important to address the missing components and challenges in the existing health care and intervention systems. A strategic and systemic approach to sustain mental health promotion for culturally diverse older adults is needed for the improvement of mental health of the aging Chinese immigrants. Keywords : mental health, Chinese, immigrants, older adults, aging

SS25 318-S-3

SOCIAL EXCLUSION AND MENTAL HEALTH OF OLDER PEOPLE IN RURAL CHINA

Ai Mei GUO¹, Hongmei TONG², Daniel LAI² (*1. Ginling Women's College, Nanjing Normal University, China; 2. Faculty of Social Work, University of Calgary, Canada*)

Introduction : The growth of the aging population in China is an important reality facing professionals and policy makers working with older adults. The challenges and needs related to mental health faced of older adults, particularly those in rural areas in China have been understudied. Method : This research is based upon a cross-sectional research study of 499 older adults randomly selected from rural Jiangsu Province of China. Social exclusion was presented by the family adequacy, housing condition, social relations, participation and basic services. Mental health indicators include depression, loneliness, happiness, worries and life satisfaction. Bivariate statistics and multivariate regression analysis were used to examine the association between the social exclusion variables and mental health variables. Results : Using a social exclusion framework, this study finds that exclusions related to family adequacy, housing condition, social relations, participation and basic services are associated with various mental health indicators of the aging Chinese in rural communities. But, the contribution of the social exclusion variables to mental health varies among the various mental indicators when demographic and physical health variables are controlled. Conclusion : The results have pointed to the emerging mental health needs of the aging rural Chinese

population while this presentation will further discuss the structural factors related to mental health interventions and services for this population group. Keywords : aging Chinese social exclusion, mental health

SS25 318-S-4

MENTAL HEALTH AND DAILY FUNCTION AMONG OLDER ADULTS IN CHINA

Lili HU, Huali WANG, Xiaozhen LV, Xin YU (*Clinical Research Division, Peking University Institute of Mental Health, China*)

Introduction : Functional limitation is prevalent among older adults. In addition to the physical conditions, mental health status also plays an important role in maintaining the functional activity. This study was designed to explore the effects of depressive symptoms on the functional levels among older adults in China. Method : We used a new sample of 2685 middle-aged and older Chinese respondents (aged over 45 years) recruited in the CHARLS pilot survey in two quite distinct provinces --- Zhejiang, a high growth industrialized province on the East Coast, and Gansu, a largely agricultural and poor Province in the West. The 10 item version of Center for Epidemiological Studies Depression Scale (CES-D) was used to evaluate the presence of depressive symptom. A CES-D-10 cutoff score of 11 is indicative of "significant" or "mild" depressive symptomatology. The functional limitation scale was used to assess the level of daily function. Results : The prevalence of significant depressive symptoms was 29.2%. There was no gender difference in the prevalence of depressive symptoms. The individuals presenting significant depressive symptoms had more severe functional difficulty in daily activities ($P < 0.001$). There was a significant relationship between the severity of depressive symptom and the functional limitations ($r = 0.305$, $P < 0.001$). Conclusion : The depressive symptoms are common among older adults in China. The presence of depressive symptoms is associated with the functional disability among older population. The findings imply the significance of improving mental health status among older adults to improve their functional capability. Keywords : depression, functional limitation, older adults

SS25 323-C

GERIATRIC SURGERY: ADVANCES IN THE PERI-OPERATIVE MANAGEMENT OF GERIATRIC PATIENTS

SS25 323-C-1

PHYSIOLOGICAL CHALLENGES IN THE GERIATRIC SURGICAL PATIENT

Emile WOO (*Surgery, The University of British Columbia Providence Health Care, Canada*)

Introduction : The ageing patient presents unique challenges when undergoing surgery. This presentation will review the common physiological changes that occur in the geriatric patient and the relevance these changes have on perioperative management both from an anaesthetic and surgical viewpoint. Method : Literature and case series review. Conclusion : The ageing patient presents specific challenges when surgery is contemplated. However, if properly assessed, the resultant perioperative risks can be managed. Keywords: physiology, surgery

SS25 323-C-2

RISK STRATIFICATION AND SURGICAL CONSIDERATIONS IN GERIATRIC SURGERY

Kok-Yang TAN (*General Surgery, Alexandra Health, Khoo Teck Puat Hospital, Singapore*)

The management of elderly surgical patients has to be at a higher level compared to a younger patient. Geriatric surgical patients demand multi-faceted, holistic care. Considerations should include the physiological changes associated with ageing. Surgical management and planning for these patients must thus be holistic and all encompassing. It should be anticipatory of not only medical and surgical problems that may arise but also address the psychosocial issue that may arise. The aim should not only be to reduce morbidity and mortality in this group of patients but more importantly, their postoperative functional status should be addressed aggressively so as to preserve the independence of these patients. Indeed, in an elderly patient, failure to address all these issues may have a negative impact on the patients' outcomes. Treatment goals have to be clear when the elderly are treated. Appropriate informed consent is important to ensure a satisfactory outcome for all sides. Risk stratification takes an extra level of importance in the context of geriatric surgery. Risk stratification is not only essential for predicting perioperative morbidity and mortality, but, equally important is to predict return to baseline function. The heterogeneity of the elderly population provides added complexity of this risk stratification process. Surgical scoring systems, geriatric tools and frailty will be discussed here. Keywords : Surgery, risk, considerations

SS25 323-C-3

TRANSDISCIPLINARY CARE IN GERIATRIC SURGERY

Phyllis Xiuzhuang TAN (*Nursing Administration, Khoo Teck Puat Hospital, Singapore*)

Management of the elderly surgical patient is complex owing to the higher incidence of co-morbidities and reduced functional reserves. Many of these complexities go beyond the boundaries of an individual surgeon's expertise and team approach must take precedence. A coordinated and seamless transdisciplinary care model is a product of evolution from multidisciplinary care to a more integrated, collaborative and less compartmentalized approach. It dispenses of hierarchy, and communication is freeflowing and ongoing. This model aims to provide an integrated and coordinated assessment and care plan with an ultimate unified management. In order to provide the most holistic care to an elderly surgical patient, many interacting factors need to be considered. There are physiological changes associated with aging. Functional reserves of elderly surgical patients are poorer reducing the margin of error that could be allowed in the patient management. There are also other issues such as psychosocial, financial, chronic illnesses associated with polypharmacy, malnutrition and hygiene related problems that need to be considered in the setting of major surgery. Furthermore, geriatric surgery should aim not only to reduce morbidity and mortality but more importantly, post operative functional status should be aggressively addressed to preserve their independence. Failure to address all these issues may have a negative impact on the patient's outcomes. In this session, we describe how a transdisciplinary model of care enhances the recovery process and facilitates the early return to pre-morbid functional status during the peri-operative period of an elderly patient undergoing major surgery.

SS25 323-C-4

PREHABILITATION AND REHABILITATION

Janet KUSHNER-KOW (*Geriatric Medicine, Providence Health Care, Vancouver BC, Canada*)

Introduction : Little evidence exists to support whether the type and targeting of physical and functional optimization before surgery can improve outcomes, and whether it can prevent the need for extensive rehabilitation. Method : A retrospective review of perioperative

outcomes was done. A pilot prospective trial of geriatric prehabilitation was done at a community hospital in patients over 70 who were booked for general surgery. Results : Results will be presented of the preliminary outcomes of patients who had prehabilitation. Conclusion : Data will be incorporated into a full trial of prehabilitation and future directions will be presented. Keywords : prehabilitation rehabilitation surgery

SS25 324-R

CURRENT STUDIES BY THE ASIAN WOMEN'S HEALTH RESEARCH NETWORK

SS25 324-R-1

A POPULATION STUDY OF THE SELF-CARE BEHAVIORS AND THEIR ASSOCIATED FACTORS AMONG KOREAN ELDERLY WOMEN WITH HYPERTENSION

Seung Hee LEE¹, Soon-Ok YANG² (1. Department of Nursing, The University of Ulsan, Korea; 2. Division of Nursing, Hallym University, Korea)

Introduction : Hypertension is one of the most common chronic illnesses in Korean older adults and the complications have been a major health concern to the patients, their family, and society. The purpose of this study was to examine the self-care behaviors and their associated factors among elderly Korean with hypertension. Method : Data for this study came from the 2009 Korea National Health and Nutrition Examination Survey. Subjects with hypertension diagnosed by medical doctors, aged 60 years or older were included. Self-care behaviors included the following: taking medicine regularly, taking care of the diet to control hypertension, trying to lose or maintain the weight, exercising, avoiding cigarettes, avoiding alcohol. The factors considered were demographic factors including age, sex, education, income, cohabitation, and health related factors including smoking, drinking alcohol, body mass index (BMI), self-perceived health, other chronic diseases, duration of hypertension, and limitation of activity of daily living (ADL). Results : There were 1,031 subjects aged 60 years or older who were confirmed with hypertension. Hierarchical multiple regression showed that those who were younger, obese, non-smoker, who had higher level of education, who had longer duration of hypertension were more likely to have higher self-care behavior scores. Conclusion : The findings suggest that attention should be given to the patients who were older, smoker, who had lower level of education, and who had shorter duration of the disease in providing hypertension intervention program. Keywords : Self-care behavior, Hypertension, Korean

SS25 324-R-2

PREVENTIVE HEALTH CARE PRACTICES (INFLUENZA VACCINATION, MAMMOGRAM, AND PAP TEST) AMONG KOREAN AMERICAN WOMEN

Young-Shin LEE¹, C. Richard HOFSTETTER², Veronica L. IRVIN³, Melbourne F. HOVELL³ (1. Nursing, San Diego State University, USA; 2. Political Science, San Diego State University, USA; 3. Public Health, San Diego State University, USA)

Introduction : Of the total U.S. population, 10% are estimated as the first generation of immigration. Migrant populations face challenges in accommodating new cultures and environment which result in health risk. The study purposes were to examine the characteristics of preventive health care practice behaviors (influenza vaccination, mammo gram, and Pap smear) under the Behavioral Model among Korean American women residing in California. Method : A representative probability sample of 1,786 Korean American women

residing in California, U.S. was explored the three preventive health care practices by telephone interview. Independent variables included acculturation; years living, a primary care provider; health status and health concern of participants; and demographic items. Results : Compared to young KA women, the older adults aged 60+ were more likely to perform three preventive health care practices with those who were married, who were born in Korea, resided in the United States longer, and had a primary care provider. Conclusion : Our findings indicate that older KA women were better aware about the preventive health practices than the counter part and that a behavioral model was suitable to explain the three preventive health care practices. Keywords : Preventive health practice

SS25 324-R-3

THE EFFECTS OF PHYSICAL ACTIVITY ON MENOPAUSAL SYMPTOMS AMONG FOUR ETHNIC GROUPS IN THE UNITED STATES

Sun Ju CHANG¹, Wonshik CHEE², Eun-ok IM² (1. Gachon University, Korea; 2. School of Nursing, University of Pennsylvania, USA)

Introduction : Although the hormone replacement therapy (HRT) has been reported to effectively alleviate some menopausal symptoms, the interests in alternative management strategies for menopausal symptoms have recently increased because of potential serious risks involved in the HRT. Alternative management strategies including physical activity also have high potential to improve women's health in their later life. The purpose of this study was to determine the effects of physical activity on menopausal symptoms and to provide directions for physical activity as a management strategy for menopausal symptoms. Method : This was a secondary analysis using the dataset of a nationwide Internet survey study on attitudes toward physical activity among four ethnic groups of midlife women in the U.S. For the study, data from a total of 481 women (113 Hispanics, 114 Non-Hispanic [NH] Asians, 113 NH African Americans, and 141 NH Whites) were retrieved from the original dataset. The instruments included the Midlife women's Symptom Index for assessing menopausal symptoms and the Kaiser Physical Activity Survey for assessing physical activity. Hierarchical multiple regression analyses were used to analyze the data. Results : The household physical activity was a significant factor that influenced both the prevalence and severity scores of the psychological menopausal symptoms in NH Asians and NH African Americans. Also, the occupational physical activity score was a statistically significant predictor of the physical menopausal symptoms of Hispanics and the psychosomatic menopausal symptoms of NH Whites. Conclusion : Health care providers should consider ethnic-specific types of physical activity when developing physical activity promotion programs to alleviate menopausal symptoms. Keywords : menopausal symptoms, physical activity, ethnic group

SS25 324-R-4

RELATIONSHIPS BETWEEN PHYSICAL ACTIVITY AND AWARENESS AND TREATMENT STATUS AMONG ADULTS WITH LOW FEMORAL BONE DENSITY IN THE U.S.

Young-Shin LEE¹, Jong-Duek BAEK², Kyeongra YANG³, Saunjoo YOON⁴ (1. Nursing, San Diego State University, USA; 2. Public Health, San Diego State University, USA; 3. Nursing, University of Pittsburgh, USA; 4. Nursing, University of Florida, Gainesville, USA)

Introduction : Low bone mass is common and serious bone disorder from mid to later life. In the U.S., more than 44 million adults have

low bone mass and the number is increasing. While low bone density increases the risk for fractures, many are not aware of their condition that delays controlling the bone condition and prevention of injury. The purpose of this study was to examine relationships between physical activity (PA) and awareness and treatment status of low bone mineral density (BMD) among adults aged 50 years and older. Method: A cross-sectional stratified sample of 1928 adults who participated in the National Health and Nutrition Examination Survey [NHANES] 2005-2006 was included in the analysis. Variables by objective measures - Femoral neck BMD, duration of PA, and step counts and those by self-report - strength exercise, and awareness and treatment of low bone density were employed. Results : Despite a high prevalence of low BMD, self-reported awareness, treatment, and PA were very low. After controlling socio-demographic and health related factors, those who were aware of their low bone density status and who received its treatment were less physically active than those who were unaware of their bone condition or who did not have any treatment. Conclusion : PA levels are below the recommended level for bone health benefits. Healthcare providers should consider screening individuals at risk of low bone density and encourage them to implement prevention and treatment regimen including increasing daily levels of PA. Keywords : Physical activity, bone density

SS25 325-C

THE FUTURE PERCEPTIONS AND INTERVENTIONS OF ANTIAGING

SS25 325-C-1

EVIDENCE-BASED ANTI-AGING MEDICINE: NEW ALLIANCE BETWEEN RESEARCH, PRACTICE, THE INDUSTRY AND THE CLIENT?

Astrid STUCKELBERGER (*Faculty of Medicine, University of Geneva, Switzerland*)

Introduction : Technological progress - from biotechnologies to assistive devices onto engineered solutions - is characterized by the rapidity of its evolution: what was unthinkable a decade ago is today not only on the 'medical market' but more and more in the home of the consumer. While some interventions and products have become part of the daily health care routine, other practices and devices hold high risks for the population or remain science-fiction. Method : Recently, a study on the level of evidence and risks of anti-aging medicine was conducted in Switzerland, USA and Japan supported by TA-Swiss and the Swiss Academy of Medical Science. Results : Findings show that biological and clinical findings are proliferating along with a growing market of technological and engineered high tech medicine and products, from therapeutic cloning, stem cells, genomics, human engineering, biogerontology to dietary supplements, to engineered solutions for a smart home and age-friendly environment. Furthermore, reversal of aging symptoms, stem cell and regeneration processes, human enhancement, body parts replacement, bioengineering and bionic prostheses are a reality. Conclusion : Beside the debate on the scientific evidence, anti-aging medicine questions our way of considering the 'norm' of the aging process. The new paradigm no longer sets aging as an irreversible decline process leading to pathological conditions, but aging as a simple machinery marked by time (chronological age), which can be kept to optimal functioning through high tech interventions. The presentation will present the current situation and giant steps between research, practice, the industry and the client/patient and discuss some of its implications. Keywords : Anti-Aging, medicine, industry

SS25 325-C-2

PERSONALIZED CANCER CARE: THE NEW FRONTIER

Gregory Stanislaw BURZYNSKI (*Internal Medicine, Burzynski Clinic, USA*)

Introduction : The arrival of molecular profiling technology has ushered in the age of personalized cancer treatments. Being cognizant of the underlying molecular mechanisms, pathways, and intricate tumor characteristics allows us to begin to tailor our therapy more precisely. Due to genetic testing methods developed from the Human Genome Sequencing Project, practitioners can one day depart from 'one size fits all' treatment plans. Method : By using targeted approaches based on the genetic signature of a tumor and known data from prior clinical research, we can combine Antineoplastons (ANP) with targeted agents to enhance the treatment response and duration. ANP are a group of anti-tumor agents which act on approximately one hundred different genes and pathways involved in the cancer process. The targets of ANP include tumor suppressor genes, oncogenes, genes of the cell cycle, metabolic pathways, and those governing apoptosis. ANP regulate the gene expression via epigenetic mechanisms. Results: We describe the response of over 2,000 evaluable patients treated at the Burzynski Clinic using the principles of personalized care which include analysis of gene expression across the entire tumor genome, gene products, and clinical knowledge. Conclusion : This personalized approach to cancer treatment ideally should be complemented by proper nutrition, exercise, and mind/body balance for a improved patient outcome. Keywords : Personalized cancer care, targeted therapy, antineoplastron, gene expression

SS25 325-C-3

EPIGENETICS IN AGING

Azad RASTEGAR (*Anti-Aging, Burzynski Clinic, USA*)

Introduction : The epigenome controls genetic expression, either silencing or activating the genes, by essentially three mechanisms. One of these epigenetic changes to gene expression occurs by RNAi. The other way epigenetics adjusts cellular behaviors is by chromatin remodeling by means of acetylating & deacetylating histones. The final manner in which epigenetics control a gene's expression is via DNA methylation which is the binding of methyl groups to the genes promoter region. The ideal anti-aging intervention involves restoration of optimal gene expression. This means activation of genes which have become silenced due to the aging process, and normalization of genes which have become over-active in aging. Method : Our group isolated a number of small molecules existing in human blood, dairy products, and royal jelly, which act as epigenetic switches and help regulate gene expression. These molecules were used in cell cultures, animal studies, and human clinical trials. Among them are amino-acid derivatives: 3-phenylacetyl-amino-2,6-piperidinedione (A10), phenylacetylglutamine (PG), phenylacetylisoglutamine (isoPG), phenylacetate (PN) and phenylbutyrate (PB). Clinical trials were performed on a topical formulation at the University of Bordeaux in France with PG and IsoPG. Results : Extensive biochemical and cell culture research has revealed that these substances decrease overexpression of RAS, AKT and MYC oncogenes and activate the tumor suppressors PTEN, p21, p53, and INI110. Conclusion : Epigenetic mechanisms will silence or activate our gene expression and greatly influence the aging process as well as susceptibility to disease. Certain molecules interfere with this process and lead to anti aging results. Keywords : Epigenetics, Methylation, Gene Expression

SS25 325-C-4

THE STUDY OF DEVELOPMENT OF MATERIALS AND DEVICE FOR PREVENTION OF AGING ASSOCIATED MUSCLE FUNCTION DECREASE

Cheolmin KIM¹, Nam Deuk KIM², Yung Hyun CHOI³, Jai-heon LEE⁴, Chang-hyung LEE⁵, Byoung Chul KIM⁶, Duk-young JUNG⁷ (1. School of Medicine, Pusan National University, Korea; 2. Department of Pharmacy, Pusan National University, Korea; 3. Department of Biochemistry, Dongeui University College of Oriental Medicine, Korea; 4. Department of Genetic Eng., Dong-A University, Korea; 5. Department of Rehabilitation Medicine, Pusan National University Yangsan Hospital, Korea; 6. Department of applied IT Engineering, Pusan National University, Korea; 7. Senior Products Industrial Center, Busan Techno-park, Korea)

Introduction : The sarcopenia, aging associated muscle loss, is a major problem which affect life quality of elder peoples. Even though natural maintenance of muscle function by exercise is the best way, some people needs medical support by exercise mimetics. **Method :** We tried to develop helpful functional food from natural resources including herb and seaweed. For functional evaluation, we established in-vitro system using myoblast cell lines and in-vivo system using drosophila and mice models. Genetically engineered animal models are used also. We developed convenient devices for analysis of muscle mass change and muscle stimulator. For clinical test, we used dynamometer and CT scanning or standard measure of muscle function and muscle mass. **Results :** Some materials from our research showed beneficial effect on muscle function increase in in-vitro and in-vivo models. Data from device using BIA showed very good correlation with cross-sectional area in CT scan. Modules in muscle stimulator are consisted of muscle relaxation and stimulation for safety and efficiency. **Conclusion :** We developed some functional food and devices as exercise mimetics. Synergistic effects are consisted of general effect by functional food and local effect by devices. **Keywords :** muscle, exercise, mimetic

SS25 325-C-5

ANTI-AGING MEDICINE: A NEW PUBLIC HEALTH PARADIGM OR A FASHION TREND?

Astrid STUCKELBERGER (*Facutly of Medicine, University of Geneva, Switzerland*)

Introduction : Anti-Aging Medicine” emerged in the US in the 1990s, promoting the ability to stop and reverse aging. Biotechnologies and therapies that were unthinkable a decade ago are a reality today. The expectation by the public that practically anything is possible makes some people all too trusting. Beside the debate on the scientific evidence, anti-aging medicine questions our way of considering the “norm” of the aging process and healthy aging. The new paradigm presented no longer sets aging as an irreversible decline process leading to pathological conditions, but considers the aging body as a simple “biological machine” marked by time (chronological age), which can be kept to an optimal functioning through high tech detection and intervention. **Method :** A review of the evidence and risks of anti-aging medicine was commissioned by TA-Swiss and the Swiss Academy of Medical Science. This project reviewed scientific theories and findings as well as clinical practices in Switzerland, Japan and the USA. The objective was to review the interventions, products, the socio-economic and ethical consequences and what recommendations could be drawn for governments, health professionals, the medical community and patients. **Results :** This presentation will explore the growing academic and industrial field of anti-aging medicine and discuss some of its. **Conclusion :** Nine key recommendations stem from the analysis of the study, from ethical research to professional practices issues, from evidence-based information to safety measures and international legislation. Global public health policy needs to support innovation and technology while ensuring the development of safe medical interventions and products

for our “longevity society”. **Keywords :** Anti-Aging, Technology, Prevention

SS25 326-C

POOR ORAL HEALTH IN FRAIL OLDER PEOPLE: A NEW GERIATRIC GIANT

SS25 326-C-1

POOR ORAL HEALTH AND ITS EFFECT ON GENERAL HEALTH IN (FRAIL) OLDER PEOPLE

Claar D. VAN DER MAAREL-WIERINK, Gert-jan VAN DER PUTTEN, Cees DE BAAT (*Oral Function and Prosthetic Dentistry, Radboud University Nijmegen Medical Centre, Netherlands*)

Introduction : Oral health influences mastication, food selection, weight, speech, taste, hydration, appearance, and psychosocial behaviour and is therefore an essential part of general health with an impact on a person’s quality of life during his entire lifespan. Several worldwide reports have shown that the oral health of older people, in particular that of frail and disabled older people, is rather poor. **Method :** Oral surfaces are continuously bathed with saliva, which supplies nutrients, keep conditions warm and moist at neutral pH, suitable for growth of many microorganisms. The complexity of oral health status, oral mucosal lesions, systemic diseases, and multiple medication use make (frail) older people more vulnerable to oral problems than younger age groups. **Results :** Associations have been reported between oral health and general health, for instance with respect to cardiovascular and respiratory diseases, and diabetes mellitus. The theories behind the associations are that microorganisms act as opportunistic pathogens in cases where they gain access to normally inaccessible sites of the body, and that subgingival biofilms in periodontal disease contain numerous Gram-negative bacterial species with inflammatory cell surface components. In cases where the host’s defence mechanisms are compromised, transportation of these pathogens and components potentially can affect distant sites in the body. **Conclusion :** In addition, various studies have suggested that between 50% and 75% of care home residents have some difficulty in swallowing, and as a consequence have a high risk of choking and developing an aspiration pneumonia from anaerobic bacteria which are present in the mouth. **Keywords :** oral health, microorganisms

SS25 326-C-2

THE SUBJECTIVELY AND OBJECTIVELY ASSESSED PREVALENCE OF DYSPHAGIA IN CARE HOME RESIDENTS

Jos SCHOLS¹, Claar VAN DER MAAREL-WIERINK², Judith MEIJERS³, Gert-jan VAN DER PUTTEN⁴, Luc DE VISSCHERE⁵, Ewald M. BRONKHORST⁶, Ruud HALFENS³, Cees DE BAAT⁷ (1. Dept. GP and Dept. HSR, Maastricht University and on behalf of BENECOMO, Netherlands; 2. Dept. of Oral Function and Prosthetic Dentistry, Faculty of Medical Sciences, Radboud University Nijmegen AND on behalf of BENECOMO, Netherlands; 3. Dept. Health Services Research, Maastricht University, Netherlands; 4. Birkhoven Care-estate and on behalf of BENECOMO, Netherlands; 5. Dental School, University Ghent, Ghent, Belgium, University Ghent and on behalf of BENECOMO, Belgium; 6. Dept. of Preventive and Restorative Dentistry, Radboud University Nijmegen, Netherlands; 7. Dept. of Oral Function and Prosthetic Dentistry, Radboud University Nijmegen, Netherlands)

Introduction : To assess the prevalence of subjective as well as objective dysphagia in Dutch care home residents and to assess the association with relevant risk factors of dysphagia. **Method :** To assess subjective dysphagia, a retrospective data analysis of a multi-centre,

cross-sectional study (Dutch National Prevalence Study on Care Problems-LPZ) was performed. Data of 8,119 care home residents aged 65 years or older were analyzed. For the second objective, five experienced speech therapists assessed systematically 115 primarily physically-disabled and 88 primarily cognitively-impaired care home residents aged 60 years or older in the first week after admission to the care home. First, they interviewed the residents. Second, a water swallowing observation was performed. In addition, relevant resident data were also collected from the medical records. Results : Subjective dysphagia was present in 751 (9%) residents. A final prediction model for subjective dysphagia after multivariate backward stepwise regression analysis revealed several significant variables related to care dependency, malnutrition, main diagnosis and comorbidity. Objective dysphagia was present in 43 (21.2%) residents. The final prediction model for dysphagia, using multivariate logistic regression analysis, showed Parkinson's disease as a significant factor. Conclusion : Both subjectively assessed dysphagia and objectively assessed dysphagia are relevant care problems in care home residents in the Netherlands. The prevalence of objectively assessed dysphagia is higher than subjectively assessed dysphagia. Taking into account some variables that are significantly related to dysphagia, seems relevant for daily practice. Keywords : dysphagia, nursing home

SS25 326-C-3

EFFECTIVENESS OF AN ORAL HEALTH CARE GUIDELINE ON ORAL HEALTH OF CARE HOME RESIDENTS.

Gert-jan VAN DER PUTTEN¹, Cees DE BAAT², Luc DE VISSCHERE³, Jacques VANOBBERGEN³, Jos SCHOLS⁴ (1. Oral Function and Prosthetic Dentistry, Radboud University Nijmegen Medical Centre, Netherlands; 2. Department of Oral Function and Prosthetic Dentistry, Radboud University Nijmegen Medical Centre, Netherlands; 3. Department of Community Dentistry and Oral Public Health, Ghent University, Belgium; 4. Department of General Practice, Section Nursing Home Medicine, CAPHRI, Maastricht University, Netherlands)

Introduction : The aim of this study was to compare a supervised versus a non-supervised implementation of the Dutch "Oral health care Guideline for Older people in Long-term care Institutions" (OGOLI) and a daily oral health care protocol derived from the OGOLI. Method: The study involved a single-blinded cluster randomized controlled trial in 12 care homes with a care home as the unit (cluster) of randomization. The intervention consisted of a supervised implementation of the OGOLI and a daily oral health care protocol derived from the OGOLI. In every care home oral examinations were carried out on a random sample of, initially, 30 residents. Primary outcome variables were dental and denture plaque scores of the participating care home residents. Results : At baseline, the overall random sample comprised 343 residents. At 6 months, the trial results showed statistically significant differences between the intervention and the control group. The intervention reduced mean plaque scores with 0.44 or 30% for dental plaque, and 0.39 or 20% for denture plaque. Unknown care home characteristics were of significant influence and it is difficult to assess which care home characteristics might explain the variance in mean plaque scores at 6 months. Conclusion : This study proved that a supervised implementation of the OGOLI and derived daily oral health care protocol was more effective than a non-supervised implementation in reducing mean dental and denture plaque scores at the end of the 6 months study period. However, the reduction of mean dental plaque scores could not be explained by the intervention exclusively. Keywords : Oral health care, dental care, care homes

SS25 326-C-4

BARRIERS AND ENABLING FACTORS FOR DAILY ORAL HEALTH CARE IN CARE HOMES, A QUALITATIVE APPROACH IN GERIATRIC ORAL HEALTH RESEARCH

Luc DE VISSCHERE¹, Gert-jan VAN DER PUTTEN², Lize DE MEYER¹, Bart PEETERS³, Bjorn SODERFELT⁴, Jacques VANOBBERGEN¹ (1. Community Dentistry and Oral Public Health, Dental School Ghent University, Belgium; 2. Oral Function and Prosthetic Dentistry, Radboud University Nijmegen Medical Centre, Netherlands; 3. Pharmaceutical Care Unit, Faculty of Pharmaceutical Sciences Ghent University, Belgium; 4. Department of Oral Public Health, Faculty of Odontology Malmo University, Sweden)

Introduction : Oral health care in care homes in Flanders (Belgium) is inadequate. This study reports on a qualitative study designed to identify and understand what influencing factors nurses and nurses' aides believe are related to the practice of oral health care and how they impact on their oral health care behaviour. Method : Qualitative data were obtained from nurses employed in 13 care homes involved in two randomised controlled trials in Flanders-Belgium. Data were collected by focus group and face-to-face interviews during April 2005 and December 2009. All transcripts were analysed with support of NVivo 8 (Version 2008). Transcripts were analysed in an inductive way. Results : Most revealed barriers were consistent with previous findings in the literature. Newly reported barriers were respect for residents' self-determination, experience based oral health care by nurses, residents' oral health status and nurses' inability to notice residents' oral health status. Demand driven oral health care was found to be a strong enabling factor. Conclusion : The integration of oral health care into day-to-day care seemed to be a major problem due to a multitude of barriers. Integration of oral health care in nurses' curriculum and continuous internal education in the intramural care should be seriously considered focusing on knowledge, practical oral health care skills and nurses and residents attitude to oral health care. Keywords : oral health care, oral health guideline, care homes, dental care, implementation

SS25 327-C

OPTIMIZING MEDICATION USE IN NURSING HOMES - EUROPEAN PERSPECTIVES

SS25 327-C-1

POLYPHARMACY IN NURSING HOME RESIDENTS WITH SEVERE COGNITIVE IMPAIRMENT: RESULTS FROM THE SHELTER STUDY

Graziano ONDER (Geriatrics, Universita Cattolica del Sacro Cuore, Italy)

Introduction : Pharmacological treatment of older adults with cognitive impairment represents a challenge for prescribing physicians and polypharmacy is common in these complex patients. The aim of the present study is to assess prevalence and factors related to polypharmacy in a sample of nursing home (NH) residents with advanced cognitive impairment. Method : We conducted a cross-sectional analysis on 1,449 NH residents with advanced cognitive impairment participating to the Services and Health for Elderly in Long TERM care (SHELTER) project, a study collecting information on residents admitted to 57 nursing home in 8 countries. Data were collected using the interRAI instrument for long-term care facilities. Polypharmacy status was categorized in 3 groups: non-polypharmacy (0-4 drugs), polypharmacy (5-9 drugs) and excessive polypharmacy (≥ 10 drugs). Results : Polypharmacy was observed in 735 (50.7%) residents and excessive polypharmacy in 245 (16.9%). As compared

with non-polypharmacy, excessive polypharmacy was directly associated with ischemic heart disease (OR 3.68; 95% CI 2.01-6.74), diabetes (OR 2.66; 95% CI 1.46-4.84), Parkinson's disease (OR 2.84; 95% CI 1.36-5.85), gastrointestinal symptoms (OR 1.20; 95% CI 1.43-3.39), pain (OR 3.12; 95% CI 1.99-4.89), dyspnoea (OR 2.57; 95% CI 1.31-5.07) and recent hospitalization (OR 2.56; 95% CI 1.36-5.85). An inverse relation with excessive polypharmacy was shown for age (OR 0.74; 95% CI 0.59-0.93), ADL disability (OR 0.79; 95% CI 0.63-0.99) and presence of a Geriatrician in the NH staff (OR 0.36; 95% CI 0.20-0.64). Conclusion : Polypharmacy and excessive polypharmacy are common among NH residents with advanced cognitive impairment. Determinants of polypharmacy status includes not only comorbidities, Keywords : nursing home, polypharmacy, older adults

SS25 327-C-2

WHAT KIND OF RESIDENTS RECEIVE ANTI-DEMENTIA DRUGS IN NURSING HOMES

Harriet FINNE-SOVERI¹, Eva TOPINKOVA², Daniela FIALOVA³, Andrea FOEBEL¹, Graziano ONDER³ (1. Ageing and Services, National Institute for Health and Welfare, Finland; 2. Geriatrics, Charles University, Czech; 3. Geriatrics, Universita Cattolica del Sacro Cuore, Italy)

Introduction : Cognitive impairment among nursing home residents is prevalent, majority of those suffer from possible Alzheimer's disease. Diagnoses may be unreliable or missing and little is known whether old persons residing in these settings benefit from this kind of drugs or not. In addition to cognitive deficits, anti-dementia drugs may relieve non-cognitive symptoms, such as behavior problems, that also are prevalent in these settings. We therefore used EU-funded SHELTER database to investigate in which extent anti-dementia drugs were used and what kind of European nursing home residents received them. Method : Cholinesterase inhibitors will be used as dependent variables and variables for age, sex, payment source, country, concomitant diseases, degree of dementia, behavior, mood, depression, social activities, ADLs, antipsychotic, and sedative medications as independent variables. Chi square analysis will be used for dichotomous and logistic regression for continuous variables to find out the associations. Multiple regression analyses will be performed to investigate the independent predictors for anti-dementia drug use. Results : 23,3% of residents who potentially could benefit from anti-dementia drugs received these medications. Most prevalent was memantine (10,5%) followed by donepezil and rivastigmine (6,9%), and less prevalent was galantamine (3,4%). Both cholinesterase inhibitor and memantine was received by 3,8%. The variation in the use of anti-dementia drugs between 59 facilities was 0 - 85,7%. If payment source was self or family (n=222, 10,4%), use of anti-dementia drugs was 45,4% (p<0,0004), if payment source was public (244, 11,4%) the corresponding figure was 48,2% (p<0,0001). Conclusion : Results may depend on local patterns. Keywords : Dementia, nursing homes, medications

SS25 327-C-3

LONG-TERM CARE IN EUROPE AND APPROPRIATENESS OF THE MEDICATION USE-RESULTS FROM THE EU SHELTER PROJECT

Daniela FIALOVA¹, Jindra REISSIGOVA², Graziano ONDER³, Eva TOPINKOVA⁴, Harriet FINNE-SOVERI⁵, Jacob GINDIN⁶, Roberto BERNABEI³ (1. Department of Geriatrics and Gerontology, Department of Social and Clinical Pharmacy, 1st Faculty of Medicine and Faculty of Pharmacy, Charles University, Czech; 2. Department of Biostatistics- EUROMISE centre, Academy of Science, Czech; 3. Centro Medicina dell'Invecchiamento, Universita Cattolica del

Sacro Cuore, Italy; 4. Department of Geriatrics and Gerontology, 1st Faculty of Medicine, Charles University, Czech; 5. Institute for Health and Aging, Institute for Health and Aging, Finland; 6. Laboratory for Research in Geriatrics and Gerontology, Faculty of Health and Social Studies, University of Haifa, Israel)

Introduction : The incidence of potentially inappropriate prescribing (PIP) in nursing home (NH) residents in Europe (EU) varies substantially across the EU countries. Symposium presentation focuses on theory, best clinical practice and reality of PIP in LTC setting in Europe. Different criteria, guidelines and recent analytical results from the EU SHELTER project (Services and Health for the Elderly in Long Term Care, 7th FP, 2008- 2011) are presented. Method : Criteria and guidelines of PIP published between 1997 and 2012 yrs were applied in analyses of appropriateness of the medication use in 4156 EU NH residents aged 65+ from 7 EU countries (Italy- IT, Czech Republic- CZ, England- EN, Finland- FIN, France- FR, Germany- GER, The Netherlands- NL) and Israel (ISR). Patients' data were gathered prospectively by trained research staff at the baseline study period (Sept- Dec 2009) using standardized and validated InterRAI-LTCF instrument (see www.inter-rai.org). A Pearson χ^2 -statistics and Cochran-Mantel-Haenszel statistics were used to test homogeneity across study samples. Results of multiple logistic regression models were adjusted for age, gender and polypharmacy. Results : Mean age of participants was 83.5 ± 9.4 yrs (73% were women). 40.5% of NH residents used potentially inappropriate medications- the prevalence ranged from 28.0% in GER to 62.9% in FR. Beers's 2003 criteria gained the lowest prevalence (16.6%, except in FR- 31.6%). Specific prescribing habits were (p<0.001): extensive use of vasoactive agents (CZ); high dosing of brotizolam (ISR)/temazepam (FIN)/lorazepam (IT)/zolpidem (FR, CZ) and zopiclon (GER, ISR, FIN); frequent use of sotalol (NL), hydroxyzine and meprobamate (FR). Conclusion : NewEU guidelines must respect recent prescribing habits. Keywords : inappropriate prescribing, Europe, nursing homes

SS25 327-C-4

PREVALENCE AND DETERMINANTS OF INFLUENZA AND PNEUMOCOCCAL VACCINE COVERAGE IN NURSING HOME RESIDENTS IN 8 COUNTRIES. THE SHELTER STUDY

Eva TOPINKOVA¹, Francesco LANDI², Daniela FIALOVA¹, Martina VLACHOVA¹, Graziano ONDER², Henriette VAN DER ROEST³, Harriet FINNE-SOVERI⁴, Roberto BERNABEI² (1. Department of Geriatrics, First Faculty of Medicine, Charles University, Czech; 2. Centro Medicina dell'Invecchiamento, Universita Cattolica del Sacro Cuore, Italy; 3. Department of Nursing Home Medicine, EMGO Institute for Health and Care Research, VU University Medical Center, Netherlands; 4. National Institute for Health and Welfare, Finland)

Introduction : Influenza outbreaks and lower respiratory tract infections represent serious health concern in nursing homes. Immunization of residents with influenza and pneumococcal vaccines prevent both morbidity and mortality caused by influenza and invasive pneumococcal infections. The aim of this study is to explore the influenza and pneumococcal vaccination rates and associated factors in a sample of NH residents participating in SHELTER study, www.shelter-elderly.eu using interRAI LTCF assessment system. Method : Influenza vaccination in the last year and Pneumococcal vaccination in the last 5 years were recorded in total 4156 residents in 59 NHs in 8 countries (Czech Republic, England, Finland, France, Germany, Italy, The Netherlands and Israel). Binary logistic regression and multivariate regression analyses will be used to detect associations

and relationships between client -related (age, gender, cognitive status, depression, diagnoses, functional limitations) as well as facility-related factors (presence of geriatrician, physician's visits). Results : Mean age of the sample was 83.4 ± 9.4 years, 73% were female. Influenza vaccination was reported in 82.1% of residents (range 56.6 in CR to 93.2 in Italy) compared to much lower pneumococcal vaccination rates 27.9% of residents, ranging from 1.7% in Finland to 72.4% in Israel. However, for both vaccines usage there was a great inter-facility variation in all countries. Factors significantly associated with individual vaccines will be presented as well as potential barriers. Conclusion : The majority of NHs does not comply with recommended preventive use of vaccines. This study enables to identify barriers and facilitators of vaccine use and may help in developing strategies to improved vaccination. Keywords : influenza vaccination, pneumococcal vaccination, nursing homes

SS25 404-C

NURSING CARE PHENOMENA IN THE ELDERLY, A EUROPEAN APPROACH

SS25 404-C-1

WHICH CHARACTERISTICS OF NURSING HOME RESIDENTS PREDICT MALNUTRITION? AN INTERNATIONAL COMPARISON IN NURSING HOMES IN THE NETHERLANDS, GERMANY AND AUSTRIA

Noemi VAN NIE¹, Judith MEIJERS¹, Jos SCHOLS², Christa LOHRMANN³, Sabine BARTHOLOMEYCZIK⁴, Marieke SPREEUWENBERG¹, Ruud HALFENS¹ (1. Department of Health Services Research, Faculty of Health, Medicine and Life Sciences, Maastricht University, Netherlands; 2. Dept. HSR and Dept. GP, Faculty of Health, Medicine and Life Sciences, Maastricht University, Netherlands; 3. Institute of Nursing Science, Medical University Graz, Austria; 4. Institute of Nursing Science, University Witten/Herdecke, Germany)

Introduction : Prevalence rates of malnutrition vary internationally considerably, partly due to differences in measurement methodology and instruments. The aim of this study was to investigate whether resident characteristics predict and explain possible differences in malnutrition prevalence between countries, using the same methodology and instruments. Method : The study followed a cross-sectional, multi-centre design measuring malnutrition in nursing home residents from the Netherland, Germany and Austria. Patient data were gathered using a standardised questionnaire. Malnutrition was operationalized and validated according to Meijers (2009) and based on BMI, unintentional weight loss and nutritional intake. Data were analysed using a predictive as well as an association model, both built up using stepwise logistic regression. Results : The prevalence of malnutrition in the Netherlands, Germany and Austria was respectively 18.3%, 20.1% and 22.5%. The multivariate (backward) logistic regression analysis showed that gender, age, care dependency and some specific diseases predict whether a resident is malnourished or not. The association model showed that the odds ratio of malnutrition in the three countries declined after including the predictive resident characteristics. Conclusion : This study reveals that differences in malnutrition prevalence rates are not only determined by differences in resident characteristics but also by other country related factors. More research is needed to assess the contribution of these factors. Keywords : malnutrition prevalence, care homes, country comparison

SS25 404-C-2

PRESSURE ULCER CARE IN NURSING HOMES: A COMPARISON BETWEEN THE NETHERLANDS AND

GERMANY

Esther MEESTERBERENDS¹, Ruud HALFENS¹, Christa LOHRMANN², Jos SCHOLS¹ (1. Department of Health Services Research, Maastricht University, Netherlands; 2. Department of Nursing Science, Medical University of Graz, Austria)

Introduction : In the Netherlands and Germany annual national pressure ulcer prevalence surveys have been conducted over the past years. Results of these surveys reveal a large disparity between both countries in pressure ulcer prevalence rates, especially for the nursing home sector. Reasons for this discrepancy have been examined by previous studies, but exact causes have not been found yet. This study aimed to investigate whether the incidence of pressure ulcers in nursing homes in the Netherlands and Germany differs too and, if so, to identify resident-related risk factors, nursing-related interventions and structural factors associated with pressure ulcer development in nursing home residents. Method : A prospective multicenter study was performed in which a cohort of newly admitted nursing home residents in 10 Dutch and 11 German nursing homes was followed for a period of 12 weeks. Data were collected weekly by research assistants using questionnaires on four different levels; resident, staff, ward and organisation. Results : A significantly higher pressure ulcer incidence rate was found for the Dutch nursing homes compared to the German nursing homes. Six factors that explain the difference in pressure ulcer incidence rates were identified: dementia, analgesics use, the use of transfer aids, repositioning the residents, the availability of a tissue viability nurse on the ward and regular internal quality controls in the nursing home. Conclusion : Pressure ulcer incidence was significantly higher in Dutch nursing homes than in German nursing homes. Factors related to residents, nursing care and structure explain this difference in incidence rates. Keywords : pressure ulcer, nursing homes

SS25 404-C-3

NUTRITIONAL CARE IN AUSTRIAN HOSPITALS AND NURSING HOMES: A COMPARISON OF THREE YEARS

Silvia SCHONHERR¹, Ruud J G HALFENS², Jos M G A SCHOLS³, Christa LOHRMANN¹ (1. Department of Nursing Science, Medical University of Graz, Austria; 2. Department of Health Service Research, School for Public Health and Primary care, Maastricht University, Netherlands; 3. Department of General Practice and Health Service Research, School for Public Health and Primary care, Maastricht University, Netherlands)

Introduction : Malnutrition is a common health care phenomenon which leads to serious consequences for those who are affected. International studies report considerable deficiencies in nutritional practice across health care institutions. Audit & feedback, as a summary of clinical performance over a specified period of time, delivered in written or verbal formats (Jamtvedt et al. 2006), may promote improvement in practice. However, the literature provides only limited information on the effect of audit & feedback on nutritional practice in health care institutions. The aim was to investigate nutritional care in Austrian hospitals and nursing homes during a three-year period of audit & feedback. Method : From 2010 to 2012, the Annual National Prevalence Measurement of Care Problems (LPZ) was performed in Austrian hospitals and nursing homes. The LPZ measurement involves a comprehensive audit and feedback system using standardized questionnaires and procedures. 9 hospitals and 3 nursing homes took part continually from 2010 to 2012. Results: The sample across the years showed no clinically relevant demographic differences. The prevalence of malnutrition dropped from 22.1% to 17.5% in hospitals and from 21% to 20.5% in nursing homes. The use of validated screening tools increased from 17.1% to

43.2% in hospitals and from 3% to 95.2% in nursing homes. Conclusion : Malnutrition prevalence rates decreased from 2010 to 2012 in institutions participating repeatedly in the LPZ measurement, while an increase in nutritional screening rates was observed. Participation in the LPZ audit & feedback may have played a critical role in increasing malnutrition awareness and, consequently, leading to these results. Keywords : Nutritional care, hospitals, nursing homes

SS25 404-C-4

RISK-ADJUSTED HOSPITAL COMPARISONS OF PRESSURE ULCERS AND FALLS: CONTRIBUTION TO THE KNOWLEDGE ON RISK FACTORS IN OLDER AGE, DATA FROM SWITZERLAND

Christa VANGELOOVEN, Dirk RICHTER, Sabine HAHN (*Health, Berne University of Applied Sciences, Switzerland*)

Introduction : Comprehensive data regarding the quality of health care in Switzerland are still scant. The first annual National Point Prevalence Measurement Project, which includes the quality indicators for pressure ulcers and falls, was conducted in Swiss acute care hospitals in 2011. Method : The indicators, pressure ulcers and falls, were assessed with the International Prevalence Measurement of Care Problems Questionnaire from Maastricht University in the Netherlands. This instrument also contains institutional, ward and patient level items. The data were analyzed descriptively and by utilizing hierarchical logistic regression analysis. Results : 112 hospitals with 1,042 wards, and 10,606 patients participated in the measurement. Patients were, on average, 65 years of age and 58% were over 65. The prevalence of nosocomial pressure ulcers grades 1-4 and grades 2-4 were relatively low in comparison with other studies. The prevalence of falls was relatively high. Regression analyses revealed several significant factors related to these adverse patient outcomes. Patients over 75 years of age had more than a twofold risk of pressure sores compared to patients younger than 55. Similarly, the risk of falls was 1.5 times higher in older age. Length of stay, surgeries and various diseases, each independently increased the risk for pressure ulcers and falls. Conclusion : The results may underestimate prevalence rates due to a relatively high non-response rate. However, the results are useful in gaining first insights into adverse events in an elderly hospital population. Older age is a significant risk factor; therefore, this vulnerable population requires special attention in acute care hospital settings. Keywords : pressure ulcers, falls, risk factor, older age

SS25 406-R

IMPLICATIONS OF THE "DISABILITY WAVE" IN GLOBAL AGING

SS25 406-R-1

INTERSECTIONS OF AGING AND DISABILITY POLICY IN THE UNITED STATES

Michelle PUTNAM (*School of Social Work, Simmons College, USA*)

Introduction : This presentation identifies key intersections of aging and disability policy in the United States and discusses how and why they are relevant to individuals aging with long-term disability and older adults aging into disability. Conceptually, this discussion takes a life course approach to assessing existing and needed public policies for the growing aging population in the United States. Method : Specifically, policies are reviewed from across sectors, but primary emphasis is placed on evaluating health and social care policies that influence positive and active aging outcomes. Results : Findings from this review suggest a greater need to evaluate existing capacity to meet

the needs of persons aging with and into disability and to reconsider the assumptions that underlie existing aging and disability policies which segment the life course and these populations. Conclusion : Redefining policy outcomes may guide this process. However critical to this work is a new view of our national 'investment' in people with disabilities of all ages. Keywords : aging, disability, public policy

SS25 406-R-2

THE STATE OF AGING AND DISABILITY IN AUSTRALIA

Christine BIGBY (*Social Work and Social Policy, LaTrobe University, Australia*)

Introduction : In Australia, an increasing proportion of people with intellectual disability are surviving into later life and outliving their parents, who have been their lifelong primary carers. The demographic bulge of the baby boom generation has contributed to the increasing number of older people with intellectual disability. Despite the long term care and support of middle aged and older people with intellectual disability being flagged as an important issue for families, services and policy makers for more than 20 years, there remains a fragmented and ad hoc approach from both the aged care and disability sectors. Both sectors have been subject to significant policy reform since 2010 and Australia is about to embark on a National Disability Insurance Scheme which will have various launch sites by mid-2013.

Method : This presentation will review these reforms and consider the implications for people aging with an intellectual disability. The challenges that stem from some of the unique issues associated with aging of this population and their often very disadvantaged position as they embark on the aging process will be considered. Results : The presentation will suggest that Australia has taken a different path from some other countries and rather than efforts to bridge aging and disability sectors, the two are becoming more separate. Conclusion : Strategies to counteract this trend and ensure adequate support is available for people aging with intellectual disability to live health and active lives will be put forward. Keywords : aging, disability, bridging

SS25 406-R-3

PARTICIPATION OF PEOPLE WITH DISABILITIES WHO ARE GETTING OLDER IN JAPAN

Kimika MASUDA (*The Japanese Red Cross Kyusyu International College of Nursing, Japan*)

Introduction : The purpose of this study is three folds: 1) to find out whether there are differences in the extent of participation among the types of physical disabilities; 2) to identify differences in the level of participation across age categories; and 3) to analyze the factors that influence the extent of participation. Method : A questionnaire survey comprised of the Revised Craig Handicap and Reporting Technique (R-CHART) and the Community Integration Questionnaire (CIQ) was distributed to 3,200 people with physical disabilities who were 30 years of age and older. Results : Valid responses were received from 1,653 people. The following results were obtained. First the level of participation was the lowest among people with cerebral palsy compared to the other types of disabilities. Second, occupational scores on R-CHART were found to decrease significantly after the age of 70. Finally social integration scores on R-CHART were found to be influenced by marital status and economic self-sufficiency was affected by the level of education. Conclusion : Based on these findings, the author proposes the following suggestion. As marital status affected the level of participation by people with disabilities, support systems and group activities are required. As most people with cerebral palsy have had disabilities since birth or early childhood, they have not had as many opportunities to develop friendships. Therefore,

it is necessary to establish a social support system that takes into consideration following the death of the parents of people with disabilities. Because the level of education affected the level of economic self-sufficiency, it is necessary to promote educational opportunities for people with disabilities. Keywords : Aging, Disability, Participation

SS25 406-R-4

AGING WITH INTELLECTUAL DISABILITIES IN HONG KONG

Terry Yat Sang LUM (*Social Work & Social Adm & Sau Po Center on Ageing, The University of Hong Kong, Hong Kong*)

The Hong Kong Census and Statistics Department estimated that the number of persons with intellectual disabilities in Hong Kong was between 67,000 and 87,000 people in 2008. Although we do not have any data on age distribution of people with intellectual disabilities, the Census and Statistics Department reported that in 2001, 22.9% of people with intellectual disabilities living in residential care settings were age between 40 years and 49 years, and 9% were age 50 years or older. In 2008, that figures increased to 27.7% (40 years - 49 years) and 20.9% (50 years or above). Although people with intellectual disabilities are aging rapidly, the HK society still treats most intellectual disabilities, such as Down syndrome, as pediatric health problems. Using a community-university collaboration between the Sau Po Center on Ageing at the University of Hong Kong and the Hong Kong Down Syndrome Association as a case example, I will present our effort to advocate for providing ageing services to people with Down syndrome and to reduce ageism and disability-related discrimination among the general population in Hong Kong. Keywords : Aging

SS25 407-B

VASCULAR AGING I: BASIC MECHANISMS

SS25 407-B-1

LIFESPAN REGULATORY SYSTEM AS A POTENTIAL THERAPEUTIC TARGET FOR CARDIOVASCULAR DISEASE

Minamino TOHRU (*Department of Cardiovascular Biology and Medicine, Niigata University Graduate School of Medical and Dental Sciences, Japan*)

Introduction : Epidemiological studies have shown that age is the dominant risk factor for lifestyle-related diseases. The incidence and the prevalence of diabetes, heart failure, coronary heart disease and hypertension increase with advancing age. However, the molecular mechanisms underlying the increased risk of such diseases that is conferred by aging remain unclear. Cellular senescence is originally described as the finite replicative lifespan of human somatic cells in culture. Cellular senescence is accompanied by a specific set of phenotypic changes in morphology and gene expression including negative regulators of the cell cycle such as p53. Primary cultured cells from patients with premature aging syndromes are known to have a shorter lifespan than cells from age-matched healthy persons. It is also reported that the number of senescent cells increases in various tissues with advancing age. Interestingly, such accumulation of senescent cells in aged animals is attenuated by caloric restriction that regulates the lifespan regulatory system and delays age-associated phenotypes. I therefore hypothesize that cellular senescence in vivo is regulated by the lifespan regulatory signals and that accumulation of senescent cells contribute to the pathogenesis of age-associated cardiovascular disease. Conclusion : Here I will present our recent data on the role of cellular senescence and the lifespan regulatory system in

cardiovascular disease and will discuss the potential of anti-senescence as a novel therapeutic strategy for age-associated diseases. Keywords : Aging, cellular senescence

SS25 407-B-2

ENDOTHELIAL CELL SENESCENCE: INFLAMMATION, MITOTIC DYSREGULATION AND P53

Jae-Ryong KIM (*Aging-associated Vascular Disease Research Center, Department of Biochemistry and Molecular Biology, College of Medicine, Yeungnam University, Korea*)

Introduction : Cellular senescence is a stress-response phenomenon in which cells lose the ability to proliferate; it is induced by telomere erosion, activation of oncogenes or tumor suppressor genes, or exposure to a sub-lethal dose of DNA damaging agents or oxidative stresses. Method : Our cDNA microarray analysis on endothelial cell (EC) senescence revealed that inflammation and mitotic dysregulation might be the underlying basis for the molecular alterations that link EC senescence and age-related cardiovascular pathological processes. Results : While diverse inflammatory mediators such as insulin-like growth factor binding proteins (IGFBPs), interferons (IFNs) and inflammatory cytokines were up-regulated, mitotic proteins such as aurora kinase B (Aurora B), mitotic centromere-associated kinase (MCAK), Holliday junction recognition protein (HJURP), and polo-like kinase 1 (PLK1) were down-regulated during replicative senescence. We found that IGFBP-3, IGFBP-5, and IFN-gamma accelerated EC senescence through a p53-dependent DNA damage signal pathway. Conversely, Aurora B, MCAK, HJURP and PLK1 were found to inhibit EC senescence via a p53 pathway. These results suggest that inflammatory mediators and mitotic proteins might play important roles in EC senescence through a p53-dependent pathway and contribute to the pathogenesis of age-related cardiovascular diseases. Conclusion : These results suggest that inflammatory mediators and mitotic proteins might play important roles in EC senescence through a p53-dependent pathway and contribute to the pathogenesis of age-related cardiovascular diseases. Keywords : endothelial cell senescence, inflammation, mitotic dysregulation, p53

SS25 407-B-3

AUTOPHAGY AND VASCULAR AGING

Ming-Hui ZOU (*University of Oklahoma, USA*)

No Abstract

SS25 407-B-4

ROLES OF SUMOYLATION IN ENDOTHELIAL DYSFUNCTION

Chang-Hoon WOO (*Department of Pharmacology, Yeungnam University College of Medicine, Korea*)

Introduction : Atherosclerosis is readily observed in certain areas where disturbed blood flow (d-flow) is known to occur. A positive correlation between PKC ζ activation and d-flow has been reported, but the exact role of d-flow-mediated PKC ζ activation in atherosclerosis remains unclear. We test a hypothesis that PKC ζ activation by d-flow induces endothelial cell (EC) apoptosis by regulating p53-sumoylation. Method : We have shown that hydrogen peroxide (H₂O₂) and advanced glycation end products (AGE) inhibit steady laminar blood flow (s-flow)-induced ERK5 transcriptional activation as well as the subsequent anti-inflammatory KLF2 and eNOS expression via ERK5-sumoylation in endothelial cells (ECs). Results : Lysine residues 6 and 22 of ERK5 have been identified as SUMO targeting sites. Depletion of PIAS1 (SUMO E3 ligase) and ERK5-K6/22R mutant reversed the

inhibition of KLF2 and eNOS expression in response to diabetic stimuli. In addition to ERK5-sumoylation in ECs, we also found that PKC ζ -mediated p53-sumoylation is key regulator in peroxynitrite(ONOO⁻)-induced EC apoptosis. ONOO⁻ significantly increased PKC ζ activation, which subsequently induced p53-sumoylation, p53-Bcl-2 binding, and EC apoptosis. En face confocal microscopy revealed increases in non-nuclear p53 expression and apoptosis in aortic EC located in d-flow areas compared with those present in steady laminar flow areas. Conclusion : We propose a novel mechanism for ERK5-sumoylation and p53-sumoylation mediated by PKC ζ -PIASy interaction during d-flow-mediated EC apoptosis, which contributes early events of atherosclerosis. Keywords : blood flow, endothelial dysfunction, atherosclerosis

SS25 409-C

MILD COGNITIVE IMPAIRMENT IN THE ELDERLY - DIAGNOSIS AND MANAGEMENT

SS25 409-C-1

SCREENING AND IDENTIFYING FOR MCI

Yun-Hee KIM (*Physical and Rehabilitation Medicine, Sungkyunkwan University School of Medicine, Samsung Medical center, Korea*)

Introduction : Mild cognitive impairment (MCI) is considered as a cognitive disturbance representing a transitional phase between normal aging and dementia. MCI demonstrated estimated conversion rate of 10-15% within 1 year and 40% within 2 years to dementia. The relevance of improved identification of MCI is that these individuals are at higher risk of developing dementia and are potential candidates for initiation of intervention. Method : The neuropsychological tests are the most classic methods of detecting the degree of cognitive impairment, however, the test protocols are diverse and time consuming, or lack of sensitivity and specificity. Differences among studies in prevalence or conversion rate of MCI are influenced by methodological differences. The MMSE, CDR, clock drawing test (CDT), MoCA, and AVLT were commonly used test methods separately or in combination to improve detection rate of MCI. Results: Different neurochemical markers from CSF or serum as well as the biochemical markers using PET, SPECT, and MRI were also used as adjuvant diagnostic methods of distinguishing MCI or early dementia. Recently, combined use of neuropsychological measures and morphometric analysis of neuroimaging findings was found to potentially facilitate the early identification of MCI from normal cognition. Conclusion : More recently, broader conceptualization of MCI have emerged delineating clinical subtypes that commonly include amnesic and nonamnesic forms, the single and multiple cognitive domains. With these broader classification schemes, diagnostic challenges related to MCI have increased. There is a need to develop objective, cost-effective and normative screening tests which could effectively evaluate cognitive problems for older individuals at risk of dementia. Keywords : Mild cognitive impairment, neuropsychological test, neuroimaging method

SS25 409-C-2

BRAIN NETWORK CHANGES IN MILD COGNITIVE IMPAIRMENT AND ALZHEIMER'S DISEASE

Andrew T. REID, Alan C. EVANS (*McConnell Centre for Brain Imaging, Montreal Neurological Institute, Canada*)

Introduction : Alzheimer's Disease (AD) has been characterized as a "disconnection syndrome", which propagates in a predictable manner along the anatomical network structure. This suggests that the structural network changes associated with mild cognitive impairments

(MCI) can be used to elucidate the disease mechanisms at an early time point. Such associations have clinical importance as potential surrogate endpoints for clinical trials, and may also provide insight into mechanisms by which brain networks subserve cognitive functions. Method : Groupwise correlations in regional cortical thickness, derived from MRI, have previously been used to investigate brain connectivity changes underlying MCI and AD. We extended this method by extracting individual residual error and associating this with cognitive performance. Data was obtained from the Alzheimer's Disease Neuroimaging Initiative (ADNI). Results : Group differences in subject residuals for Normal, MCI, and AD groups revealed a network centered on the parahippocampal gyrus (PHG). This pattern largely matched that of correlation coefficients between subject residuals and performance on the Alzheimer's Disease Assessment Scale (ADAS-cog). We further found distinct networks associated with performance on the Category Fluency and Digit Symbol Substitution measures. Conclusion : These results provide a means by which group-wise associations in structural morphometry can be related to individual outcomes, such as cognitive performance. This presents the possibility of using structural MRI to infer connectivity changes in individuals, and use these to predict cognitive decline and dementia. The residuals method might also be generalized to other forms of neurodegenerative disease. We intend to extend these preliminary findings to investigate the feasibility of such approaches. Keywords : brain networks, mild cognitive impairment, cortical thickness

SS25 409-C-3

PHYSICAL ACTIVITY, LIFESTYLE AND COGNITIVE FUNCTION

Hyuntae PARK (*Section for Physical Activity and Health, National Center for Geriatrics and Gerontology, Japan*)

Introduction : Physical activity may have a protective effect against development of cognitive impairment and dementia. This presentation will discuss our research related to the cognitive benefits associated with objectively measured physical activity, behavior patterns and lifestyle. Method : I will highlight which physical activity is effective in promoting cognitive health and preventing MCI among older adults (the overall pattern, quality, quantity, and timing of activity), and the factors determining whether older adults should continue with the necessary physical activity as a means to delay or prevent the onset of cognitive impairment (emphasizing personal, social, and environmental determinants). I will also highlight the relationships between physical activity, cognition, and brain activation. Results : We found daily physical activity was associated with multiple aspects of cognitive functioning, suggesting that both the quality and quantity of the habitual physical activity (daily duration at an intensity >3 metabolic equivalents, the daily step count and interrupting prolonged periods of sedentary activity) may be important factors for cognitive benefits. Subjects actively participating in habitual physical activity tended to have larger total brain volume than sedentary subjects. A higher-level of physical activity predicted greater volumes of prefrontal regions after the 1-year intervention. Conclusion : Associations between habitual physical activity and cognitive function are strongly suggestive, and greater amounts/intensity of physical activity are associated with greater prefrontal gray matter volume, which is associated with a reduced risk of cognitive impairment. More randomized controlled intervention studies are needed to make a causal interpretation of the relationships that we have demonstrated. Keywords : physical activity, mild cognitive impairment, brain activation

SS25 409-C-4

NON-PHARMACOLOGICAL THERAPY FOR MCI: A RCT OF EXERCISE AND COGNITIVE STIMULATION

Hiroyuki SHIMADA (*Section for Health Promotion, National Center for Geriatrics and Gerontology, Japan*)

Introduction : An association has been proposed between regular participation in physical activity and a variety of cognitive benefits. Current results of RCT were conducted to determine the effect of exercise or physical activity on cognitive functions in the mild cognitive impairment (MCI) older adults. These studies identified the effect of exercise or physical activity on cognitive function including general cognitive function and executive function in the older adults with MCI. We designed the present randomized trial to test whether 6 months supervised multicomponent exercise to improve cognitive function among older adults with MCI. **Method :** Subjects were 100 older adults (mean age, 75 years) with MCI. Subjects in each group were randomized to either a multicomponent exercise or an education control group using a ratio of 1:1. Subjects in the multicomponent exercise group exercised under the supervision of physiotherapists for 90 minutes/day, 2 days/week, 40 times for 6 months. The exercise was included aerobic exercise, muscle strength training, and postural balance retraining which was conducted under multitask conditions to stimulate cognitive functions. **Results :** The exercise program improved the ADAS-cog and logical memory score. However, this improvement did not reach significance group×time interactions. A sub-analysis of amnesic MCI patients for group×time interactions revealed that the exercise group exhibited significantly better MMSE and logical memory scores, and reducing whole brain cortical atrophy compared to the control group. Similar results were found for amnesic MCI subgroup after 12 months. **Conclusion :** Exercise intervention improves or maintains cognitive performances, at least partly, in the older adults with amnesic MCI. **Keywords :** Prevention, Dementia, Mild cognitive impairment

SS25 409-C-5

SYMPTOMATIC AND PREVENTIVE THERAPIES FOR AMNESTIC MCI

Sangyun KIM (*Department of Neurology, Seoul Nation Univ Bundang Hospital / Seoul National Univ College of Medicine, Korea*)

Introduction : Mild cognitive impairment (MCI) is very useful term for the clinical research and clinical diagnosis. But the diagnosis of MCI is not so easy and relatively subjective, which is affected by the content of operational diagnostic criteria. Persons with MCI are at high risk of developing Alzheimer disease (AD), and the rate of annual progression from the amnesic form of MCI to clinical AD estimated at approximately 10%-15%. And now, MCI has moved from research into clinical practice. **Method :** Although the economic and emotional burden of Alzheimer's disease itself are well recognized, the pre-dementic state of Alzheimer's disease is not the primary target of drug therapy because of the insufficient data on the effects of pharmacological managements. But these may be due to the lack of effective clinical study methods for this stage of cognitive impairment. **Results :** According to the recently proposed criteria, MCI of the Alzheimer's type and prodromal Alzheimer's dementia are very useful concepts for the clinical and basic research field. Initiating treatment and care management in the MCI phase could improve the health and well-being of patients and caregivers and possibly offset certain costs. **Conclusion :** In this presentation, we are going to review the clinical concepts of MCI due to AD briefly and some clinical trials for these patients group. Lastly I'd like to propose a new concept of management of this stage of Alzheimer's disease before dementia,

"AD control". **Keywords :** mild cognitive impairment. treatment. amnesic MCI. MCI due to Alzheimer's disease

SS25 414-S

NEW DIRECTIONS IN RESEARCH ON OLDER PEOPLE AND SOCIAL EXCLUSION

SS25 414-S-1

SOCIAL EXCLUSION OF OLDER PERSONS: A SCOPING REVIEW AND TESTABLE MODEL

Kieran WALSH¹, Thomas SCHARF¹, Norah KEATING² (*1. Irish Centre for Social Gerontology, National University of Ireland Galway, Ireland; 2. Department of Human Ecology, University of Alberta, Canada*)

Introduction : As a concept, social exclusion has come to dominate policy discourse on marginalisation in Europe and other world regions. Understanding exclusionary processes and outcomes can provide valuable insight into how mechanisms of disadvantage can impact on and shape older people's lives. However, much of the existing discourse is based on loose conceptualisations of social exclusion that rarely account for or addresses an ageing population. In part, this is due to the lack of critical engagement with the concept in the social gerontology literature. Nevertheless, social exclusion is potentially a useful frame not just for exploring multi-dimensional disadvantage in later life, but in informing the development of policy and practice interventions. **Method :** This paper draws on a scoping review of international literature to present a conceptual exploration of age-related social exclusion. The review, which focused on material published within the last 15 years, involved two steps: first, a review was conducted of all conceptual frameworks on social exclusion and ageing to establish the primary domains of exclusion for older people; second, these results were used to structure a review of empirical material relating to each domain. **Results :** Bridging the disciplinary traditions of the Anglo-Saxon and French sociological perspectives, the scoping review's findings were used to inform the development of a testable model of age-related social exclusion. **Conclusion :** The paper closes with a consideration of potential drivers of social exclusion for older people and sets out requirements for future gerontological research. **Keywords :** social exclusion, older people, conceptualisation

SS25 414-S-2

SOCIAL INCLUSION OF ELDERS IN FAMILIES: A EUROPEAN PERSPECTIVE

Jim OGG (*Unite des Recherches sur le Vieillessement, Caisse nationale d'assurance vieillesse, France*)

Introduction : Demographic and social trends such as population ageing, falling fertility rates, transforming welfare states, globalisation and economic crises, are placing new challenges on families with particularly repercussions for elders. **Method :** European data from the SHARE survey (Waves 1 to 4) are examined in relation to the household composition and geographical proximity of older individuals to other family members, the exchange of social support and subjective measures of isolation. **Results :** Although principles and mechanisms of intergenerational solidarity remain intact, research reveals areas of concern where older people may be at risk social exclusion because of a deficit in family support. This risk appears to arise as a result of changes at the macro level - such as the consequences of migration flows and the institutional contexts that regulate them, or initiatives related to combining family responsibilities with labour force participation - rather than family

members becoming more independent and self-reliant. Conclusion : The risks of social exclusion from family life can be addressed by effective social policy that helps families to undertake the tasks that are integral to them, namely caring for vulnerable members. This does not mean to say that so-called "traditional" approaches to social care in families, whereby women are heavily involved in personal care tasks, are the solution. The family can ensure the social inclusion of its older members in other ways, notably by providing important links to external sources of support and community engagement. Keywords : exclusion, elders, Europe

SS25 414-S-3

SOCIAL EXCLUSION AND AGEING IN THE AUSTRALIAN REGION: CRITICAL REFLECTIONS

Jeni WARBURTON (*John Richards Initiative, La Trobe University, Australia*)

Introduction : Social exclusion has been identified as a major challenge facing older Australians, yet one that is not yet being addressed in federal policy. Despite the establishment of the federal Social Inclusion Board in 2008, older people were not identified as a priority area. This paper seeks critically to explore the relevance of social exclusion in considering an ageing Australia; and to identify issues associated with the development of more socially just ageing policies. Method : Defining social inclusion as capacity to be involved in key activities of the society in which people live (Burchardt et al., 2002) demonstrates the risks of social exclusion faced by older people. A social inclusionary approach highlights core issues such as civil engagement, an ageing workforce, age-friendly communities, and civic involvement. Results : Three key areas signal the importance of social exclusion to an ageing population. First, older people are vulnerable to economic deprivation through the processes of ageing and retirement, making social inclusion far less dynamic. Second, disadvantage can be cumulated across the lifecourse, and can have a long-term impact on social groups such as women, Indigenous people, or those from disadvantaged regions. Third, there is considerable diversity in the ageing population, yet ageist stereotypes remain powerful psychological barriers to social inclusion. Conclusion : The discourse of social inclusion provides important new perspectives on ageing policy, including economic, social and civic considerations. Addressing these issues is complex and requires a multidimensional approach, however, as new cohorts of people age, it becomes even more critical. Keywords : social exclusion, Australia, ageing policy

SS25 414-S-4

OLDER PEOPLE IN SUB-SAHARAN AFRICA: CONTEXTUALIZING SOCIAL EXCLUSION

Nana Araba APT (*Academic, Ashesi University, Ghana*)

Introduction : Concerns about later life are rapidly rising even in Africa where children and youth dominate the population policy landscape. Any policy strategy to reduce the growing divide in contemporary Africa between young and old, rich and poor, urban and rural with regard to Africa's ageing spectrum will ultimately rest on an adequate conceptual framework and current literature. In the latest Ghana Human Development Report (UNDP, 2007) for a more inclusive society, it was concluded that a number of structural, cultural and institutional factors have tended to push older people into the exclusion zone. Method : The paper draws on case studies of older people in rural and urban areas in Ghana. Results : The paper explores and analyzes the construction and meanings of exclusion from the perspective of Sub-Saharan Africa as well as the major underlying forces behind these developments, showing how these differ from the

more usual interpretations from western nations. Conclusion : The paper concludes by highlighting the need for social gerontology to consider non-western interpretations of inclusion and exclusion in relation to population ageing. Keywords : social exclusion, Ghana, Sub-Saharan Africa

SS25 416-R

ACTIVE AGING: A PERSPECTIVE OF KOREA-JAPAN CENTENARIAN STUDIES

SS25 416-R-1

FACTORS ASSOCIATED WITH ADL AND IADL DEPENDENCY AMONG KOREAN CENTENARIANS

Keon Yeop KIM (*Preventive Medicine, Kyungpook National University, Korea*)

Introduction : Centenarians represent a special life stage that a small but growing number of people are reaching worldwide. This study aims to examine the functional status of Korean centenarians. As functional health is one of the essential components of healthy aging, our primary objective is to identify the correlates of two aspects of functioning, activities of daily living (ADL) and instrumental activities of daily living (IADL). Method : Using a census survey conducted by the Korean National Statistical Office (KNSO) in 2005, we documented ADL and IADL limitations and analyzed their relationship to sociodemographic factors (age, educational attainment, residence, past occupation, religion), health behaviors (alcohol, smoking, physical activity), social connectedness, and presence of diseases. Results : The study participants were 796 adults aged 100 years or older. The mean age was 101.5 ± 1.8 , and females were 89.9% of the sample. Regarding ADL, the disabled group represented 58.8% of the participants, and for IADL the disabled groups represented 90.9% of the subjects. Both ADL and IADL dependences were more common among females, those who did less physical activity, those who had more diseases, and those who did not participate in social activities. Conclusion : Intervention programs designed to address life-stage issues such as focusing on initiating healthy behaviors from youth, managing chronic diseases in mid-life, and fostering social participation in later life are recommended ways to improve functional independence and promote healthy aging among current and future generations of Korean centenarians. Keywords : centenarians, activities of daily living (ADL), instrumental activities of daily living (IADL)

SS25 416-R-2

THE HEALTH-LONGEVITY REGIONAL PLAN IN KOREA

Sung Kook LEE (*Dept. of Preventive Medicine, School of Medicine, Kyungpook National University, Korea*)

Introduction : The objectives of this study were to: (1) select the area of healthy longevity in Gyeongsangbuk-do, Korea and (2) develop a model for promoting healthy longevity of the elderly, especially in the aspects of the health, welfare and self-supporting development using local resources. Method : The study was conducted in all areas in Gyeongsangbuk-do and used methods in three parts: (1) Selecting the healthy longevity area in Gyeongsangbuk-do was identified from Bureau of the Census (2) Assessing the actual conditions on areas of the healthy longevity was based. Results : We found significant characteristics of healthy longevity for the elderly in jangsumyeon of Yeongju city, bukhumyeon of Andong city, homyeongmyeon of Yecheon Gun, and mulyamyeon of Bonghwa Gun as the healthy longevity areas of Gyeongsangbuk-do. The critical contributors of healthy longevity for the elderly were clear water, refreshed air from

the forest, available organic food such as wild edible greens, etc. As the data from diverse factors of healthy longevity for the elderly and environmental characteristics of healthy longevity areas, we are planning to develop a model of health longevity area. Conclusion : In order to sustainably maintain and develop the environmental characteristics of healthy longevity in Gyeongsangbuk-do, it is required the holistic and systematic management system. Therefore, it is necessary to build the Healthy Longevity Support Center, which will be a central place to play a major role in developing educational programs for promoting healthy longevity, fostering health care professionals and even driving much of the research on the impacts of healthy longevity for the elderly. Keywords : Area for healthy longevity, healthy resources, Health Longevity Support Center

SS25 416-R-3

THE DAILY LIVES OF CENTENARIANS : THROUGH AN ANALYSIS OF INTERVIEWS

Hyeweon KIM (*Faculty of Intercultural Studies, Yamaguchi Prefectural University, Korea*)

Introduction : This research focused on the daily lives of centenarians of Korea and Japan, in particular focusing on the aspects of autonomous and the support they have received and the perceptions of longevity. Method : This study consists both of case studies carried out on the super-elderly (those over age 85, including centenarians), and the document analysis of previously conducted interviews of centenarians. The case studies were carried out on the super-elderly in Korea and Japan. For the document analysis, 'Portrait of a Centenarian' (No.1-68) was used. Results : It was discovered that many super-elderly people continue to try to act autonomously in their daily lives. Analysis showed that this effort was highly-valued by family care-givers, which in turn led to a good care relationship. In particular, in the case of elderly people that consciously maintained contact with the outside world, health levels were relatively good, and the subjects showed positive perceptions of longevity. In regards to the norms of family care, has been more strongly supported in Japan than Korea. Conclusion : It can be concluded that maintaining control of one's daily living activities and continued contact with the outside world are very important factors in ensuring one's healthy life expectancy. The role of the family and others around the super-elderly is to manage the resources and reinforce the care system for their continued support. Keywords : the perceptions of longevity, contact with the outside world , Autonomous attitude

SS25 416-R-4

HEALTH OF CENTENARIANS: AN ANALYSIS OF AN ACTUAL LIFE SITUATION

Makiko TANAKA (*Graduate Division of Health and Welfare, Yamaguchi Prefectural University, Japan*)

Introduction : In the Asian countries such as Japan or Korea, aging is taking place at a rapid pace, which in turn is influencing their social health. Therefore, there is a need to clarify the life actual situations of centenarians, which represent the quality of health welfare, and to examine factors affecting health and longevity from the viewpoint of active aging. Method : A questionnaire using the Likert scale was developed by the present author to identify factors affecting health and longevity. It was administered to 626 centenarians who live in Yamaguchi, which has the third highest rate of aging. The questionnaire items pertained to the degree of ADL, the living environment, life habits, and the sense of happiness. Results : Responses were obtained from 348 participants. 35% of them lived at home while 19.3% of them lived in hospitals and 45.4% in welfare

facilities. The sense of happiness was significantly higher among those who lived at home, those who were autonomous in terms of ADL, those who cared about their eating habits, and those who cared about longevity. Conclusion : Continuing to live in a life environment one is used to, living with people who one feels comfortable with, being aware of health, and caring about autonomous lifestyle--these show significant relationships to health and participants, which are concepts often pointed out in active aging. The perspective of active aging, therefore, is an important factor to health and longevity. Keywords : Centenarian, Health ,Life situation

SS25 417-B

CHROMOSOMES AND AGING

SS25 417-B-1

PEPTIDE BIOREGULATORS INDUCED REACTIVATION OF 'AGED' CHROMATIN

Teimuraz LEZHAVA, Maia GAIOZISHVILI (*Department of Genetics, Tbilisi State University, Georgia*)

Introduction : In the present investigation are considered eligible the modification of heterochromatin (total heterochromatin, constitutive - pericentromeric and telomeric heterochromatin, nucleolus organizer regions - NORs and facultative heterochromatin) under the influence of peptide bioregulators (tetrapeptides Ala-Glu-Asp-Gly; Lys-Glu-Asp-Ala and dipeptide Lys-Glu) and heavy metal in lymphocytes cultured from individuals at the age of 80 and over. Method : We have studied chromosomes of metaphases lymphocyte cultures obtained from healthy individuals aged 80 years and over (control - 20-40 years old). The peptide bioregulator (tetrapeptides Ala-Glu-Asp-Gly; Lys-Glu-Asp-Ala and dipeptide Lys-Glu) at a concentration of 0.01 µg/ml were added to the cultures at the onset and left for an entire period of incubation (72h). We have used: differential scanning microcalorimetry for study of heterochromatin denaturation parameters; NOR - heterochromatin by Ag- staining intensity and the frequency of association acrocentric chromosome; the structural pericentromeric C-, and telomeric heterochromatin; frequency of sister chromatid exchanges for definition the level of facultative heterochromatin. Results : The results showed: 1) progressive heterochromatinization of total heterochromatin occurs at aging; 2) peptide bioregulators induce unrolling deheterochromatinization of total heterochromatin; each peptide bioregulator selectively effect definite the deheterochromatinization of chromosomes; 4) Co²⁺ ions in combination with the bioregulator tetrapeptide (Lys-Glu-Asp-Ala) has induced deheterochromatinization of the telomeric heterochromatin regions in lymphocytes of old individuals. Conclusion: Our data may be important as new information on the remodeling of constitutive and facultative heterochromatin induced by bioregulators (Ala-Glu-Asp-Gly; Lys-Glu-Asp-Ala; Lys-Glu) and bioregulator - Lys-Glu-Asp-Ala with Co²⁺ ions in aging and aging pathology and may lead to the development of therapeutic treat. Keywords : Aging, , Heterochromatinization, Peptide Bioregulators.

SS25 417-B-2

THE STUDY OF FRAGILE SITES IN AGED INDIVIDUALS

Tetsuji KADOTANI (*Medicine, The Kadotani Medical Research Foundation, Japan*)

Introduction : Chromosome fragile sites were studied in the middle-aged and women over 60 years and old. Method : The lymphocytes were cultured for 72 hours in the minimal essential medium without folic acid (MEM-FA) supplemented with 5% calf serum. The slides were made by means of the flame-drying technique.the chromosome

observation was made with the frequency of the break and/or gap and also the satellite association. The locations of the break points were identified by G-banding technique after decolorizing them. Results : The satellite associations and the frequency of the break and/or gap both the 40-45 and 60-76 year old group statistical was not recognized. In the aged women over 60 years old, 8 fragile sites were observed. Keywords : Fragile sites, satellite association, gap

SS25 417-B-3

CHROMATIN CHANGES BY HEAVY METALS IN AGING

Tinatin JOKHADZE, Tamar BUADZE (*Department of Genetics, Tbilisi State University, Georgia*)

Introduction : The modification of chromatin in eukaryotes is the basis of epigenetic variability. Epigenesis is important factor in the regulation of the genome in eukaryotes. Modification of the chromatin can be programmed. For example, the programmed heterochromatinization of chromatin occurs during aging. The modification of the chromatin can be induce by different chemicals. Method : We studied the effect of ions of nickel, zinc and cobalt on chromosomal parameters - the frequency of sister chromatid exchanges (SCE), the activity of nucleolar organizer regions (NORs) and the level of expression fragile sites of chromosome. The study was conducted with the use of the lymphocyte cultures of individuals - 20-30 and 75-86 years. Results : Zinc causes an increase of the frequency of SCE in the cells of senile individuals (11.1 ± 05 exchange/cell, in intact cultures - 5.9 ± 0.4). Cobalt induce increase the frequency of pericentromeric exchanges (15.4% of the total number of exchanges, in intact cultures - 4.5%). Variability of the level of activity NOR was observed only by influence zinc, which induces decline of this parameter in control, and in old age group - increases. All studied metals increased the level of expression of chromosomal fragile sites in the first age group and also in elderly. Cobalt induces increase in the frequency pericentromeric fragile sites (69.1% of the total; in intact cultures - 21.7%). zinc and nickel - subtelomeric (11.3% and 10.5%, respectively, in intact - 4.8%). Conclusion : All three studied metal have a specific modifying effect that depends on the variability of chromatin in age. Keywords : Heavy metal, Chromatin, Heterochromatinization

SS25 418-S

DISASTER SUPPORT FOR ELDERLY INDIVIDUALS: BASED ON EXPERIENCES IN ASIA

SS25 418-S-1

A MID TO LONG-TEM NURSING CARE GUIDELINE FOR THE ELDERLY VICTIMS AFTER DISASTERS

Chiyo MATSUOKA (*Department of Nursing, Bukkyo University, Japan*)

Introduction : In a catastrophic natural disaster such as earthquake, tsunami and typhoon, elderly people have high vulnerability and have various and particular health issues and living problems not only immediately after but also in the mid- to long-term wake of a disaster. For example, concerning the health issue, it is known that the elderly have frequently experience onset of disaster associated diseases, such as high blood pressure, cerebrovascular disease, and cardiac disease. Method : Moreover, after a disaster, since neither medication nor rehabilitation are as readily available as before, it is known that health conditions and physical functional status will get worse. Especially in case of evacuation living in shelter or temporary housing is prolonged, these health issues tend to deteriorate. As for living problem, it is difficult for the elderly to return to their former lives because of their

social and economic issues. Results : In Japan, after the Great Hanshin-Awaji Earthquake in 1995, research of the disaster nursing advanced and scientific knowledge about care of elderly victims accumulated. That scientific knowledge was used efficiently in the Great East Japan Earthquake in 2011. Conclusion : In this symposium, I will present a nursing care guideline for elderly victims based on the scientific knowledge related to disaster elderly care gathered from researches in not only Japan but also the rest of the world. Through the discussion at this symposium, this care guideline will be further refined as well as particularly helping participants to prepare to respond in disaster situations. Keywords : disaster nursing, natural disaster, care guideline

SS25 418-S-2

THE ELDERLY IN A DISASTER - THE LONGITUDINAL STUDY OF ELDERLY SURVIVORS' DAILY LIVES AND HEALTH STATUS AFTER SICHUAN EARTHQUAKE

Xiu-ying HU (*West China Nursing School /West China Hospital, Sichuan University, China*)

Introduction : The elderly are particular vulnerable to the adverse affects of disasters. This study aimed to understand the daily lives and health status of elderly survivors in affected areas after Sichuan earthquake, find out the influence factors for the elderly health, and propose corresponding nursing methods based on the problems. Method : The longitudinal investigation started from 2008, conducted 355 elder survivors who aged 60 and over, experiencing Sichuan earthquake and living in temporary housing after the earthquake, without cognition impairment. The main contents of questionnaire included the survivors' socio-demographics, damage of the disaster and the physical and mental health status. The data were analyzed by SPSS 13.0. Results : During the 1st to 4th year, the daily lives of elder survivors changed 88.8%, 72.2%, 72.1% and 70.6%, about their self-rated health, the mean value of IES-R score were respectively 33.1, 24.1, 13.5 and 14.8 ($P < 0.05$); the IES-R rates were found to be 53.8%, 36.6%, 9.2% and 0.5%. It was influenced from greatly to a little by time after the disaster, having unpleasant symptoms, preparation for further disaster, self health, residence before the earthquake, housing damage. Conclusion : The elder survivors' daily lives and health status were clarified during the 1st to 4th year after the earthquake. The study demonstrates the elderly survivors need much more attention on their health, and point out the key points and details of nursing instructions about their daily lives, including disaster-preparedness care, the specific care in different time after disasters and psychological nursing after disasters. Keywords : the elderly, disaster, nursing

SS25 418-S-3

PERCEPTIONS OF THE ELDERLY ON DISASTER PREPAREDNESS IN SOUTH KOREA : FOCUSED ON RURAL AREAS

Myoung Ran YOO (*Nursing Science Department, Armed Forces Nursing Academy, Korea*)

Introduction : Under normal conditions, the elderly need special assistance due to their impaired physical mobility and they take medication for their chronic health conditions. In times of disaster, situation becomes worse because the primary care giver for the elderly person may not fulfill their special needs so the elderly person can be in such poor condition that they might not even survive. It is vital for the elderly to be adequately prepared for disasters. Therefore, this study is to investigate perception of the elderly of what they should do to prepare for a disaster event. Method : Data will be gathered and analyzed by using focus group interview on people who are older than

60 years old and live in rural areas. Results : Nursing interventions will be addressed that can improve the preparedness of the elderly in rural areas. Conclusion : Based on the results of the study, the nursing interventions that can improve the preparedness of the elderly will be identified so that not only care givers but also the elderly themselves can be aware of what they need to prepare for a disaster event. Furthermore, this study can provide the basic data to develop educational program for disaster preparedness of the elderly. Keywords : Disaster, Older people, Disaster preparedness

SS25 419-C
CURRENT STRATEGY ON ORAL REHABILITATION FOR EDENTULOUS PATIENTS

SS25 419-C-1
EDENTULISM AND QUALITY OF LIFE OF EDENTULOUS PATIENTS

Yong-Geun CHOI (*Epidemiology and Biostatistics, EB dental clinic, Korea*)

Introduction : Edentulism is generally considered to be the result of removal of all teeth because of caries and periodontal disease. The ability to chew is not only an important dimension of oral-health-related quality of life, but also it is increasingly recognised that there are connections with general health. The ability to masticate food may affect dietary choices and nutritional intake and have consequences for general health. This may be reflected in generic health-related quality of life. In addition, there is a positive aspect to health, measured through aspects of well-being. These positive life influences may also be influenced by basic biological conditions and related functions such as the ability to chew. The aims of this presentation is to investigate the relationship between tooth loss and chewing ability and their association with oral- and general-health-related quality of life and life Method : Quantitative evidences from systematic studies regarding the quality of life and tooth loss were collected and analyzed. The impact of number of teeth on the quality of life was ascertained. Results : 27.4% of elderly aged more than 65 years old was edentulous. Number of teeth were both significantly associated with oral- health related quality of life. Those with a larger number of missing teeth were more likely to experience poor quality of life (OR=4.0, 95%CI= [2.6-6.3]. for edentate, OR= 3.4 95%CI=[2.4-4.9] for 1-19 teeth holder). Edentulism demonstrated a 40.0% loss in quality of life. Conclusion : Prosthodontic health care should be provided for the impaired oral function that deteriorates the quality of life by 40%. Keywords : edentulism, quality of life, aging population

SS25 419-C-2
RESTORATIVE OPTIONS & TREATMENT PLANNING FOR EDENTULOUS PATIENTS

Kung-Rock KWON (*Dept. of Prosthodontics, School of Dentistry, KyungHee University, Seoul, Korea, Korea*)

Introduction : The number of edentulous persons over 65 in highly industrialized countries is projected to decrease considerably. However although the absolute number of persons over 65 is expected to double by the year 2030, the actual number of those needing treatment with complete dentures will remain almost constant. This means that knowledge and clinical skills in complete dentures prosthodontics will still be important in the next century. Method : Furthermore given that the age of candidates for a first set of complete dentures will increase continuously in the coming years patient's difficulty in developing the necessary levels of neuromuscular skill to manage conventional complete dentures will also increase. To overcome these difficulties

the dentist needs to have great clinical skills and a patient-centered approach. Results : The range of treatment options for a person needing or already wearing complete dentures who requests such treatment includes the following; -Referral for a specialist opinion or treatment -Immediate placement of a complete denture -Modification of existing dentures -Construction of new dentures copied from existing dentures -Placement of a new complete dentures -Placement of implant-supported complete dentures. Conclusion : Before commencing treatment with complete dentures the patient should be examined thoroughly and possible risk factors identified. In addition, a careful examination of existing dentures should be carried out. This examination serves to determine whether prosthodontic treatment should be carried out and if so, which type of treatment might be appropriate. Keywords : edentulous person, complete denture, diagnosis

SS25 419-C-3
MANDIBULAR IMPLANT SUPPORTED OVERDENTURES
Jeong-Yol LEE (*Department of Dentistry(Prosthodontics), Korea University Medical Center, Guro Hospital, Korea*)

Introduction : The restoration of the edentulous mandible with a conventional denture is a much poorer alternative than the use of an implant-supported prosthesis. There is now a large body of evidence that supports the proposal that a two-implant supported mandibular overdenture should be the minimum offered to edentulous patients as a first choice of treatment. This clinical trial is aimed to compare the effect of ball attachments on the treatment outcomes of mandibular implant overdentures. Method : Fifty-one patients from 177 complete denture patients were selected for this study by inclusion and exclusion criteria. The number of subjects who took part in the trial was 40. They received two implants (Simpline II, Dentium, Korea) in mandibular canine region. Two months later after implant placement, randomly assigned 2 ball attachments (Ball attachment of Dentium Co. or Anchor attachment of Straumann AG) were placed on the implants and the respective matrices were incorporated in existing lower complete denture. The following clinical parameters were assessed: 1) implant success rate, 2) peri-implant tissue status, 3) prosthetic maintenance and complications, and 4) patient satisfaction. Results : Implant success rate was 100% at stage II surgery. For implant mobility, ISQ value at implant installation was 78.10±3.370, and 2month later, 78.35±3.02. The data of marginal bone loss, peri-implant tissue status, prosthetic maintenance and complications have been collecting for further evaluation. Conclusion : There were no significant differences of treatment outcome between Ball attachment group and Anchor attachment group in terms of implant success rate, implant mobility, patient satisfaction. Keywords : Edentulism, Mandibular implant overdentures, Ball attachment

SS25 419-C-4
FUTURE DIRECTION OF PROSTHODONTIC REHABILITATION FOR EDENTULOUS PATIENTS
Sang-Wan SHIN (*Department of Prosthodontics, Institute for Clinical Dental Research, Korea University Guro Hospital, Korea*)

Introduction : Edentulous patients can have substantial difficulties using conventional complete dentures and in oral function. Implant-supported prostheses can be accepted as treatment options for edentulous patients recently. However, issue on decision-making on the selection of prostheses is still in debated among clinicians in terms of function, esthetics, patient's satisfaction, and cost efficiency. Literature reviews and a clinical study were undertaken to evaluate current treatment modalities for edentulous patients. Method :

Literature search was conducted by PubMed search strategy and hand-searching of relevant journals considering inclusion and exclusion criteria up to year 2012. RCT and clinical trial studies on prosthodontic rehabilitation for edentulous patients were selected and data on implant survival rate, prosthetic maintenance and complications, patient satisfaction were evaluated. A clinical research on the treatment outcomes of mandibular implant supported overdentures for edentulous patients was conducted at KU Guro Hospital from March, 2011 to March, 2013. Information obtained by the literature reviews and clinical study was evaluated. Results : Literature reviews on mandibular implant overdentures presented a high level of effectiveness and efficacy as a restorative option for edentulous patients. A modern approach utilizing mandibular two-implant supported overdentures to prosthetic treatment of edentulous patients was recommended as the first choice of treatment for edentulous patients at the 2002 McGill Consensus and 2009 York Consensus. In addition, our clinical research on the treatment outcomes of mandibular implant overdentures for edentulous patients confirmed the idea suggested by the consensus. Conclusion : A mandibular two-implant supported overdenture may be suggested as the first of treatment of choice for edentulous patients. Keywords : Mandibular, Implant, Overdentures, Edentulous, Treatment outcome

SS25 424-R

CAREGIVING OF PEOPLE WITH DEMENTIA IN ASIA: PAST, PRESENT AND FUTURE

SS25 424-R-1

CAREGIVERS OF PEOPLE WITH DEMENTIA IN CHINESE COMMUNITIES:A SYSTEMATIC REVIEW OF FINDINGS AND THE WAY AHEAD

Claudia Ky LAI (*School of Nursing, The Hong Kong Polytechnic University, China*)

Introduction : This review intends to identify the relationship between stress management and the quality of life (QOL) of family caregivers of elderly people with dementia in the community among Chinese populations in Asian countries. Method : We searched the literature for the period January 1990 to Dec 2011 in 4 databases (CINAHL, MEDLINE, PSYINFO, and Social Work Abstracts). The articles were defined as relevant when they: (a) were related to the caregivers of people with Alzheimer's disease or dementia; (b) studied informal caregiving in the community; and (c) discussed caregiving experiences, including the concepts of stress and coping and burden and quality of life, but did not address instrument validation. The review of the literature is in progress. The systematic review processes used by the Cochrane Library will be adopted. Results : The studies identified will be classified into three categories: (1) examining Chinese caregivers living in a foreign country as a minority group; (2) comparing Chinese and non-Chinese caregivers with data collected in their respective countries; and (3) studying Chinese caregivers in their country of origin. Conclusion : Studies on caregivers of people with dementia in Chinese communities are a lot fewer than those from Western countries. When considering the Chinese population alone, the findings are quite consistent: caregivers are burdened by their caregiving roles and the behavioural problems of dementia. What needs further attention is the potential impact of specific contexts and the changing culture in particular Chinese countries where assumptions of traditional Chinese values like filial piety and collectivism are becoming less valid. Keywords : Caregiving, Chinese, systematic review

SS25 424-R-2

CAREGIVING OF PEOPLE WITH DEMENTIA IN KOREA: CURRENT ISSUES AND DIRECTIONS FOR FUTURE

Jun-ah SONG (*College of Nursing, Korea University, Korea*)

Introduction : As in other advanced countries, Korea is rapidly approaching the stage of an aged society with an estimation of 20.8% in the number of persons over 65 years of age by 2026. Accordingly, it has been reported that an estimated 703,899 (21.1% of people over 65) Korean elders would be affected by Alzheimer's disease (AD) and other dementias by 2020. Being based on Confucianism, most people with dementia (PWDs) used to be cared for at home by family caregivers, resulting in a lot of burden to the family. Due to changes in family structure, recognition of PWDs, and societal needs for the governmental responsibility on PWD caregiving, a political involvement called "National Long-Term Care Insurance for Elderly" has begun since July, 2008. However, Korean society is still facing many challenges to caregiving of PWDs. Caregiving of PWDs is a multidimensional concept affected by various components such as caregivers' perception, characteristics of PWDs, cost of caregiving, supports from society, and quality of life of both PWDs and caregivers. Method : Therefore, this study was performed to identify recent changes and related issues in caregiving of PWDs in Korea using a systematic review of literature. Results : The following themes were reviewed and discussed: 1) perception and attitude towards dementia and PWDs; 2) caregiving responsibility and burden; 3) management of behavioral psychological symptoms of PWDs; and 4) National Long-Term Care Insurance for Elderly. Conclusion : Findings of this paper would be able to provide valuable information about cross-cultural differences or similarities in caregiving issues of PWDs. Keywords : caregiving, dementia, issues

SS25 424-R-3

CAREGIVER ISSUES FOR PEOPLE WITH DEMENTIA IN MALAYSIA

Philip Jun Hua POI (*Department of Medicine, University Malaya Medical Centre, Malaysia*)

Introduction : There are three main ethnic groups in Malaysia; we studied selected factors of dementia patients and their caregivers that were associated with the burden of being family caregivers. Method : This cross-sectional study involved face-to-face interviews with family caregivers of patients with dementia. Participants were recruited through convenience sampling from geriatric and psychiatry outpatient clinics in three government hospitals, one university hospital, one rural health centre and Alzheimer's Disease caregivers' support groups. Seventy caregivers took part. Measures included patient and caregiver demographic variables and caregiver burden using the Zarit Burden Interview (ZBI). Results : Caregiver burden was found to be significantly associated with both ethnicity and informal support. Chinese caregivers were found to have a higher level of burden compared to Indians and Malays. Informal support, in particular assistance from family members, was significantly associated with a lower perceived burden. The study showed that formal support such as assistance from maids and private nurses did not alleviate caregivers' burden. Results highlighted the importance of improving the coping skills of burdened caregivers, particularly among family members of dementia relatives. Interventions should be tailored to the specific needs of caregivers of different ethnicities. Conclusion : It is important to counsel caregivers to join caregiver support groups, seek assistance from relatives, and access information from easy-to-read leaflets and websites. The paucity of medical and nursing specialists in dementia care, the lack of Alzheimer's support groups and possible reasons for the apathy of family members towards shared care will be discussed.

Keywords : dementia, Malaysia, caregiving

SS25 424-R-4

PERSON-CENTERED CARE FOR THE ELDERLY WITH DEMENTIA: A QUALITATIVE ANALYSIS OF HONG KONG

Vivian W.Q. LOU¹, Xuebing ZHONG², Gemma Kam Chu LAW³
(1. *Social Work & Social Administration, Sau Po Centre on Aging, The University of Hong Kong, Hong Kong*; 2. *Social Work & Social Administration, The University of Hong Kong, Hong Kong*; 3. *Nursing Studies and Health Care, Division of Health and Applied Science, SPACE, The University of Hong Kong, Hong Kong*)

Introduction : The senile dementia population in Hong Kong reached 110,000 in 2010. Dementia care has become a more pressing issue, calling for a scientific and efficient care model to ensure quality of care. Person-centered care (PCC) was developed in response to the need for patient-oriented healthcare service, and has been adopted as a key standard for dementia care in many developed countries. This study aims to achieve a better understanding of stakeholders' attitudes toward PCC, thereby contributing to policy-making. **Method :** A qualitative research method was applied. 14 focus groups and 21 in-depth interviews were conducted among 106 participants who were elderly with mild cognitive impairment (MCI), family caregivers, care workers, and professionals from 17 care units provided by 9 local NGOs. This study adopted a tripartite model of attitude (affective, behavioral, and cognitive) and Brooker's PCC=V+I+P+S model as its theoretical framework. **Results :** Elderly with MCI have strongly negative impressions of care homes, mainly because of the lack of PCC. Family caregivers are willing to provide good quality care, but lack knowledge about PCC, as well as social and psychological support. Formal caregivers have a more pessimistic attitude towards realizing PCC, due to a strained workforce and current policy. Innovative management can help to promote care workers' motivation for practicing PCC. **Conclusion :** Understanding about PCC among both formal and informal caregivers is neither clear nor sufficient. Dementia care provision is limited and inflexible, leaving a big gap in meeting the real needs of elderly people with dementia. Systemic promotion of PCC is urgently in need. **Keywords :** Person-centered care; dementia; caregiver

SS25 425-C

COGNITIVE THERAPY AS A COMPLEMENTARY WAY TO REDUCE FALL RISK

SS25 425-C-1

DO WE NEED A NEW APPROACH TO IMPROVE GAIT AND REDUCE THE RISK OF FALLING IN OLDER ADULTS?

Manuel MONTERO ODASSO (*Gait and Brain Lab, Lawson Health Research Institute, The University of Western Ontario, Canada*)

Until recently, clinicians and researchers have performed gait assessments and cognitive assessments separately when evaluating older adults. Increasing evidence from clinical practice, epidemiological studies, and clinical trials shows that gait and cognition are inter-related in older adults. Quantifiable alterations in gait among older adults are associated with falls, dementia, and disability. At the same time, emerging evidence indicates that early disturbances in cognitive processes such as attention, executive function, and working memory are associated with slower gait and gait instability during single and dual-task testing, and that these cognitive disturbances assist in the prediction of future mobility loss, falls, and progression to dementia. There is evidence that gait assessments can provide a window into the understanding of cognitive function and

dysfunctions, and fall risk in older people in clinical practice. We postulate that the complementary approach for reducing the risk of falls by improving certain aspects of cognition through both non-pharmacological and pharmacological treatments are feasible. Untangling the relationship between early gait disturbances and early cognitive changes may be helpful for identifying older adults at higher risk of experiencing mobility decline, falls and the progression to dementia. **Keywords :** falls, gait, dual-task

SS25 425-C-2

COGNITIVE REMEDIATION TO IMPROVE GAIT AND REDUCE FALLS

Anne Felicia AMBROSE (*Rehabilitation Medicine, Mount Sinai School of Medicine, USA*)

Introduction : Falls are a leading cause of injury and death among older adults and a significant public health issue. Annually it affect one in three adults over the age of 65 and 50% of adults over the age of 80. Falls are a major cause of injury, morbidity, mortality, loss of function and independence. This talk will explore the recent evidence and clinical trials using cognitive therapy to improve attention and executive function to improve mobility and reduce the risk of falling., including the study described below. **Method :** Using a randomized single-blind control design, 24 sedentary older adults (exercise less than or equal to once weekly and gait velocity <1 m/s) were randomly assigned to an 8-week computerized cognitive remediation program or wait-list. Primary outcome was change in gait velocity during normal pace and 'walking while talking' conditions. We also compared the proportion of improvers (velocity change ≥ 4 cm/s) in each group. **Results :** The 10 participants who completed cognitive remediation improved gait velocity from baseline during normal walking (68.2 ± 20.0 vs 76.5 ± 17.9 cm/s, $p = .05$) and walking while talking (36.7 ± 13.5 vs 56.7 ± 20.4 cm/s, $p = .002$). The 10 intervention participants improved gait velocity over the 8-week intervention both during normal walking (change: 8.2 ± 11.4 - 1.3 ± 6.8 cm/s, $p = .10$). **Conclusion :** The findings of this pilot trial are promising and suggest that cognitive remediation may improve mobility in sedentary seniors. **Keywords :** Cognitive Remediations, falls, geriatrics

SS25 425-C-3

DUAL-TASK, MOTOR IMAGERY AND BRAIN IMAGING: DIFFERENT BUT COMPLEMENTARY WAYS TO ASSESS HIGHER LEVELS OF GAIT CONTROL

Cedric ANNWEILER (*Neuroscience and Geriatrics, Angers University Hospital, France*)

Introduction : The central nervous system plays an essential role in walking through two different aspects: first acting in the open-loop control of locomotion by receiving and integrating multiple sensory inputs to produce coordinated movements; and second as being the seat of cognitive higher-levels of motor control to present motor response adapted to environmental constraints. The purpose of this talk is to review different ways to assess the higher levels of gait control. **Method :** Literature review using the Medline database. **Results :** The dual-task paradigm ("walking while talking"), showing that performing an attention task while walking results in the deterioration of gait performance, helped understand that walking, especially in older adults, involves cognitive resources, specifically attention demands. Similarly, motor imagery, which is defined as mentally simulating a given action without actual execution, has demonstrated that age-related gait disorders are not only associated with classic motor disorders in the basal ganglia, cerebellum and primary motor areas, but also with a central misprocessing of information mainly

related to executive dysfunction. Finally, recent neuroimaging studies have reported that age-related gait disorders could be explained not only by subcortical age-related white matter hyperintensities, but also by neurodegeneration and dysfunction of several cortical regions including the frontal, temporal, parietal and motor cortex. Conclusion : Studying the neuroanatomical correlates of higher-level gait disorders can improve the risk assessment of gait disorders and falls, and give rise to new rehabilitative procedures to maintain independence and quality of life in older adults. Keywords : gait control, dual-task, neuroimaging

SS25 425-C-4

THE POTENTIAL OF PHARMACOLOGICAL INTERVENTIONS TO IMPROVE GAIT: WHICH DRUGS FOR WHICH PATIENTS?

Olivier BEAUCHET (*Department Neuroscience, Angers University Hospital, France*)

Introduction : During the past decade increasing evidence have underscored that pharmacological interventions may improve gait and balance in older adults with and without neurodegenerative disease such as Alzheimer's disease and related disorders (ADRD). The purpose of this work was to review the pharmacological-related changes in gait in patients with ADRD. Method : An English Medline search was conducted in June 2012 using the Medical Subject Heading terms 'Gait' AND 'Pharmaceutical Preparations'. Results : Among the 75 found and screened abstracts, it has been found that acetylcholinesterase inhibitors (AChEIs) (i.e., donepezil, galantamine and rivastigimine) and NMDA receptor antagonists (i.e., memantine) may improve gait performance. In particular, a decrease in gait variability (i.e., equivalent to better dynamic stability) has been reported in demented patients using either donepezil or memantine.. AChEIs-related improvement of gait performance has been explained by enhancements of the attention resource allocation involved in gait control. In parallel, memantine-related gait improvement has also been explained by its dopaminergic effect. More recently, it has been reported that the anti-dementia drugs-related beneficial effect depends on the walking condition. Indeed, a significant memantine-related decrease in gait variability under single-task and an AChEIs-related decrease in gait variability under dual-task have been shown in patients with ADRD. Conclusion : All preliminary interventional studies provide a basis of evidence of an improvement related to anti-dementia drugs in patients with ADRD. This evidence needs to be confirm with larger randomized controlled trials. Keywords : Gait, Dementia, drugs, older patients

SS25 426-C

ROLE OF PALLIATIVE CARE IN DYING WITH DEMENTIA

SS25 426-C-1

PALLIATIVE CARE IN DEMENTIA: CONCEPTUAL ISSUES

Jenny T. VAN DER STEEN (*Department of General Practice & Elderly Care Medicine, EMGO Institute for Health and Care Research, VU University Medical Center, Netherlands*)

Introduction : Palliative care in dementia is distinct; dementia is incurable but patients may live years before they die from or with dementia. The presentation focusses on applicability across dementia stages. Method : Two data sources are used: (1) the Dutch End Of Life in Dementia study (DEOLD, 2007-2011) which recruited 372 nursing home residents with variable dementia stages upon admission with prospective follow-up until death (59%), along with 119 residents included retrospectively after death; (2) an international Delphi study

among 64 experts from 23 countries to achieve a set of recommendations about palliative care in dementia for the European Association for Palliative Care (EAPC). Results : Research so far has focussed on the advanced stages. In DEOLD, pain in the last week of life was more common (52% had pain on 2 or more days) than shortness of breath or agitation (both 35%). There was no difference between advanced versus less advanced dementia; neither did cause of death differ (e.g., infections 35% versus 42%). The EAPC definition of palliative care in dementia comprised eleven domains. Almost all (95%) experts agreed that palliative care is important in dementia, but there was controversy on whether it applied to advanced ("severe") dementia "only" (25% agreed), "equally" (51%), or "more" so (64% agreed). Conclusion : Palliative care may address needs in dying with advanced dementia as well as less advanced dementia. Future work should focus on how to give shape to palliative care across dementia stages against the framework of a clear definition of palliative care in dementia. Keywords : dementia, palliative care

SS25 426-C-2

HUNGRY FOR EVIDENCE: THE ISSUE OF ARTIFICIAL NUTRITION AND HYDRATION

Giovanni GAMBASSI (*Internal Medicine - Geriatrics, Università Cattolica, Italy*)

Introduction : An increasing proportion of older adults with Alzheimer's disease or other dementias are now surviving to more advanced stages of the illness. Advanced dementia is associated with feeding problems, including difficulty in swallowing and respiratory diseases. Patients become incompetent to make decisions. As a result, complex situations may arise in which physicians and families decide whether artificial nutrition and hydration is likely to be beneficial for the patient. Method : Systematic review of available evidence. Results: Only observational controlled studies have been conducted and mainly assessing mortality. Overall, there is no evidence of increased survival in patients receiving enteral tube feeding. None of the studies examined QoL and there is no evidence of benefit in terms of nutritional status. More recent studies have documented that most feeding tubes are inserted in an acute care hospital and that insertions are associated with poor survival and significant rate of health care use after insertion. Also, feeding tubes are not associated with prevention or improved healing of a pressure ulcer. Rather, the use of PEG tube is associated with increased risk of pressure ulcers among NH residents with advanced dementia. Conclusion : Despite the very large number of patients receiving this intervention, there is insufficient evidence to suggest that enteral tube feeding is beneficial in patients with advanced dementia. The decision-making process is complicated, however, and involves the clinician considering such issues as advance directives, ethical considerations, legal/financial concerns, emotional factors, cultural background, religious beliefs, and the need for a family meeting incorporating all of these principles. Keywords : Advanced Dementia, Palliative care, Artificial nutrition.

SS25 426-C-3

TREATMENT OF PAIN IN DEMENTIA

Katarzyna WIECZOROWSKA-TOBIS (*Department of Geriatric Medicine and Gerontology, Karol Marcinkowski University of Medical Sciences in Poznan, Poland*)

Introduction : Pain is one of the most important problems in old age, as it decreases the functional status of the subject. Individuals with dementia do not seem to be different in this respect. The aim of the presentation is an analysis of the approach to pain treatment in dementia. Method : The frequency of pain in patients with dementia

has not been studied intensively. It is especially an issue in those who are not able to communicate verbally. Moreover, there is growing evidence that analgetic drugs are underused in these patients. However, it was found in the study on representative population for Poland (PolSenior), that the percentage of subjects treated with opioids was the same in subgroups of cognitively intact individuals and those who had dementia, no matter how severe the dementia was. Results : In patients with dementia, pain needs to be taken into account in those individuals who have acute onset of behavioral or psychiatric problem, as antipsychotic agents are very frequently used in this subpopulation. This raises the question if analgesia should be administered routinely in dementia in case of acute onset of neuropsychiatric problems. Nevertheless, it is obvious that in order to treat pain in individuals with dementia pain must be diagnosed first and subsequently the question about its possible causes should be answered. Conclusion : In conclusion, as the necessary feature to treat pain is to be aware of its presence in first place, education is needed to give the doctors tools for dealing with pain in elderly subjects. Keywords : dementia, palliative care, pain

SS25 426-C-4

JAPANESE SITUATION OF PALLIATIVE CARE IN DEMENTIA: SUGGESTIONS FROM A FAMILY BOOKLET ADAPTATION AND ACCEPTABILITY STUDY

Miharu NAKANISHI (*Research Department, Institute for Health Economics and Policy, Japan*)

Introduction : In Japan, a majority of people dies in hospitals (78.5% in 2011). Persons whose cause of death was Alzheimer's disease, cerebrovascular, or other dementia also frequently die in hospitals (51.0%), or residential facilities (34.1%). Special nursing homes are residential facilities under the public long-term care insurance program, and are the only facilities available for permanent residence for elderly persons. However, half of decedents in special nursing homes (53.4% in September 2010) has been transferred to hospitals in the dying phase. We surveyed staff of special nursing homes to evaluate an adapted Japanese version of an originally Canadian booklet to guide and inform families on palliative care in dementia, and assessed their attitudes towards end-of-life care for residents with dementia in these settings. Method : We adapted the booklet where necessary to the Japanese environment, e.g., regarding legal requirements and adding explanation in view of prevailing ethical principles, retaining guidance on palliative care where possible. An anonymous self-administered paper questionnaire survey was conducted during October-December 2010, using a 1-5 point scale on agreement with 26 statements about the booklet. Among a total of 255 staff members from the 5 homes sampled, 157 members (response rate 61.6%) evaluated the booklet. Results : Evaluations of the revised booklet were unfavorable regarding statements on withholding or stopping medical treatment such as cardiopulmonary resuscitation, intravenous feeding, and tube feeding. Conclusion : The results suggest some culturally sensitive issues on palliative care in dementia compared to Canada, some of which we encountered also in, for example, Italy. Keywords : Dementia, Nursing homes, Palliative care

SS25 427-C

RELATING MUSCLE MASS WITH FUNCTIONAL CAPACITY AND INSULIN RESISTANCE: WHAT IS APPARENT IS NOT ALWAYS REAL

SS25 427-C-1

EXERCISE, BODY COMPOSITION AND GLUCOSE METABOLISM IN OLDER ADULTS

Isabelle J. DIONNE (*Faculte d'education physique et sportive, University of Sherbrooke, Canada*)

Aging is associated with a decline in glucose metabolism, leading to an increased risk of Type 2 diabetes. The age-related gain in fat mass in various compartments likely explains this risk. The Canadian Guidelines for the management of Type 2 diabetes have now proposed physical activity as a first-hand part of the treatment of Type 2 diabetes, supporting the importance of this lifestyle change for body composition and glucose metabolism. This presentation will review the scientific evidence that physical activity participation plays a key role in body composition and glucose metabolism management in older adults. Keywords : glucose metabolism, exercise, type 2 diabetes

SS25 427-C-2

SKELETAL MUSCLE, FUNCTIONAL CAPACITY AND INSULIN SENSITIVITY IN THE ELDERLY.

Mylene AUBERTIN-LEHEUDRE (*Kinesiology, University of Quebec in Montreal (UQAM), Canada*)

Introduction : With the increasing number of seniors, type 2 diabetes and loss of autonomy become two major health concerns. Age related changes in body composition (reduction in muscle mass (MM; sarcopenia) and in muscle strength (MS; dynapenia) are associated with functional capacity and insulin sensitivity. In addition, there is evidence indicating that when combined with obesity, these changes (sarcopenic-obesity and dynapenic-obesity) have worse impact on physical impairments and metabolic disorders. Method : However, controversies exist about the role of MM as predictor of functional incapacities in elderly people. We observed that for the same amount of MM index, dynapenic women had significantly poorer cardio-respiratory functions than non-dynapenic women. In addition, it is still unclear if the loss of MS when combined or not with obesity is associated with an unfavorable metabolic profile. We observed that dynapenic-obese women have a more favourable metabolic profile than non-dynapenic-obese women. Thus, when associated with obesity, dynapenia and sarcopenia seem to have similar effects on the insulinemic profile. Results : Our understanding about these associations is that insulin resistance plays a key role in the development of type 2 diabetes, and in the loss of MM and MS. In addition, aging is associated with loss of muscle type II fibers, which are known to be positively associated with MS and insulin resistance. Conclusion : This presentation will review the scientific evidence that MM and MS play different key roles in regard to functional capacity or insulin sensitivity in elderly people and the potential mechanisms related to these phenomena. Keywords : sarcopenia, dynapenia, aging, functional capacity and metabolic disorders

SS25 427-C-3

BODY COMPOSITION CHANGES AND ITS RELATIONSHIP WITH THE DEVELOPMENT OF INSULIN RESISTANCE IN PARTICIPANTS OF THE NUAGE COHORT

Jose A. MORAIS¹, Joane MATTA², Tamas FULOP³, Isabelle J. DIONNE⁴, Pierrette GAUDREAU⁵ (*1. Division of Geriatric Medicine, McGill University, Canada; 2 School of Dietetics and Human Nutrition, McGill University, Canada; 3. Division of Geriatric Medicine, University of Sherbrooke, Canada; 4. Department of Kinesiology, University of Sherbrooke, Canada; 5. Faculty of Medicine, University of Montreal, Canada*)

Introduction : Aging is associated with a loss of muscle mass and a gain in fat that is centrally distributed. Fat mass has been linked with insulin resistance (IR), and since muscle is the primary site of glucose

disposal, its loss has been proposed to contribute to IR as well. Method: Using non-diabetic participants of the Quebec Longitudinal Study on Nutrition and Successful Aging (NuAge) Study we sought to explore the independent relationships between components of body composition and IR using cross sectional and longitudinal data, while controlling for known covariates, such as energy and protein intake, sex, age, chronic diseases and physical activity. Results : Cross sectional data relating all variables using path analysis revealed that IR as assessed by the HOMA-IR score was associated with both muscle mass index (MMI; kg/m²) and %body fat. Physical activity was associated with lower fat and higher MMI. Protein intake sources affected indirectly and differently the HOMA-IR score through MMI and fat mass since plant protein intake was negatively associated with IR but with MMI as well whereas the reverse holds for animal protein. Longitudinally, using developmental trajectories to determine changes in insulin sensitivity status and logistic regression analyses to determine baseline predictors, we found that the independent predictors of IR were MMI= [OR (95% CI): 1.72 (1.26-2.3)], %body fat [1.18 (1.12-1.25)] and sex [women versus men: 0.15 (0.04-0.45)]. Conclusion : Taken together, these results suggest that both higher muscle mass and % body fat confer increased risks of developing IR with aging, while being a woman is protective. Keywords : insulin resistance; muscle mass; predictors of insulin resistance.

SS25 427-C-4

BLOOD BIOMARKER PROFILE OF INSULIN RESISTANCE IN THE NUAGE COHORT

Pierrette GAUDREAU¹, Tamas FULOP², Jose A MORAIS³
(1. Department of Medicine, University of Montreal and Centre Hospitalier de l'Université de Montreal Research Center, Canada; 2. Department of Medicine, University of Sherbrooke and Institut universitaire de gériatrie de Sherbrooke, Canada; 3. Division of Geriatric Medicine, MUHC-Royal Victoria Hospital and McGill University, Canada)

Introduction : The decrease in physical performance with aging is mediated, at least in part, by changes in body composition and metabolic status including insulin resistance. However, it is still unclear whether or not a blood biomarker signature can predict or characterize these conditions. The objective of this study was therefore to quantify fasting serum levels of glucose, insulin, cholesterol, triglycerides, insulin-like growth factor 1 and binding protein 3, leptin and adiponectin, and markers of inflammatory status such as C reactive protein, tumor necrosis factor-alpha and interleukin 6 in a subset of elderly people of the Quebec NuAge cohort. Method : Biomarkers were measured in 288 participants that were not insulin-resistant (IR) at recruitment in the cohort (year 1) but became (n=96) or not (n=192) IR at year 3. The two groups under study were paired for age and sex. Serum glucose, cholesterol and triglycerides were analyzed in clinical biochemistry laboratories and immunoreactive levels of other biomarkers were quantified in our laboratories. Results: Appropriate data modeling and statistical analyzes is performed to determine whether or not a blood biomarker signature characterizes each group at year 1. Conclusion : Identification of a specific blood signature predicting IR would be of great value to develop pharmacological and/or lifestyle interventions to prevent or reduce the deleterious effects of IR on physical performance decline in aging. This research was supported by the Canadian Institutes of Health Research and the Quebec Network for Research on Aging. Keywords : biomarkers, elderly, cohort study

SS25 502-R

CAREGIVING FOR THE ELDERLY IN ASIA

SS25 502-R-1

EXPECTATIONS ABOUT BEQUEST AND INFORMAL CARE

Young Kyung DO, Kelvin FOO (Program in Health Services and Systems Research, Duke-NUS Graduate Medical School Singapore, Singapore)

Introduction : Although informal care provided to a functionally dependent elderly is oftentimes uncompensated and can be motivated by altruism, individual decisions on informal care may be associated with an exchange motive involving intergenerational transfers between elderly parents and their adult children. Method : This study uses data from the 2006 and 2008 Korea Longitudinal Study of Aging to investigate the relationship between expectations about bequests and informal care, from the perspectives of both parents and adult children. Results : We find that daughters providing informal care to their parents have approximately 30 percentage points higher probability of expecting an inheritance of 100 million Korean Won (approximately USD 88,000) or more compared with those who do not provide care for parents. We also find that elderly parents with a higher expected probability of leaving at least inheritance of 100 million Korean Won are more likely to report that at least one of their adult children will be willing and able to help them with basic daily activities in the future. The associations are statistically significant for non-coresiding parent-child relationships only, not for coresiding ones, suggesting that among those who are currently not coresiding, bequests may influence the behaviors of parents and adult children on informal care. Conclusion : Given the decreasing rates of intergenerational coresidence in South Korea and other Asian countries, bequests and other intergenerational transfers are likely to play an increasingly important role in informal care provision in the future. Keywords : Informal care, Intergenerational transfers, Coresidence

SS25 502-R-2

MODELING DEPRESSION AMONG CAREGIVERS OF OLDER INDIVIDUALS WITH PHYSICAL, COGNITIVE AND BEHAVIORAL DISABILITIES

John Pastor ANSAH, David Bruce MATCHAR (Health Services and Systems Research, Duke-NUS Graduate Medical School, Singapore)

Introduction : Caring for an older person who has physical, cognitive or behavioral disabilities is recognized as a source of burden and distress for family caregivers (Knight 2000). A significant body of literature documents the effects of caregiving on self-reported emotional distress and depression. Our contemporary understanding of caregiver distress is based on the stress and coping theory developed by Lazarus and Folkman and their colleagues (Folkman et al. 1987; Lazarus 1984). However, the stress and coping models of the caregiver depression process that have emerged tend to be static in nature and focus on correlating primary stressors and primary and secondary appraisal to depression outcome (Yates, Tennstedt, and Chang 1999; Malhotra et al. 2012). Understanding how caregiver depression develops over time is difficult to decipher from these static models. In addition, the static nature of the current models makes it difficult to evaluate the potential impact of policies on depression. The purpose is to operationalize the conceptual stress and coping model in a simulation. Method : The depression model presented herein is a deterministic, differential equation type model built using the methodology of system dynamics combining local and expert evidence and insights from previous research. Results : Depression among caregivers is projected to increase as the number of caregivers and care burden increase. Conclusion : The effort will be deemed successful to the extent that the content experts are satisfied that the model expresses their theory with good fidelity and the resulting calculational

model offers outputs deemed useful for policy makers and other stakeholders. Keywords : system dynamics, caregiver depression, singapore

SS25 502-R-3

IMPLICATIONS OF ELDERLY SOMATIC AND MENTAL DETERIORATION ON THE PHYSICAL AND PSYCHOLOGICAL CONDITION OF CAREGIVERS

Trinidad Sarao OSTERIA (*Yuchengco Center, De La Salle University, Philippines*)

Introduction : Population ageing has become a distinctive demographic development in the Philippines. This phenomenon raises a range of economic, political and social concerns. Fertility and mortality declines reflect an increase in elderly dependence. Increasing numbers of women in the labor force, geographic mobility and high incidence of separation and non-marriage strain the family's capacity to care for the aged. These dramatic trends imply that there will be fewer family caregivers. Method : Empirical research on the caregivers of the elderly in selected areas in the Philippines dichotomized family members and domestic helpers. Particular attention is given to their relationship with their elderly wards, the extent of double burden, stressors, adjustments, anxiety, and depression. Caregiver's burden was measured through assessment of anxiety and depression scores of caregivers and elderly. Results : The physical nature of elderly caregiving can be particularly exhausting. Women who care for the elderly with limited mobility are particularly affected. They also suffer from the psychological and emotional demands of caregiving. Depression sets in. This has been reinforced by the different psychological tests on anxiety and depression. (Zarit, ADL, Hamilton) Conclusion : Long term burden, anxiety and stress exhaust the caregivers. It is important for them to stay healthy, be active, and have some along time regularly. One source of stress among caregivers is the lack of knowledge/training about proper elderly care. Training can be provided to equip the caregivers with management of health problems. Keywords : Elderly, caregivers, anxiety

SS25 502-R-4

BEHAVIORAL AND PSYCHOLOGICAL SYMPTOMS AND FUNCTIONAL LIMITATIONS MEDIATE THE ASSOCIATION BETWEEN OLDER PERSON COGNITIVE IMPAIRMENT AND CAREGIVER DEPRESSION

Rahul MALHOTRA, Choy Lye CHEI, Truls ØSTBYE, Angelique CHAN, David Bruce MATCHAR (*Health Services and Systems Research, Duke-National University of Singapore Graduate Medical School, Singapore*)

Introduction : Caregivers of older persons with cognitive impairment (CI), versus caregivers of those without CI, are more likely to be depressed. Behavioral and psychological symptoms of dementia (BPSDs) and functional limitations (FLs) are more common among older persons with CI than those without CI. We assess BPSDs and FLs as mediators of the effect of older person CI on clinically significant depressive symptoms (CSDS) in their caregiver. Method : Data from Singapore for 1,111 older persons (75+ with ≥ 1 activity of daily living(ADL) limitation)-caregiver dyads was used. Caregiver CSDS (yes/no) was based on CES-D Scale score, and older person CI(yes/no) on SPMSQ score or on RMBPC memory-problem subscale score. Older person BPSDs were operationalized through combining RMBPC disruptive-behavior and depression subscale scores, and FLs through OARS ADL score. The causal steps approach was utilized to assess for mediation of the effect of older person CI on caregiver CSDS through the two potential mediators and a bootstrapping

approach for calculating point estimates and significance of the indirect effect. Results : The causal steps approach supported older person BPSDs and FLs as mediators of the effect of older person CI on caregiver CSDS. The bootstrapping approach confirmed both as significant mediators, though BPSDs (indirect effect odds ratio 1.31 [95% bootstrap CI 1.18,1.44]; %mediation:75.0%) was a much stronger mediator relative to FLs (1.05 [1.01,1.11]; %mediation:11.7%). Conclusion : While caring for an older person with CI is detrimental for the caregiver's mood, management of associated BPSDs and FLs among such older persons may reduce depression or depressive symptoms among their caregivers. Keywords: Disruptive behavior; Mediation analysis; Activities of Daily Living

SS25 504-R

COMPARATIVE ANALYSIS ON SOCIAL PARTICIPATION AND HEALTH IN ASIA-PACIFIC REGIONS

SS25 504-R-1

SOCIAL PARTICIPATION AND HEALTH OF KOREAN RETIREES

Yoon Shin KIM (*Institute of Aging Society(IAS), Hanyang University, Korea*)

Introduction : Korea has been undergoing population aging, in a speed unparalleled in world history. Retirement of middle aged bring about change of social structure in social and economic aspects, therefore required to approach various perspective and active aging. Method : The purpose of this research is to determine the appropriate direction for Social Participation and Health of education program for Korean retirees in public and private aspects and to suggest realistic improvement plans. Results : This study has established the following as research topics : Firstly, to review and analyze social participation and health of education program for Korean retirees to identify problems and areas that call for improvement. Secondly, The social participation and health of education program for Korean retirees in public sectors and in private sectors are analyzed separately, especially focusing on retirees education programs of hanyang university in Korea. Conclusion : The implications of this study were as follows : A life-long learning program needs the follow-up management system and rewards for maximizing it's performance after retirement. Second, it needs rewards for maximizing it's performance. It seems to supplementation and development of systematic curriculum for retirement education in different types. Keywords : Social Participation, Health, Retirement Education Program

SS25 504-R-2

SOCIAL PARTICIPATION AND HEALTH OF JAPANESE RETIREES

Masataka KURAOKA (*Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology, Japan*)

The percentage of the population over 65 years of age in Japan is projected to reach 30% in 2024. As costs for medical and long-term care insurance grow, it is vital to prevent disease, provide for long-term care needs, and maximize healthy life expectancy. In 2012, baby-boomers reached 65, and from 2013 continuing employment of people who wish to work after retirement age until age 65 will begin to be required of corporations. In the same year the starting age of pension payouts will be raised to 65. In this political transition, it is a national priority to respond to the vast number of people who continue actively seeking jobs as well as securing their long-term healthy living. The promotion of health for Japanese retirees has been implemented through vitalizing senior's awareness, social participation, and

enhancing promotion of health programs at both national and local government levels. Social participation to enhance the health of Japanese elderly has been promoted through exercise and dementia prevention projects such as cooking and a read-aloud program. Although the proportion of Japanese elderly who have not experienced volunteer activities is high (52%) compared to the US (33%), lifelong learning, volunteer programs and community activities by seniors have become more important. Our research indicates a positive effect of social participation on the participants' health. Social involvement has now become the critical factor in constructing all the social services from employment reference service for the active elderly to long-term care for the frail elderly at facilities. Keywords : Social Participation Japan

SS25 504-R-3

SOCIAL PARTICIPATION AND HEALTH OF USA RETIREES Colette BROWNE (Social Work, University of Hawaii, USA)

This presentation will provide an overview of social participation patterns and their relation to health and health status among varied groups of older adults in the United States of America. The relationship between social participation and health is critical to better understand as poor health, more than most other changes associated with ageing, can lead to reductions in a person's satisfaction and competence in mastering his or her environment. In the USA, the vast majority of older adults hope to "age in place" in their own homes in age-friendly communities that promote social participation, and that offer affordable and accessible health/healthcare information. Based on US Census and other data, we will discuss a number of innovative living arrangements that promote elder friendly and livable communities; among them, naturally occurring retirement communities (NORCs), Assisted Living Facilities, Intentional communities, and others. Keywords : Health

SS25 507-B

VASCULAR AGING II: TRANSLATIONAL RESEARCH TO CLINICAL APPLICATION

SS25 507-B-1

TARGETING INFLAMMATION TO TREAT VASCULAR AGING IN HUMANS

Gary L PIERCE (Health and Human Physiology, University of Iowa, USA)

Introduction : Cardiovascular disease (CVD) remains a major cause of global morbidity and mortality of which older age is a primary risk factor. The increased risk of developing CVD with advancing age in humans has been attributed in large part to two fundamental alterations in arterial structure and function associated with normal aging: 1) stiffening of the large elastic thoracic central arteries (e.g., aorta, carotid), and 2) impaired vascular endothelial function. Method : The mechanisms responsible for these adverse vascular physiological changes with aging are not completely understood, but strong epidemiological and experimental evidence suggests that inflammation and oxidative stress may be common mechanisms that contribute to both. Results : Recent evidence suggests that chronic activation of nuclear factor kappa B (NF κ B), a key proinflammatory transcription factor that regulates expression of hundreds of inflammatory genes, contributes to vascular dysfunction with aging in part related through the development of vascular oxidative stress. We will advance the idea that that vascular NF κ B may be a novel target in the treatment of vascular dysfunction with aging and related co-morbidities such as obesity and prediabetes. We will describe recent pre-clinical (animal

models) and clinical (human studies) evidence that select pharmacological (e.g., salsalate) and lifestyle (e.g., aerobic exercise) strategies prevent or reverse vascular aging in part through inhibition of vascular NF κ B signaling and suppression of oxidative stress. Furthermore, preliminary data on pilot clinical studies using salsalate to treat vascular aging will be discussed. Conclusion : Inflammation may be a novel therapeutic target to treat vascular aging in humans. Keywords : nuclear factor kappa B, oxidative stress, endothelial function, arterial stiffness, exercise

SS25 507-B-2

VASCULAR SENESENCE-RELATED MODIFICATION OF HIGH-DENSITY LIPOPROTEIN FROM ELDERLY: PRO-ATHEROSCLEROTIC AND PRO-SENESCENT PROPERTIES WITH INCREASED CHOLESTEROL INFLUX

Kyung-hyun CHO (School of Bioscience, Yeungnam University, Korea)

Introduction : High-density lipoprotein (HDL) is a strong antioxidant, anti-inflammatory, and anti-senescence molecule. To compare the change in lipoprotein metabolism with vascular aging, we analyzed the lipid and protein compositions of individual lipoprotein fractions. Method : We analyzed the lipid and protein compositions of individual lipoprotein fractions. Healthy and non-obese elderly subjects (elderly group, n=26) had a serum lipid profile within the normal range, although slightly higher than in young subjects (control group, n=18). Results : The elderly group had a 2-fold higher serum uric acid level and triglyceride (TG)/high-density lipoprotein (HDL)-cholesterol ratio. The elderly group had less antioxidant ability and elevated TG content in HDL with enhanced cholesteryl ester transfer activity. An elevated level of advanced glycated end products in lipoproteins and fragmentation of apoA-I were present in the elderly group, with detected lower apoA-I level and more multimerized apoA-I in HDL. The protein levels of apoA-I, apoC-III, and serum amyloid A in lipoprotein-deficient serum were increased in the elderly group. Treatment of human dermal fibroblasts (HDFs) and macrophages with elderly-HDL caused more severe cellular senescence and foam cell formation, respectively; however, treatment with HDL from a young group (Y-HDL) and native apoA-I (nA-I) suppressed senescence and atherosclerosis. Conclusion : In conclusion, E-HDL and glycated apoA-I-rHDL share similar physiologic properties in macrophages and HDFs. They exacerbated cellular senescence and atherosclerosis with increased cellular cholesterol influx. Keywords : high-density lipoproteins, apolipoprotein A-I, glycation, senescence, vascular aging

SS25 507-B-3

TELOMERE BIOLOGY IN CARDIOVASCULAR DISEASE - AN UPDATE 2013

Peter M. NILSSON (Clinical Sciences, Malmo, Lund University, Sweden)

Introduction : Telomeres are protecting the end of the DNA helix between cell divisions. With every cell division the telomere tends to shorten and therefore telomere length (TL) has been regarded as a marker of biological ageing. TL is also determined by enzymatic activity of the enzyme telomerase against a background of genetic programming. Method : A literature search has been carried out to search for publications on telomere and TL in relation to cardiovascular (CVD) and coronary heart disease (CHD), as well as hypertension and diabetes until December 2012. Results : A number of cross-sectional studies have documented an association between shorter TL and early onset manifestations of CVD, CHD and type 2 diabetes complications. Prospective studies have shown a shortening

of TL in most studies with repeated measurement, and an association between TL at baseline and predictive risk of CHD, as well as nephropatic complications to type 1 diabetes. Some paradoxical findings have been published, for example that left ventricular hypertrophy, being a marker of target organ damage and elevated risk in hypertensives, is associated with longer TL and not shorter. The influence of cardiovascular drugs on TL is not well studied. In the LIFE study in hypertensives there was no effect of losartan or atenolol on changes in TL, but in the WOSCOP study pravastatin therapy protected men with hyperlipidemia from future CHD. Conclusion : Telomere biology is complicated and even if there are numerous findings to support the concept of early cardiovascular ageing in risk patients we still do not know the exact mechanisms. Keywords : Cardiovascular, Coronary, Telomere

SS25 507-B-4

APPLICATION OF STEM CELLS IN AGE-RELATED VASCULAR DISEASE

Hyo Soo KIM (*Seoul National University, Korea*)

No Abstract

SS25 508-R

NEW MODELS OF HOME AND COMMUNITY CARE. REQUIREMENTS AND APPROACHES

SS25 508-R-1

HEALTH PROMOTION IN LONG TERM-CARE

Annett HORN¹, Doris SCHAEFFER² (*1. Health sciences research and nursing research, University of Bielefeld, Germany; 2. Health services research and nursing research, University of Bielefeld, Germany*)

Introduction : In order to meet the challenges that result from demographic changes and influence particular the Long Term-Care (LTC) setting, new concepts for preventing loss of independence are required - concepts which can be applied early in the course of a chronic illness instead of later, when loss of function has already begun. Method : An explorative study was carried out to find out if this demand is taken into account in practice. For this purpose 14 interviews with General Practitioners (GPs) and 12 expert interviews with nurses working in home care services in the OWL (Ostwestfalen-Lippe) region of Germany were carried out and analyzed. Results : The results show on the one side the large extent to which chronic illnesses and multimorbidity dominate the work of the GPs and the work in home care settings. On the other side they demonstrate that finding ways to prevent loss of independence has become more important than ever. Conclusion : The potentials preventive and health promoting approaches hold for the rising number of older people are rarely seen and picked up in practice. In the future, more efforts have to be taken to develop concepts and competences and there is a need for qualification of nursing personnel as well as GPs. Keywords : Health Promotion, Long Term-Care, Expert Interviews

SS25 508-R-2

HOME CARE OF ELDERLY IMMIGRANTS - SITUATION AND PERSPECTIVES IN GERMANY

Elke OLBERMANN¹, Gerhard NAEGELE² (*1. University of Dortmund, Institute of Gerontology, Germany; 2. Institute of Gerontology, TU Dortmund University, Germany*)

Introduction : Older People with migration background are the group with the highest growth rate in German society and the number of

elderly immigrants in need of care is rapidly increasing. With this development, the migrant families and the German health and social care system are facing many challenges on how to provide care. While home care is the most common type of elderly care, the knowledge base about the situation of home care of older migrants in Germany is rather low. Method : An analysis of research findings and model projects was conducted to gain an overview on the situation of home care of older migrants in Germany, to identify problems as well as good practice. Results : Immigrant elderly show a lower use of home care services. There are diverse barriers for access to professional help and offers in need of care especially for people with a migration background. But there are also approaches and innovative intervention strategies to improve access to health and social care system and to enhance the quality of life of older migrants in need of care and their relatives who provide care. Conclusion : Special efforts of care providers and policy makers are necessary to develop a home care system with respect to the needs of older migrants and their family caregivers. Interventions should include the provision of culturally sensitive care services and the empowerment of older migrants and their relatives. Keywords : older migrants, home care

SS25 508-R-3

HOME AND COMMUNITY CARE IN RURAL REGIONS - MODELS AND APPROACHES IN CANADA AND FINLAND

Kerstin HAEMEL¹, Doris SCHAEFFER² (*1. Institute of Nursing Science, Bielefeld University, Germany; 2. Public Health Nursing & Health Sciences Research, Bielefeld University, Germany*)

Introduction : Rural regions are concerned with fast aging population, but access to health and social care is still underdeveloped. Specific conditions in rural settings, like sparse population density, wide distances, less differentiated care structures and higher concerns with health professional shortage are challenging the implementation of aging in place strategies. The research project "Rural care models - An international perspective" focuses on developments in Canada and Finland: countries with extensive rural areas and a strong policy focus on home and community care. Method : In the first phase of the project semi-structured interviews with rural health care experts in Canada and Finland were conducted to identify recent developments, problems as well as innovative models. To explore selected models, field visits and interviews with health care planners and providers were undertaken. Results : Different care models are implemented in both countries alongside different state/regional health systems. Examples of selected models and their contributions to strengthening home and community care will be outlined. Beyond the differences in services provided, scope, and functioning of the models there are recurring elements in addressing the health needs of elderly people living in their homes and communities; that are fostering continuity of care, building interprofessional teams, shaping new and extended professional roles, and cultivation of community partnerships. Conclusion : The models show common elements, but there is no single one-fits-all approach. Care models have to be adaptable to established community care structures and cultures. Community health assessments can be a key approach providing a systematic development. Keywords : rural regions, home and community care, community health

SS25 508-R-4

EVALUATING SERVICE NETWORKS FOR PEOPLE WITH DEMENTIA AND THEIR INFORMAL CAREGIVERS: THE "EVIDENT"-PROJECT

Monika REICHERT (*Institute of Sociology, University TU Dortmund, Germany*)

Introduction : In an ageing society efficacy of care provision and other outpatient support services for people with dementia and their informal caregivers is of particular importance. Against this background, the project "EVIDENT" (funded by the German Ministry of Health) aimed to evaluate the work of six dementia care networks in Germany. The principal purpose of these dementia care networks - which were regarded as 'good practice' - was to decrease the fragmentation of community based services by linking the different parts of dementia care supply (e.g., medical and nursing services, consultation, self help.) **Method :** Six case studies were conducted to document structure and processes of each network and analyse facilitators for and barriers to the development and functioning of dementia networks. Data refer to the institutional and individual drivers for participating in networks, the development of networks in community care systems, the conditions necessary for success and sustainability, and the restrictions of networks referring to institutional and financial framework. **Results:** Results show, for example, that dementia networks have to be adapted to the regional parameters, case management has to be developed more systematically and family doctors and other medical specialists have to be included into the networks more strongly. **Conclusion :** To overcome fragmentation in dementia care supply and to increase the service use by informal carers different actions and actors are necessary. In this connection an important role can be attributed to the local community, which, however, has to be supported by an efficient national care policy. **Keywords :** dementia care services, networks, evaluation,

SS25 509-C

PROMOTING HEALTHY AGING IN THE COMMUNITY: EAST ASIAN PERSPECTIVES

SS25 509-C-1

CHANGES IN PHYSICAL ACTIVITY LEVEL AND COGNITIVE DECLINE IN OLDER KOREAN ADULTS

Yunhwan LEE (*Dept. of Preventive Medicine and Public Health; Institute on Aging, Ajou University School of Medicine; Ajou University Medical Center, Korea*)

Introduction : Physical activity in late life may be beneficial in maintaining cognitive health. This study examined the association between changes in physical activity levels and cognitive decline in community-dwelling older people. **Method :** Data were from the Korean Longitudinal Study of Aging, with participants aged ≥ 65 years interviewed at baseline (2006) and 2-year follow-up ($n=3,511$). Cognitive decline was defined as below -1.96 on the Reliable Change Index of the Mini-Mental State Examination. Physical activity level was categorized as sedentary (0: 0 min/week), low (1: 1-149 min/week) and recommended (2: ≥ 150 min/week). Changes in physical activity levels were classified into active (1 to 1, 2 to 2), increaser (0 to 1, 0 to 2, 1 to 2), inactive (0 to 0), and decreaser (2 to 1, 2 to 0, 1 to 0). Logistic regression was used to analyze the influence of changes in physical activity on cognitive decline. **Results :** Overall, 7.3% of the participants had a reliable deterioration in cognitive function during the interval. The decreaser showed the highest percentage of cognitive decline (9.8%), followed by inactive (7.5%), increaser (6.8%), and active (4.5%). Compared with the active group, the inactive (odds ratio [OR] = 1.75, 95% confidence interval [CI]: 1.00-3.02) and decreaser (OR=1.98, 95% CI: 1.14-3.46) demonstrated a significantly higher likelihood of cognitive decline, adjusting for sociodemographics and health-related covariates. **Conclusion :** Among older adults, reduced levels of physical activity were associated with an elevated risk of cognitive decline. Maintaining physical activity in later life may be protective against cognitive decline. **Keywords :** cognition, physical activity, longitudinal studies

SS25 509-C-2

ASSOCIATION BETWEEN URINARY INCONTINENCE AND PAIN IN COMMUNITY-DWELLING ELDERLY WOMEN

Hunkyung KIM (*Epidemiology, Tokyo Metropolitan Institute of Gerontology, Japan*)

Introduction : Urinary incontinence and pain are common problems experienced by elderly people, and chronic pain has been associated with mobility limitations, and future dependence in activities of daily living. The aim of this study was to explore the relationship between urinary incontinence and pain in elderly community-dwelling Japanese women. **Method :** Subjects included 1,399 women aged 75 or older who participated in a comprehensive health examination including a face-to-face interview and physical fitness tests. To evaluate the relationship between urinary incontinence and pain, urinary incontinence was defined as those who experienced urine leakage episodes more than once a week. **Results :** The prevalence of urinary incontinence was 18.5%. The subjects with urinary incontinence were significantly older, heavier, had higher fat mass, lower level of walking ability and balance function, were more likely to report osteoarthritis (OA) and greater levels of pain. The prevalence of urinary incontinence was significantly higher in subjects with pain (21.9%) than without pain (12.5%; $p<0.001$). The most common pain sites were in the lower back and knee. Urinary incontinence was significantly associated with age (odd ratio(OR)=1.08, 95% confidence interval (CI)=1.03-1.14), usual walking speed (OR=0.37, 95%CI=0.21-0.64), fat mass (OR=1.05, 95%CI=1.02-1.09), OA history (OR=2.38, 95%CI=1.06-5.16), and lower back pain (OR=1.56, 95%CI=1.11-2.22). **Conclusion :** Urinary incontinence was significantly associated with lower back pain and OA history. Our data suggest that elderly women who have urinary incontinence should have a multifactorial risk assessment that includes a pain and/or OA history assessment. **Keywords :** urinary incontinence, lower back pain, elderly women

SS25 509-C-3

INTERVENTION TRIAL FOR PREVENTION OF COGNITIVE DECLINE AMONG THE COMMUNITY ELDERLY IN JAPAN

Takao SUZUKI¹, Daisuku YOSHIDA², Hyuma MAKISAKO², Hyuntae PARK², Sangyoon LEE², Hiroyuki SHIMADA² (*1. Director, National Center for Geriatrics and Gerontology (NCGG), Japan; 2. Independent Support for Elderly, NCGG, Japan*)

Introduction : Population-based studies in older adults performed in North America, Europe, and Asia report a prevalence of mild cognitive impairment (MCI) ranging from 11% to 17%, and a prevalence of the amnesic MCI (aMCI) subtype between 3 and 5%. Epidemiological data suggests that moderate exercise and physical activity are associated with a lower risk of dementia including AD. We conducted the randomized controlled trial to examine the effects of a multicomponent exercise program on the cognitive function of older adults with aMCI. **Method :** Subjects were the fifty older adults with aMCI ranging in age from 65 to 93 years (mean 75). These subjects were randomized into either a multicomponent exercise ($n=25$) or an education control group ($n=25$). The intervention group had exercise including aerobic muscle strength training using multiple conditions to stimulate cognitive functions for 90 min/d, 2d/w, for a total of 80 times over 12 months. Measurements from both physical and mental tests were administered before, after the 6-month, and after the 12-month intervention period. **Results :** The mean adherence to the exercise program was about 80%. Improvements of cognitive function following multicomponent exercise were significantly increased at treatment end such as MMSE ($p=0.04$), logical memory of immediate

recall ($p=0.03$), and letter verbal fluency test ($p=0.02$). Conclusion : This study indicates that exercise improves or supports, at least partly, cognitive performance in older adults with aMCI. Keywords : MCI, RCT, Japan

SS25 509-C-4

INTERGENERATIONAL LEARNING SERVICE PROGRAM FOR ELDERLY HEALTH PROMOTION

Jin-jong CHEN (*Department of Physical Therapy and Assistive Techn, National Yang-Ming University, Taiwan*)

Introduction : This IGSL program, in cooperation with the Community College of Beitou, was approved and financially supported by the Ministry of Education, Taiwan Government to meet the demand for intelligent life for elderly, and to promote smart health care technology in medical education system. Method : The IGSL is divided into two stages: (1) before the midterm(preparing stage) - to complete the basic knowledge, theories and techniques of teaching, including: physical activity epidemiology, basic exercise physiology, sports injury prevention, health physical fitness test, exercise and chronic disease, exercise and aging, exercise prescription, USB digital pedometer / scales / sphygmomanometer health management technology; (2) after midterms(practical stage) ? to make a cooperative internship arrangements with the Community College for students. Results : Learning achievement assessment included: midterm (30%), class participation (40%) and case studies (30%). Class participation included attendance rate, the amount of physical activity and physical fitness maintained or improved of students themselves. Case studies, including oral and written reports, focused on the reflection of the learning process of their own services, as well as suggestions for community elderly care. By providing opportunities for students through practical problem-solving process and knowledge integration, students can experience the true wisdom of health medical care, and fostering the sense of responsibility of the young people to the elderly. Conclusion : By the implementation of the case studies to deepen the connotation of service-learning courses, this IGSL program do promote university students actively participate in social and national affairs to the life of the late elderly care and learning needs. Keywords: medical education, service-learning, elderly

SS25 510-R

AGEING IN CHINA: CHALLENGES AND OPPORTUNITIES

SS25 510-R-1

HEALTH CARE REFORM IN CHINA: WILL IT MEET THE NEEDS OF AN AGEING POPULATION?

Colette BROWNING¹, Tuohong ZHANG² (*1. School of Primary Health Care, Monash University, Australia; 2. Department of Health Policy and Management, Peking University, China*)

Introduction : By 2011 the number of people aged 60 years and over living in China reached 165 million. The rate of increase in the older population is three times that of the overall population increase and compared to developed countries the rate of population ageing is occurring at a much higher rate. This demographic change is occurring in the context of lower economic prosperity compared to other countries that have undergone this transition. China is now facing the challenge of increasing pressures on the health system. Method : This paper presents an overview of the health and disability issues for older people in China and a policy analysis of current health care reforms in China to address these issues with a focus on primary health care reforms. Results : The most common chronic conditions for older people in China are hypertension, cerebrovascular disease, hearing

loss, coronary heart disease, osteoarthritis, cataract, type 2 diabetes, and chronic bronchitis. The current reforms are focussed on chronic illness management in community settings and the training of doctors and nurses to deliver patient centred care. Conclusion : New approaches in primary care in China have the potential to deliver high quality services to older people to promote healthy ageing. However significant investment in the training of health care professionals in patient centred care and chronic illness management is required. Keywords : China, health care reforms

SS25 510-R-2

FUNDING RETIREMENT IN CHINA

Hui YANG (*School of Primary Health Care, Monash University, Australia*)

Introduction : Our qualitative studies in China have shown that having sufficient financial support is an important determinant of health ageing. The aim of this presentation is to explore the challenges of pension and social security reform in China. Social security for older people in China is a high priority on the political agenda. Fair and equitable pension schemes as well as medical insurance schemes are needed to promote quality of life in old age. Method : We will use China Family Panel Study data to explore older people's financial security and will review current policy reforms in the provision of retirement income in China. Results : 81.6% of Chinese retirees have an annual income below 7,500 Chinese Yuan (approximately 1,200 US\$). Those living in developing regions have lower income than retirees in developed areas and rural older people have significant lower income than urban older people. Older women are more disadvantaged financially than men. Major sources of income for older urban people are 'retirement pensions' while major sources of income for older rural people are family support or labour income. Given that on average 11% of a person's income in China is used for medical care and older people will spend more than the average, financial security is critical for older people to maintain and improve their quality of life and their health. Conclusion : Chinese retirees will face more difficulty in having sufficient income, as a consequence of a rapidly ageing population, insufficient social welfare and reduction of family size due to the one child policy. Keywords : retirement schemes, rural, urban

SS25 510-R-3

VILLAGE SUSTAINABILITY AND SUBJECTIVE WELL-BEING OF THE RURAL CHINESE ELDERLY: A MULTILEVEL ANALYSIS USING THE CHARLS PILOT DATA

Dale Elgert YEATTS¹, Cynthia M. CREADY¹, Xiaomei PEP², Yuying SHEN³, Hao LUO² (*1. Sociology, University of North Texas, USA; 2. Sociology, Tsinghua University, China; 3. Sociology, Texas Tech University, USA*)

Introduction : The purpose of this study was to examine the relationship between characteristics associated with a sustainable village/community and the well-being of the rural Chinese elderly. Research suggests that environmental, economic, and social characteristics of the community/village affect the well-being of the elderly. Method : Data collected from the Chinese Health and Retirement Longitudinal Survey (CHARLS) Pilot Study were used to examine the relationship between (1) well-being of the Chinese rural elderly (measured as happiness, depressive symptoms, hopefulness) and (2) characteristics associated with a sustainable village/community. Villagers from a low-income province (Gansu) and a wealthy province (Zhejiang) were surveyed. The data were analyzed using multilevel regression models. Results : Factors

associated with higher happiness included better health, being married, and having the perception that help was available if needed. Factors associated with higher depressive symptoms included worse health, more rainy days, living in a village with lower per capita net income, not being married, having the perception that help was not available if needed, and living in Gansu. Higher hopefulness was associated with better health, a perception that help was available if needed, and more rainy days. Conclusion : An examination of the data does provide some support for the proposition that the characteristics associated with a sustainable village affect the well-being of the elderly. One economic, one environmental, and two social variables were found to be important. More research is needed to further clarify the relationship between the characteristics that support a community's/village's sustainability and the well-being of the elderly. Keywords : sustainability, elderly, Chinese, village, community

SS25 510-R-4

OLD AGE SECURITY AND SOCIAL STRATIFICATION AMONG AGED CHINESE

Xiaomei PEI¹, Hao LUO¹, Dale YEATTS² (1. *Sociology, Tsinghua University, China*; 2. *Sociology, University of North Texas, USA*)

Introduction : This paper is concerned with the distributive function of the old age security system in China and its impact on social stratification of the aged Chinese population. Method : A review of the development of old age security system in the context of the social transition in modern China outlines the demographic, economic, politic as well as cultural forces shaping this development. The review is followed by a presentation of the data available on the distribution of social security benefits among the aged Chinese. Using data collected from a large sample, the relationship between social security benefit and pre-retirement occupation has been investigated. Results : It has been found that wide gaps in old age security benefit status exist among the aged population and the reform of the system from work unit retirement pension program to social insurance program reinforced the gaps. Conclusion : The findings imply that changes in social policies on old age security during the economic transition period may well serve as mechanisms for income stratification among the aged Chinese population. Keywords : pension, stratification, market transition

SS25 514-S

A NEW HORIZON FOR CAREGIVER SUPPORT

SS25 514-S-1

CAREGIVING AND SOCIAL RELATIONS IN THE LEBANESE CONTEXT

Toni ANTONUCCI¹, Kristine AJROUCH², Sawsan ABDULRAHIM³ (1. *Institute for Social Research, University of Michigan, USA*; 2. *Sociology, Eastern Michigan University, USA*; 3. *Health Sciences, American University, Beirut, Lebanon*)

Introduction : In this paper we document experiences of caregiving by age in Lebanon, and also explore whether social relations matter in the context of caregiver stress. Method : We use data from the Lebanon Family Relations and Aging Study (Ajrouch, Antonucci, & Aldulrahim, 2009) which included interviews with 500 community dwelling adults. Results : Regression analyses indicate that high positive quality relations predict less stress while high negative quality relations predict low satisfaction with the care giving experience. A curvilinear link is found so that both low and high levels of positive and negative social relations predict higher depressive symptoms among those 60+, but not among these in middle age (40-59).

Conclusion : Findings illustrate the prominence of care giving and the differential effects of social relations on well-being by age. Keywords: caregiving, social relations, Lebanon

SS25 514-S-2

ROLE CONFLICT AND ITS LINKAGE TO MARITAL QUALITY OF WORKING WOMEN CARING FOR AN ELDERLY PARENT

Dafna HALPERIN¹, Ruth KATZ², Ariela LOWENSTEIN³

(1. *Health Services Management, Yezreel Valley College, Emek Yezreel, Israel*; 2. *Human Services, Yezreel Valley College, Emek Yezreel & University of Haifa, Haifa, Israel*; 3. *President, Yezreel Valley College, Emek Yezreel & University of Haifa, Haifa, Israel*)

Introduction : The purpose of this research was to examine the relationship between role conflict, stress, husband's support and marital quality of working women caring for an elderly parent. Today, many women, especially in midlife, are holding simultaneously multiple roles like mother, wife and employee. With the increase in the aging population, the caregiving role for an elderly parent is added to the woman's multiple roles. According to role theory, role conflict and role stress may result from this situation. How does the husband's support impact woman's ability to cope with the caregiving role and what are the linkages to her marital quality. Method : one hundred employed married women, caring for a dependent elderly parent, at least four hours per week, were interviewed face to face. The structured questionnaire included the following areas: care burden, work-family conflict, work-care conflict, marital quality and husband's support. Additionally, a short qualitative interview was conducted with 10 women. Results : Women who are holding the caregiving role in addition to their other roles, experienced stress feelings resulting from role strain and interrole conflict. Work and caregiving hours were directly positively correlated with the level of conflict. In addition, the overall stress feelings had a negative correlation with marital quality. On the other hand, husband's support was partially mediating between the overall stress feelings and marital quality. Conclusion : The results are discussed using role theory and previous research findings. Practice implications are suggested. Keywords : Caregiving, Role-conflict, Marital-quality

SS25 514-S-3

BEHIND THE SCENES: FAMILY SUPPORT FOR CAREGIVERS AND ELDERERS WITH MCI

Rosemary BLIESZNER, Karen A. ROBERTO, Nancy BROSSOIE (Center for Gerontology, Virginia Tech, USA)

Introduction : Although persons with mild cognitive impairment (MCI) do not display symptoms as severe as those with dementia, research shows that early memory loss can cause worry and frustration among diagnosed persons and their care partners. This longitudinal study examines coping strategies employed by elders with MCI and their care partners as well as sources of support for them as they manage the role shifts and uncertainties associated with MCI. We also look at changes over time in symptoms, coping, and support. Method : In-depth interviews were conducted with 125 family triads including the old person with MCI, the primary care partner (usually the spouse), and a secondary care partner (usually an adult child) shortly after diagnosis, 1 year later, and 2 years later. Results : Many social network members do not understand early memory loss. Secondary care partners varied in the extent to which they acknowledged the existence of MCI and in the types and amount of support they provided those with MCI and the primary care partners. Likewise, friends, neighbors, extended kin, church members, and professionals

furnished varying types and amounts of assistance. Support was most effective when it provided brief respite for primary care partners and reduced their worry about monitoring the person with MCI. Conclusion : Families dealing with MCI need ongoing support from social network members and professionals to sustain their ability to cope effectively with the uncertainties of early memory loss. Professionals should make information about MCI available and empower primary care partners to seek needed support from their networks. Keywords : mild cognitive impairment

SS25 514-S-4

CARING FOR PEOPLE WITH DEMENTIA: DIRECT CARE WORKERS IN ASSISTED LIVING

Dena SHENK (*Anthropology, University of North Carolina at Charlotte, USA*)

Introduction : Few studies explore the attitudes and views of direct care workers (DCW) who provide care for older adults with dementia in long-term care communities. This paper is based on the narratives and interview responses of twenty caregivers identified as the “best” caregivers in an assisted living community and a special care assisted living community for people with dementia in the southeast U.S. Method : Videotaped interviews and observation with fifteen caregivers were conducted from June 2006 through January 2007 and the remaining five were conducted in August 2008. Their words are used to provide insight into their social and personal identities as dedicated caregivers. Results : In their caregiving narratives, the direct care workers generally portray themselves not only as the ones providing care, but as the ones capable of moral agency and responsible behavior. The direct care workers, at the bottom of the assisted living community’s hierarchy in their jobs as resident assistants and med techs, see themselves as holding power and total responsibility for the residents in their care. Conclusion : This perception of agency allows the caregivers to find meaning in their work and counteracts their powerlessness in other aspects of their lives. This paper provides analysis of their perceptions of agency of themselves and as a force of agency for the elders for whom they provide care. Keywords : direct care workers, caregiving, dementia

SS25 516-R

ASSESSMENT ACROSS THE HOSPITAL CONTINUUM: THE INTERRAI MINI-SUITE FOR ACUTE CARE

SS25 516-R-1

THE INTERRAI HOSPITAL MINI-SUITE: OVERVIEW

Leonard C. GRAY (*Centre for Research in Geriatric Medicine, The University of Queensland, Australia*)

Introduction : Many older people experience a series of care episodes when they are hospitalized. Multiple sequential assessments may be required in the emergency department, acute and post-acute care settings and in the community after discharge from hospital. Harmonisation of assessment processes across this continuum is likely to improve efficiency and continuity of care. Method : The interRAI Network of Excellence in Acute Care is developing a “mini-suite” of assessment tools to serve the requirements of older people as they progress through the hospital continuum. Results : Four assessment systems have been developed, pertaining to the Emergency Department (interRAI ED); Acute Care (interRAI AC); Post-Acute inpatient Care (interRAI PAC); and Post Acute home Care (interRAI HC). These instruments share a core set of common clinical observations, and a set of “severity measures” that enable comparison with pre-morbid status and monitoring of progress across the

continuum of care. In addition, each instrument has its own unique set of diagnostic screeners, risk assessment tools, clinical protocols and quality indicators. Strategies to evaluate the psychometric properties of the clinical observations and the derivative “applications” is an ongoing process, which is well advanced. Conclusion : The interRAI Hospital Mini-Suite represents a “whole-of-episode” clinical information system for older people, which links strongly to other institutional and community systems developed by interRAI. It enables comprehensive assessment capability across settings without losing context sensitive functions offered by conventional tools. Keywords : Assessment; System; Care

SS25 516-R-2

GERIATRIC CASE FINDING AND ASSESSMENT IN THE EMERGENCY DEPARTMENT

Andrew P COSTA¹, Len GRAY², John P HIRDES³ (*1. School of Public Health and Health Systems; Department of Medicine, University of Waterloo; McMaster University, Canada; 2. Centre for Research in Geriatric Medicine & Centre for Online Health, The University of Queensland, Australia; 3. School of Public Health and Health Systems, University of Waterloo, Canada*)

Introduction : Studies have shown that emergency departments (EDs) are relatively ineffective at identifying common geriatric conditions and symptoms. Despite the fact that early identification and intervention has potential to prevent post-discharge adverse events, the screening and assessment of older ED patients remains limited. This presentation addresses the development and validation of a geriatric screener as well as risk measures for an existing geriatric ED assessment instrument. Method : A prospective cohort study was conducted with ED patients age 75 and older in 8 Canadian ED sites (N=2,101). A 90-day disposition was collected for all patients, including: death, hospital discharge, length or stay, and repeat hospital utilization. Decision tree models for adverse outcomes 90 days post ED discharge were identified using patient characteristics. The Canadian study occurred concurrently with parallel studies in six countries: Australia, Belgium, Germany, Iceland, India, and Sweden (N=1,750). Results : Findings show that disease-based and episodic models of emergency screening do not adequately capture important geriatric risk factors in the ED. The risk of adverse outcomes amongst older adults in ED is accurately measured with a geriatric screening tool, the interRAI ED Screener. Also, scalar measures from a focused geriatric assessment, the interRAI ED, provide for a more accurate determination of risk and need for follow-up with specialized geriatric services. Conclusion : Older adults in ED have medical and psychosocial challenges that could benefit from a more comprehensive screening and assessment protocol. The use of geriatric screening and assessment in the ED to advance referral decision-making is an essential strategy for improving patient outcomes. Keywords : emergency department, screening

SS25 516-R-3

QUALITY INDICATORS FOR CARE OF OLDER PEOPLE IN ACUTE CARE

Melinda MARTIN-KHAN, Leonard C. GRAY (*Centre for Research in Geriatric Medicine, The University of Queensland, Australia*)

Introduction : Measuring quality of care and providing feedback to clinical staff and other relevant stakeholders is an important aspect of improving care outcomes. This process relies on information being provided in a timely manner - challenging when the audit process is an ‘add-on’ data collection task. The development of quality indicators, based on patient outcomes and derived from clinical data collected at

the bedside, ensures meaningful information is available to support improvements in care practice. Quality indicators have been developed and adopted for the interRAI Acute Care (AC) assessment tool, which is one of the interRAI mini-suite of assessment tools. Method : A research team and expert panel was convened. Following a review of the scientific and gray literature, the expert panel developed a list of potential indicators. Field work results (9 hospitals; 645 patients) were presented to the expert panel at a second meeting where indicators were refined or rejected as unsuitable. Following voting, using the RAND/UCLA methodology, a final set of indicators was recommended. Results : The Outcome Indicator set includes 9 indicators relating to core geriatric issues. Topics include: catheter use at admission; falls; decline in mobility or functioning during the acute stay; presence of delirium at discharge; pressure ulcers; and pain management. Two final indicators relate to length of stay in hospital and patients newly discharged to residential care. Conclusion : Implementation of AC Quality Indicators within the interRAI AC assessment system enables patient outcomes to be derived directly from data that is routinely collected in the process of providing patient care. Keywords : Quality of Key, Acute Care, interRAI

SS25 516-R-4

IMPLEMENTATION OF AN EHEALTH SYSTEM INCORPORATING THE INTERRAI SUITE: OPPORTUNITIES AND CHALLENGES FOR HOSPITALS

Nathalie Isabelle Helena WELLENS¹, Els DEVRIENDT¹, Philip MOONS¹, Johan FLAMAING², Anja DECLERCQ³, Koen MILISEN⁴ (1. Public Health, Center for Health Services and Nursing Research, KU Leuven, Belgium; 2. Geriatric Medicine, University Hospitals Leuven & Department of Clinical and Experimental Medicine, Belgium; 3. Public Health, LUCAS, Center for Care Research and Consultancy, KU Leuven, Belgium; 4. Public Health, Center for Health Services and Nursing Research, Belgium)

Introduction : The BelRAI web-based system incorporates various interRAI instruments aiming to centralize geriatric assessment data of multiple disciplines and health settings. It enables to transfer standardized patient data in a privacy safe environment. Method : In a Belgian cross-sectional multicenter study, trained clinical staff (nurses, occupational therapists, physiotherapists, social workers, and geriatricians, n=133) assessed 410 inpatients in three hospitals, 49 clients of fourteen home care organizations and 471 residents in five nursing homes. The process of implementation and data exchange was evaluated by questionnaires and six focus groups. Results : For all participating organizations this study was a first. Introduction to standardized data exchange and the first use of a web-based patient record. Data transfer between hospitals and residential care was satisfactory. Home care encountered organizational problems (e.g. fragmentation of staff working at different locations) which hampered data exchange. For the hospitals, it was found very useful to receive a completed BelRAI-file at (re)admission of a patient. It informed clinicians accurately about the premorbid condition and the level of independence. If necessary, the care could be adjusted accordingly. Furthermore, previous assessments implied a gain of time for the subsequent assessment during hospital stay. There are some important prior conditions for communication across settings: user-friendly web-based software, collaboration between all care partners including physicians, and the appointment of staff for coordination tasks. Conclusion : The interRAI Suite is a powerful system to underpin continuity of care. The exchange of standardized data allowed hospital staff to adjust the care early after admission and to communicate patient's condition at discharge. Keywords : geriatrics, continuity of care, data transfer

SS25 517-B

RECENT PROGRESS IN THE BASIC AND CLINICAL RESEARCH ON PROGEROID SYNDROME: CHALLENGE TO MOLECULAR MECHANISM OF HUMAN AGING

SS25 517-B-1

CHANGING PATTERN OF AGE-ASSOCIATED PATHOLOGIES IN WERNER SYNDROME

Makoto GOTO (*Rheumatology, Tokyo Women's Medical University, Japan*)

Introduction : As ~75% of the Werner syndrome (WS) reported all over the world are Japanese, the most reports on WS has been published in Japanese journals. Thus, the detailed English-written clinical review on WS has been warranted. Method : The literature has been searched for publications on WS through a citation index in and out of Japan between 1904 and 2008. Bibliographies of each report were examined for additional references. Care was taken to exclude multiple reports of the same patient, recognized by details of family and personal histories and demographic characteristics. Diagnosis of WS was based on the presence of 3 of 4 criteria under age 35 as follows; 1)Characteristic habitus & stature, 2) Progeroid phenotypes, 3) Scleroderma-like skin changes, 4) Endocrine/metabolic abnormalities. Diagnosis of neoplasia was as given by the original authors. Results : A total of 1487 patients with WS has been coined worldwide, in which 1128 were reported in Japan. Japanese patients had 293 neoplasias and non-Japanese had 46. the ratio of epithelial to non-epithelial neoplasias was about 1:1.5 instead of the usual 10:1. Death occurred on an average of ~54 years in 2008, although the life-span of WS was ~38 years in 1966. The major causes of death are neoplasia and myocardial infarction. Conclusion : The literature search showed a changing pattern of age-associated pathologies in WS including life-span over time, in accordance with the increase in average life-span in general Japanese population. These result may suggest a common environmental effect on WS and general population. Keywords : Werner syndrome Cancer life-span

SS25 517-B-2

NEW DIAGNOSTIC CRITERIA AND TREATMENT GUIDELINE FOR WERNER SYNDROME

Koutaro YOKOTE, Minoru TAKEMOTO (*Department of Diabetes, Metabolism and Endocrinology, Chiba University Graduate School of Medicine, Japan*)

Introduction : Werner syndrome (WS), also known as adult progeria, is an autosomal recessive disorder caused by a mutation in the gene encoding the RecQ DNA helicase. It is characterized by various early aging symptoms and has been reported to die in their 40s due to premature atherosclerosis, and neoplasms. The major causes of death among patients with WS are malignant neoplasms and atherosclerotic vascular diseases such as myocardial infarction. At least a few versions of diagnostic criteria have been proposed for WS to date, but their validity has not been examined recently. Method : In order to evaluate the incidence as well as clinical symptoms of patients with WS, a nationwide epidemiological survey was performed involving 6,921 questionnaire sent to hospitals with more than 200 beds in Japan. Results : One hundred ninety four cases of WS have been newly identified. The patients were shorter in their height compared with Japanese average. Graying or loss of hair, bilateral juvenile cataracts, skin atrophy, clavus and callus, flat feet, bird-like faces and abnormal voice were found in > 85% of the confirmed cases of WS. It was also found that 80% of WS complicated with characteristic "segmental or flame-like" calcification of Achilles tendon, which

turned out to be highly useful for early diagnosis. Unexpectedly, 63% of the cases were at their 60s suggesting recent elongation of life-span. Conclusion : On the basis of these findings as well as recent reports on effective treatments for WS, a new diagnostic criteria and treatment guideline have been formulated. Keywords : Werner syndrome, diagnosis, treatment

SS25 517-B-3

GENERATION OF INDUCED PLURIPOTENT STEM CELLS FROM WERNER SYNDROME PATIENTS

Akira SHIMAMOTO, Hidetoshi TAHARA (*Cellular and Molecular Biology, Hiroshima University, Japan*)

Introduction : Werner syndrome (WS) is a rare autosomal recessive disorder characterized by premature aging, chromosomal instability and cancer predisposition. Fibroblasts derived from WS patients exhibit premature replicative senescence due to telomere dysfunction. Although WRN, a gene responsible for the disease, and encoding a DNA helicase was identified seventeen years ago, and function of a protein encoded by the gene had been extensively studied, the pathogenesis of Werner syndrome is remains to be elucidated. Method: Somatic cells can be reprogrammed into induced pluripotent stem cells (iPSCs) by ectopic expression of Yamanaka four factors. To develop a new therapeutic strategy for the treatment of WS, reveal the pathogenesis of WS and provide drug screening tools for WS, we have attempted to generate iPSCs from fibroblasts of WS patients. WS fibroblasts from two individual patients were transduced with the factors by retrovirus, subsequently seeded on feeder cells and maintained in human ES cell culture condition. Results : WS iPSC colonies exhibited alkaline phosphatase activity, and expressed not only pluripotent genes such as Nanog, Rex1 and DNMT3b, but also an immortalizing gene, hTERT. The cumulative passages of WS iPSC cells are proceeding for more than two years, supporting the notion that induction of telomerase activity during reprogramming endow parental cells of WS patients with indefinite proliferative potential, and overcome their premature senescence phenotype. Conclusion : Our results demonstrate that reprogramming restores telomere dysfunction-induced premature senescence in WS cells, including premature growth arrest and karyotype abnormality, and will provide an opportunity to study the pathogenesis of human premature aging. Keywords : senescence iPSC telomerase

SS25 517-B-4

OXIDATIVE STRESS, AGING AND PROGERIC SYNDROME

Takahiko SHIMIZU¹, Hirofumi KOYAMA¹, Shuichi SHIBUYA¹, Akira SHIMAMOTO², Minoru TAKEMOTO³, Koutaro YOKOTE³ (1. *Advanced Aging Medicine, Chiba University Graduate School of Medicine, Japan*; 2. *Cellular and Molecular Biology, Hiroshima University Graduated School of Biomedical Sciences, Japan*; 3. *Clinical Cell Biology and Medicine, Chiba University Graduate School of Medicine, Japan*)

Introduction : Superoxide dismutase (SOD), which catalyzes superoxide generated from cellular metabolism, is one of major antioxidant enzymes in cells. We have reported that genetic inactivation of Sod1, which distributed in the cytoplasm, caused increased cellular superoxide leading to aging-like phenotypes such as age-related macular degeneration, low turnover osteoporosis, skin atrophy, and age-dependent deterioration in Alzheimer's disease. In addition, genetic deletion of Sod2, which localized in mitochondrial matrix, also enhanced mitochondrial superoxide generation resulting in dilated cardiomyopathy and neurodegeneration. These phenotypes in knockout mice indicated that accumulation of intracellular superoxide

caused aging-like changes in several tissues, supporting the free radical theory of age-related diseases. Method : In this context, we investigated superoxide levels in skin fibroblasts derived from younger or older individuals. Results : We found significant increase of intracellular superoxide level in older cells compared to those of younger cells. Furthermore, we confirmed that aging promoted senescent phenotypes such as senescence associated-beta-galactosidase and interleukin-6, which is one of the senescence associated secretory phenotypes. Moreover, in vitro experiments revealed that passage culture accelerated replicative senescence concomitant with increased superoxide generation in progeric fibroblasts derived from Werner syndrome patients. Finally, we tested the protective effect of an antioxidant, vitamin C, on senescent cells. Vitamin C treatment significantly repressed intracellular superoxide generation and improved the phenotypes of senescent fibroblasts. Conclusion : These results suggested that redox regulation by antioxidants might protect cells from senescence via suppressing intracellular oxidative stress. Keywords : Werner syndrome, oxidative stress, antioxidants

SS25 517-B-5

A KOREAN CASE OF HUTCHINSON-GILFORD PROGERIA SYNDROME WITH G608G LMNA MUTATION

Hong Jin LEE (*Dept. of Pediatrics, Col. of Medicine, Hallym University, Korea*)

Introduction : Hutchinson-Gilford progeria syndrome (HGPS) is a rare condition originally described by Hutchinson in 1886. Death result from cardiac complications in the majority of cases and usually occurs at average age of thirteen years. Method : A 4-yr old boy had typical clinical findings such as short stature, craniofacial disproportion, alopecia, prominent scalp veins and sclerodermatous skin. This abnormal appearance began at age of 1 yr. On serological and hormonal evaluation, all values are within normal range. He was neurologically intact with motor and mental development. An echocardiogram showed calcification of aortic and mitral valves. Hypertrophy of internal layer at internal carotid artery suggesting atherosclerosis was found by carotid doppler sonography. Results : Gene study showed typical G608G (GGC- > GGT) point mutation at exon 11 in LMNA gene. Conclusion : This is a rare case of Hutchinson-Gilford progeria syndrome confirmed by genetic analysis in Korea. Keywords : Hutchinson Gilford Progeria Syndrome, LMNA, Progeria

SS25 518-S

OCCUPATIONAL GERONTOLOGY, A MULTI-DISCIPLINARY APPROACH

SS25 518-S-1

OCCUPATIONAL GERONTOLOGY: A NEW BRANCH OF GERONTOLOGY

Willem GOEDHARD (*Chairman, The Netherlands Foundation of Occupational Health and aging, Netherlands*)

Introduction : From research in gerontology it is well known that several physiological functions decrease with advancing age. This decrease may affect the functional capability of an employee. Retirement due to disability may be one of the inferences. In many industrial countries workers are encouraged to continue working until the age of 65 and even beyond that age. Little is known about the possible effects of work exposures on the aging process. Do work exposures affect the rate of aging of employees? Therefore it would be most useful to start gerontology studies among workers in different

professions. Employees are often exposed to possible harmful work environments. This is a major concern of occupational health care. Method : In the 1980s a useful instrument was developed by the Finnish institute of occupational health. This instrument called the workability index (WAI) is a questionnaire that is now widely used in many countries. The WAI proved to be as useful instrument to monitor health and work ability of aging employees. In this presentation results of different studies with the WAI will be given. Results : Conclusion : Functional capacities of workers usually show increased variability over time. The field of occupational gerontology can provide a usable framework for addressing the practical problems concerning the management of older workers and their transition from the working life into the third age (i.e. the post retirement period). Keywords : Aging workers WAI

SS25 518-S-2

A STRATEGY OF HEALTHY AGING: GARDENING AS A PHYSICAL ACTIVITY FOR HEALTH

Sin-Ae PARK (*Department of Environmental Health science, Konkuk University, Korea*)

Introduction : For healthy aging, a key factor is regular physical activity. Regular physical activity, which is an estimated 30 minutes of moderate intensity physical activity on the most days of the week, has been found to reduce the risk of coronary heart disease and chronic disease, including diabetes, high cholesterol and high blood pressure, stroke and declines in musculo-skeletal function. Exercise intensity of physical activity can be expressed by the term, metabolic equivalents (METs). The MET is a physiological measure for expressing the energy expenditure of physical activities in relation to the resting metabolic rate. Meanwhile, gardening is a popular leisure-time activity for adults age 65 or older. The objective of this study was to determine the exercise intensity of various gardening tasks in older adults. Method : Exercise intensity of various gardening tasks were measured by using a portable system (Cosmed K4b2) while the American and Korean adults aged over 65 years were conducted the gardening tasks. Results : The gardening tasks that used both upper and lower body such as digging, fertilizing, weeding, and raking were moderate-intensity physical activity and the gardening tasks that mainly used upper body such as mixing soil, sowing seeds, and harvesting were low intensity physical activity. Conclusion : The results will facilitate tailoring garden activities of older adults to achieve appropriate levels of physical activity for good health. The same health benefits from non-gardening form of physical activities can be expected by participating in a gardening intervention for older adults. Keywords : Exercise intensity, healthy aging, successful aging, horticultural activity

SS25 518-S-3

CREATE PRODUCTIVE AGING WORKER ON THE FOUNDATION OF ACTIVE AGING SOCIETY

Masaharu KUMASHIRO (*The Association for Preventive Medicine of Japan, Japan*)

The phenomenon of the aging of society engenders both a decline in the population of productive age and an increase in the number of aged workers among the population of productive age. The foundation for creating an active aging worker is preventing lifestyle-related diseases, and the determinant of that prevention is the habit of regular exercise. Thus, if this were to produce active aging workers, the next objective would be aged workers with a high level of work ability. In other words, it would be the creation of a society with an aged workforce with the emergence of productive aging workers in greater numbers.

To put it another way, controlling “absenteeism” and “Presenteeism” are the fundamental measure for a society with an aged workforce. The basic measure that would enable this achievement is an objective evaluation of the degree of individual worker health and life function, as well as workability, to prevent a mismatch between the worker’s capacity for labor and the work. In this report, the authors demonstrate the interrelationship among three factors, namely the habit for exercise, the state of mental and physical health, and workability based on a large quantity of study data. Next, based on this idea, we propose an ergonomics and management (ERGOMA) in occupational health activities strategy for a society with an aged workforce. Keywords : work ability, absenteeism, presenteeism

SS25 519-S

RIGHTTIMEPLACECARE: IMPROVING HEALTH SERVICE FOR EUROPEAN CITIZENS WITH DEMENTIA

SS25 519-S-1

THE DEMENTIA CARE SYSTEM IN THE EIGHT RTPC EUROPEAN COUNTRIES

Ingalill RAHM HALLBERG¹, David CHALLIS², Jan HAMERS³, Helena LEINO-KILPI⁴, Gabriele MEYER⁵, Kai SAKS⁶, Maria SOTO⁷, Adela ZABALEGUI⁸, Staffan KARLSSON⁹ (1. *The Pufendorf Institute of Advanced Studies, Lund University, Sweden*; 2. *Personal Social Services Research Unit, University of Manchester, United Kingdom*; 3. *Health Services Research, Maastricht University, Netherlands*; 4. *Department of Nursing Science, University of Turku, Finland*; 5. *School of Nursing Science, Witten/Herdecke University, Germany*; 6. *Department of Internal Medicine, University of Tartu, Estonia*; 7. *Department of Geriatric Medicine, Toulouse University Hospital, France*; 8. *Fundacio Privada Clinic per la Recerca Biomedica, Hospital Clinic of Barcelona, Spain*; 9. *Department of Health Sciences, Lund University, Sweden*)

Introduction : Exploring the care and service activities offered throughout the trajectory of dementia is an opportunity for countries to learn from each other. As part of the RightTimePlaceCare project’s general objective to develop best practice strategies this presentation describes development, content and application of a template to explore the dementia health, social care and welfare systems from early sign, diagnosis, intermediate and moderate stage and to the late stage of the disease. It also describes some of the findings with regard to the chain of care and service for people with dementia. Method : A step-wise consensus procedure was applied to identify, define and develop a template covering care and service throughout the disease trajectory. In addition the professionals involved were identified and defined as for their educational level. Results : In total 50 care and service activities compiled in seven groups were identified: 1) Screening, diagnostic procedure, treatment of dementia and complications; 2) Outpatient care facilities; 3) Care at home; 4) Institutional care; 5) Palliative care; 6) Informal caregiving and support; 7) Civic activities. The largest differences in terms of availability were found for care activities specifically for people with dementia. Non-pharmacological treatment was not commonly utilized in whilst pharmacological treatment for BPSD was common. Also education and social support to family caregivers was sparsely utilized. Conclusion : The care and service offered to people with dementia and family caregivers covers a wide range of activities. Facilities specifically for dementia varies among countries. There are more similarities among countries than differences. Keywords : dementia care system

SS25 519-S-2

PATTERNS OF TRANSITION FROM HOME CARE TOWARDS INSTITUTIONAL DEMENTIA CARE: A COMPARISON OF EIGHT EUROPEAN COUNTRIES

Jan HAMERS¹, Helena LEINO-KILPI², Adela ZABALEGUI³, Ingalill RAHM-HALLBERG⁴, Kai SAKS⁵, Maria SOTO⁶, David CHALLIS⁷, Gabriele MEYER⁸ (1. *Health Services Research, Maastricht University, Netherlands*; 2. *Department of Nursing Science, University of Turku, Finland*; 3. *Fundacio Privada Clinic per la Recerca Biomedica, Hospital Clinic of Barcelona, Spain*; 4. *Vice-Rector, Lund University, Sweden*; 5. *Department of Internal Medicine, University of Tartu, Estonia*; 6. *Department of Geriatric Medicine, Toulouse University Hospital, France*; 7. *Personal Social Services Research Unit, University of Manchester, United Kingdom*; 8. *School of Nursing Science, Witten/Herdecke University, Germany*)

Introduction : The aim of this study is to assess the factors associated with the institutionalisation of people with dementia at the time of admission to institutional long-term nursing care. **Method :** A prospective cohort study was conducted in eight European countries. Participants were people with dementia (PwD) newly admitted to institutional nursing care (group 1) and PwD who receive professional home care and were at risk of institutionalization (group 2) and their informal caregivers. Data (e.g., socio-demographics, cognition, behavior, ADL, resources, caregiver burden) were collected at baseline and at 3 months follow up. Data were analysed using bivariate testing procedures, hierarchical mixed-model logistic regression, and multivariate logistic regression. **Results :** The overall sample consisted of 2014 dyads of PwD and their informal caregivers. The mean age of PwD was 83 years, 67.5% were female and 42.7% were married. The analyses showed that there were many differences across countries in factors associated with institutionalisation. To illustrate: living condition (not alone versus alone) and relation to the PwD (spouse versus other) in some countries were associated with institutionalisation but not in other countries, and large differences in ADL performance were found. Caregiver burden seemed to be influential on institutionalisation in all countries. **Conclusion :** Although factors such as ADL, cognition, and behavior in general are expected to be associated with institutionalisation of PwD, this was not confirmed by the results of this study. The conclusion is that there is a wide variation across countries in Europe, with caregiver burden as the most consistent factor associated with institutionalisation. **Keywords :** Dementia, home care, institutionalisation

SS25 519-S-3 EMPIRICALLY BASED BEST PRACTICE RECOMMENDATION FOR DEMENTIA CARE IN EUROPE

Kai SAKS¹, David CHALLIS², Gabriele MEYER³, Jan HAMERS⁴, Dirk SAUERLAND⁵, Adela ZABALEGUI⁶, Helena LEINO-KILPI⁷, Ingalill RAHM-HALLBERG⁸, Maria SOTO⁹ (1. *Department of Internal Medicine, University of Tartu, Estonia*; 2. *Personal Social Services Research Unit, University of Manchester, United Kingdom*; 3. *School of Nursing Science, Witten/Herdecke University, Germany*; 4. *Health Services Research, Maastricht University, Netherlands*; 5. *Health Systems Management, Witten/Herdecke University, Germany*; 6. *Fundacio Privada Clinic per la Recerca Biomedica, Hospital Clinic of Barcelona, Spain*; 7. *Department of Nursing Science, University of Turku, Finland*; 8. *Vice-Rector, Lund University, Sweden*; 9. *Department of Geriatric Medicine, Toulouse University Hospital, France*)

Introduction : The aim of the study is to identify best practice strategies that can be employed within existing European health and social care systems so national policy makers may base their decisions

on the best comparative information in reviewing the organization of dementia care. **Method :** The balance of care (BoC) approach was chosen to identify optimal care solutions. Its core is the identification of groups of people whose needs could be met in multiple settings (i.e. people at the margins of care) and an examination of the resource implications of providing such care. Survey data from the project were used to specify typical cases of people with dementia who were at the margin of home care and long-term institutional care. Typical vignettes were created for 14 selected case-types. Experts in dementia care in 8 European countries were asked to decide upon the best possible placement and care package. The pattern of agreement within countries and between countries will be analysed and areas of marked variation reviewed by international panel. The cost of current and alternative care will be estimated. These data in conjunction with other study data will provide a basis for estimating alternative patterns of provision which will be compared with National Dementia Strategies. **Results :** First expert groups sessions took place in November 2012 and final results (review panel decision) are expected in March 2013. **Conclusion :** Best practice indications for planning care for people with dementia in Europe will be created combining empirical quantitative and qualitative methods. **Keywords :** Dementia, balance of care, best practice

SS25 523-C BRIDGING THE GAP BETWEEN GERIATRICS AND ONCOLOGY - GLOBAL EFFORTS TOWARDS BETTER CARE OF OLDER ADULTS

SS25 523-C-1 PROMOTING SHARED CARE OF GERIATRIC PATIENTS WITH CANCER

Beatriz KORC-GRODZICKI, Stuart LICHTMAN (*Medicine, Memorial Sloan Kettering Cancer Center, USA*)

Introduction : The incidence of cancer increases with age. The median age at diagnosis is 67 and at cancer-related death is 73 years old. The geriatrician may have a pivotal role in risk assessment, screening, prevention and treatment of geriatric syndromes in cancer patients. **Method :** A Geriatrics Consultation Service within the Department of Medicine in a Cancer Center was established in April, 2009 as part of an interdisciplinary '65+ program'. Since its inception it has provided inpatient and outpatient care for older adults undergoing cancer diagnosis, surveillance or treatment. The service strived to develop an educational curriculum for house staff, nursing staff and the public and to establish collaborations with researchers in the field of cancer and aging. **Results :** Between April 2009 and March 2012 a total of 2570 new outpatients were evaluated. 16% were 65-75, 70% were 76-85 and 14% were older than 85 years old. 46% were male and 84% were white. The inpatient load included 400 new consults. Three Geriatricians, one Geriatric Nurse Practitioner and two RNs were recruited. A yearly series of noon conferences, 'Geriatrics for the House staff', a twice-a-year course on "Advancing Nursing Expertise in the Care of Older Adults with Cancer" and monthly 65+ Educational Lecture Series for Cancer Patients and Caregivers were established as well as an annual Research Day. **Conclusion :** The establishment of a Geriatrics Service in a Cancer Center was very well received and embraced by the oncology community beyond all initial predictions which showed unmet needs in the care of the elderly with cancer. **Keywords :** Oncogeriatrics, Multidisciplinary

SS25 523-C-2 USEFULNESS OF COMPREHENSIVE GERIATRIC ASSESSMENT IN PREDICTION OF TOXICITY AND

COMPLIANCE OF CHEMOTHERAPY: SHARING KOREAN EXPERIENCE

Jee Hyun KIM¹, Jin Won KIM¹, Yu Jung KIM¹, Kwang Il KIM², Cheol-ho KIM² (1. Division of Hematology and Medical Oncology, Department of Internal Medicine, Seoul National University Bundang Hospital, Korea; 2. Division of Geriatrics, Department of Internal Medicine, Seoul National University Bundang Hospital Seoul National University College of Medicine, Korea)

Introduction : Older patients with cancer have increased risk of toxicities and functional decline after chemotherapy, leading to early termination of further active cancer treatment (TFACT). We aimed to assess the role of comprehensive geriatric assessment (CGA) in predicting toxicities and compliance of systemic chemotherapy in older patients with cancer in Korea. **Method :** We conducted baseline and follow up CGAs before and after systemic chemotherapy in patients aged 65 years and older. The association between CGA parameters and occurrence of significant toxicities was analyzed. We then assessed the TFACT, its association with survival and its predictors in a separate retrospective cohort receiving first line chemotherapy in palliative setting. **Results :** In the prospective pilot study, 64 patients were enrolled (median age: 71); significant toxicities were observed in 16 (25.0%) patients, significant decline was observed in ECOG PS (p=0.002), ADL (p<0.001), IADL (p=0.003), MMSE (p<0.001), and short form of GDS (p=0.017) after chemotherapy. The baseline ECOG PS was an independent predictor of significant toxicity (p=0.037), and mini-nutritional assessment was marginally associated with the significant toxicity (p=0.064). In a separate retrospective cohort of 98 patients who received first line chemotherapy (median age: 74) in a palliative setting, active treatment was terminated in 30 patients during median follow up of 15.1 months, which lead to shorter survival (3.1 vs 14.7 months). In multivariable analysis, malnutrition and dependent IADL were the independent predictors for TFACT after first line chemotherapy (OR: 5.03, 3.06). **Conclusion :** CGA parameters, especially IADL and malnutrition, were useful predictors of toxicity and TFACT after chemotherapy in Korean elderly. **Keywords :** comprehensive geriatric assessment, chemotherapy, older patients with cancer

SS25 523-C-3

RENAL FUNCTION. KEY ELEMENT IN EVALUATING THE OLDER CANCER PATIENT

Stuart LICHTMAN (Department of Medicine, Memorial Sloan Kettering Cancer Center, USA)

Introduction : Elderly cancer patients often have renal functional impairment due to physiologic decline and the effects of comorbidity. This requires that physicians show caution during the administration of renally excreted cancer drugs or those with established nephrotoxicity. **Method :** Before drug therapy, the assessment and optimization of hydration status and evaluation of renal function is required. Serum creatinine alone is insufficient as a means of evaluating renal function, and creatinine clearance should at least be calculated in every patient by the abbreviated modification of diet in renal disease or Cockcroft-Gault equations. In the extremes of obesity and cachexia and at very high and low creatinine values, no single tool is really accurate. Within each drug class, preference may be given to agents less likely to be influenced by renal clearance, which are minimally nephrotoxic, or for which appropriate methods of prevention for renal toxicity exist. Coadministration of known nephrotoxic drugs should be avoided or minimized. **Results :** An International Society for Geriatric Oncology (SIOG) task force was organized to formulate treatment recommendations for this group of patients. These guidelines will be

presented. **Conclusion :** Elderly patients with renal insufficiency can be safely and effectively be treated for cancer with appropriate supportive care. **Keywords :** renal insufficiency, Cockcroft-Gault, comorbidity

SS25 523-C-4

FUNCTIONAL RESERVE AND SURGICAL OUTCOMES IN THE OLDER CANCER PATIENTS

Sung Wu SUN¹, Beatriz KORC-GRODZICKI² (1. Department of Medicine, Memorial Sloan-Kettering Cancer Center Weill Cornell Medical College, USA; 2. Department of Medicine, Memorial Sloan-Kettering Cancer Center, USA)

Introduction : Cancer is a disease of the Elderly. Surgery remains the best cancer treatment modality to cure solid tumors. Today more geriatric patients undergo major surgery to achieve curative treatment. Recognizing factors which lead to poor outcomes has become very important. This study will determine the association between geriatric assessment (GA) variables with post-operative morbidity and mortality. **Method :** Patients older than 75 years who were referred for geriatric assessment (GA) before major cancer surgery at Memorial Sloan Kettering Cancer Center between 9/01/2010-12/31/2011 were identified. Pre-operative GA included: Mini-Cog Test (cognition), fall history, medication list, nutritional status (weight loss >10lbs, albumin), Charlson comorbidity index (CCI), activities of daily living (ADL) and instrumental activities of daily living (I-ADL). Outcomes included: postoperative delirium, 30-day hospital readmission, surgical adverse events, 30-day mortality and 6-month mortality. Utilizing bivariate analyses, the associations between GA measures and post-operative outcomes were evaluated. **Results :** 420 patients (median age 80) underwent major surgery for treatment of cancer during the period. CCI score, falls, dependence in I-ADLs and abnormal Mini-Cog test were associated with postoperative delirium. Lack of social support was associated with increased 30-day readmission. Dependence in ADLs was associated with risk of increased 30 day mortality. Dependence in ADLs/ I-ADLs, falls, weight loss, CCI score, low albumin level and abnormal Mini-Cog test were associated with increased 6 month mortality. **Conclusion :** Preoperative GA may promote a better understanding of older patients' perioperative risks. It can detect high-risk features for postoperative delirium and shorter survival. Further prospective studies with pre-operative GA and interventions are warranted. **Keywords :** Geriatric assessment, perioperative risk, cancer, surgery

SS25 524-R

ATTITUDES OF HEALTH CARE PROFESSIONALS IN GERIATRICS AND GERONTOLOGY TOWARDS USE OF TECHNOLOGY IN DAILY PRACTICE

SS25 524-R-1

HEALTHY AGEING THROUGH SERIOUS GAMING (HASEGA): RESEARCH ON SERIOUS (EXER)GAMING FOR ELDERLY

Boudewijn Hildo DIJKSTRA, Françoise HAAN DE - LYON, Ate DIJKSTRA (Care and Well-being, NHL University AS, Netherlands)

Introduction : Populations around the world are rapidly ageing. Between 2000 and 2050, the proportion of the world's population over 60 years will double from about 11% to 22%. We face the challenge to get grip on healthcare costs and at the same time improve quality of life for elderly. Staying physically active through serious (exer)gaming can contribute to Healthy Ageing, but application of this type of gerontechnology is not common in healthcare yet. In conjunction with

the main HASEGa study, which focuses on the outcome for elderly, this study tried to determine care professionals basic attitudes towards less client care dependency through application of serious (exer)gaming. Method : A compact multiple-choice questionnaire based on the ASE model (Attitude, Social influence, self Efficacy) has been sent (PASI) to all employees of the nursing home Erasmushiem (Leeuwarden-NL). Results : Of the 85 forms sent, 46 were returned. All over results showed positive basic attitudes towards application of serious (exer)gaming aiming for less client care dependency. Management reported the most positive attitudes where as nursing staff was more sceptical. Comments showed that negative attitudes seem to be connected to high experienced workload as most named obstacle for application. Conclusion : There seem to be notable differences in attitude between management and 'work floor employees'. Nursing staff seems to 'feel the pain' (higher workload) but have less appreciation for 'the gain' (less care dependency). When applying serious (exer)gaming in elderly care, there has to be more and special attention towards influencing the attitudes of 'work floor healthcare professionals'. Keywords: Healthy, Ageing, Serious,Gaming, Elderly

SS25 524-R-2

NURSES, TECHNOLOGY AND THE FUTURE OF CARE

Eveline Joanna Maria WOUTERS¹, Marianne Esther NIEBOER²
(1. Allied health Sciences, Fontys University of Applied Sciences, Netherlands; 2. Allied health Professions, Fontys University of Applied Sciences, Netherlands)

Introduction : In order to meet the demographic challenges, technology in health care processes is one of the solutions. Several 'stakeholders' are involved in the implementation process of technology. Apart from patients, also nurses, engineers, policy makers, and managers are involved. The aim of this study was threefold: (1) to explore the main values of nurses in several health care settings and several levels of technology implementation, (2) the perceived influence of the technologies on these values, and (3) the view on future of care by nurses with respect to technology. Method : Interpretative phenomenological analysis was applied on open and semi-structured interviews with over 50 nurses in several health care settings. Results : All nurses highly valued satisfaction of the needs of patients. They appreciated mutual inter-collegial respect and appreciation of supervisors. The possibility to do their work in an careful manner was an important value for nurses. Technology was appreciated for its ability to lower physical burdens, work planning possibilities and being able to prioritise work and support autonomy. Preconditions for successful implementation of technology were reliability of technology, training prior to implementation, being supportive to team cooperation, and the availability of a help desk. Views about the future of care were mainly related to financial cut backs and dealing with less health care personnel. No spontaneous thoughts about the role of new technology was part of these views. Conclusion : Nurses need support in relating technological solutions to patients' needs. The role of health care organisations, including technological expertise, can be crucial here. Keywords : health, technology, nurses, acceptance

SS25 524-R-3

PREDICTORS FOR THE USE OF REMOTE TELECARE BY CARE PROFESSIONALS (PETZ)

Thijs VAN HOUWELINGEN¹, Ansam BARAKAT¹, Ryan BEST², Walter BOOT², Neil CHARNESS², Helianthe KORT¹ (1. Research Centre for Innovations in Healthcare, Faculty of Healthcare Utrecht University of Applied Sciences, Netherlands; 2. Department of Psychology, Florida State University, USA)

Introduction : With the age of American and European countries rising, aging in place is becoming an increasingly important goal for the health care industry. Remote telecare technology, such as videoconferencing between professionals and clients, can help to meet the growing demand for care. These technologies support traditional care as well as facilitate older adults' ability to live longer independently in their own homes. Despite the apparent positive effects of this technology, there are still barriers for remote telecare adoption related to lack of knowledge and skills associated with use (Kort en van Hoof, 2012). The current project focuses on identifying predictors for remote telecare use in Dutch and American health care professionals. Knowledge gained from the identification of these predictors will then be used to inform training programs to promote greater adoption of remote telecare across the health care field. Method : Questionnaires were devised to collect information related to demographics, technology experience, as well as feelings, attitudes, experience, and preferences related to remote telecare from Dutch and American health care professionals. Results : Data were collected from 207 health professionals working in homecare in the Netherlands. Addition observational data was collected from 20 of the professionals from this sample. Data was fit to the UTAUT model (Venkatesh et al., 2003) to describe the relationship between predictor variables, intention to use, and current use of remote telecare. Conclusion : The identity and weight of the predictor variables and the resulting implications for the design of training programs will be discussed. Keywords : technology acceptance, interaction with older adults, telecare

SS25 524-R-4

EXPERIENCE OF THERAPISTS USING SILVERFIT GAMES AND IMPLEMENTATION IN DEMENTIA CARE

Yvonne SCHIKHOF (Centre of Expertise Innovation in Care, Rotterdam University of Applied Sciences, Netherlands)

Introduction : SilverFit is a virtual rehabilitation system for elderly users. The most important exercises that train gross motor movement have been incorporated into computer games, using a 3D camera that can trace the movements of one to four people. The physiotherapist can change the level to suit the client. The games are designed to be stimulating. SilverFit also started to develop games for people with dementia and a project to introduce the system in dementia care has started. The aim of this evaluation was to learn from the experience of early adopters and to help with the implementation in dementia care. Method : A Focus Group with a team of five therapists was conducted to explore their experience with SilverFit over one to four years. Results : The therapists discussed their professional values and the contribution of SilverFit to these values. They highly value the goal-oriented and appealing character of the games. They can work on both physical and psychosocial goals with their clients. Therapists also appreciate the competitive element when clients play against each other. They already have experience using SilverFit for people with dementia and are aware of the limitations of this group and safety conditions. They described preconditions for implementation in dementia care. Conclusion : This technology is much appreciated for its ability to help clients achieve goals as set by therapists. The connection between professional values and characteristics of the games is important for the acceptance of this technology. Experience from early adopters is valuable when starting new projects. Keywords: virtual rehabilitation system

SS25 525-C

CRITICAL FALL WITH INABILITY TO GET UP: SCREENING AND NEW PREVENTION STRATEGIES

SS25 525-C-1

CRITICAL FALLS: WHY REMAINING ON THE GROUND AFTER A FALL CAN BE DANGEROUS WHATEVER THE FALL

Frederic BLOCH (*Gerontology, Hopital Broca (AP-HP), France*)

Introduction : As people age, it becomes increasingly difficult for them to stand again after a fall. However, in addition to all the consequences of the fall itself, prolonged immobilisation on the ground will have many repercussions with poor prognosis for recovery. Method : A systematic review and meta-analysis were performed, and the OR and 95%CI to assess the mortality related to the inability to get up after a fall was estimated for each study and overall. The fixed-effects method of Mantel-Haenszel was used. Heterogeneity was assessed using the I² statistic. Results : A computer search strategy identified 3,401 articles. Were excluded 3,333 articles, retaining only 70 articles concerning prospective studies about consequences and prognosis after falls of the elderly. Selecting studies with numerical data on mortality in groups lying or not-lying on the ground for extended periods of time, four studies were included. The OR and 95%CI for the association between lying on the floor during a long period and mortality in all patients studied was 1.75 [95%CI 1.15-2.67], with I²= 33%. Conclusion : Published articles on the consequences or prognosis of falls give far too often results where falls are categorised by type, or subgroups of population or place of occurrence. Our strategy is limited and has to be used complementary to systematic review when studying consequences of falls. But it is still too restrictive to focus only on traumatic falls in this case. We thus propose the term 'critical fall' to characterize a fall with an inability to retain upright posture, whatever the reason. Keywords : critical fall, unable to get up

SS25 525-C-2

THE INABILITY TO GET UP: RISK FACTORS AND CONSEQUENCES IN A POPULATION-BASED STUDY OF OVER-90-YEAR-OLDS.

Jane FLEMING¹, Carol BRAYNE¹ and Cambridge City Over-75s Cohort Study Collaboration (CC75C)² (*1. Institute of Public Health, University of Cambridge, United Kingdom; 2. Public Health and Primary Care, University of Cambridge, United Kingdom*)

Introduction : A "long lie" can have serious consequences for an older person who falls and cannot get up. This study describes the incidence and extent of "long lies" in advanced old age, and explores older old people's use of call alarm systems in these circumstances. Method : 1 year prospective follow-up of n=110 over-90-year-olds (90 women), UK population-based Cambridge City Over-75s Cohort (CC75C) falls study. Data collection included: whether the fall occurred when alone, inability to get up without assistance, recalled time on the floor, availability and use of call alarm systems, and participants' views on using call alarms to summon help. Results : In 54% of fall reports the participant was found on the floor and 82% of falls occurred when alone. 80% of those who fell were unable to get up after at least one fall. 30% suffered "long lies" (1 hour or more). Cognitive impairment was the only factor predicting a "long lie". Comments from older people and their carers reveal the complexity of issues around the use of call alarms, including perceptions of irrelevance, concerns about independence, and practical difficulties. Conclusion : There are practical implications for the training and information needed by older old people about effective use of call alarms and strategies to get up off the floor. Design issues for alarm systems include access and activation: the development of automatic fall detectors may provide a solution for some at high risk for "long lies". Care providers need better understanding of older people's perceptions in order to provide acceptable support services. Keywords : Oldest old, Frail elderly,

Accidental falls, Dementia, Assistive technology

SS25 525-C-3

THE VIGIFALL DEVICE A NEW CUTTING EDGE FALL DETECTOR: RESULTS FROM A MULTICENTRE STUDY TO TEST IT IN COMMUNITY-DWELLING OLDER PEOPLES

Jean-Eric LUNDY (*Department of Emergency Medicine, Hopital Cochin (AP-HP), France*)

Introduction : Elderly patients unable to get up or to activate an alarm mechanism after a fall are particularly at risk of complications and need to be monitored with extreme care. This fact underscores the need to draw up early alert strategies for falls and explains the development of stand-alone devices facilitating early detection of falls. The Vigi'Fall system is a new fall detector associating a "passive release" mechanism attached to the patient and external sensors with embedded confirmation software. In the event of a fall, the system automatically triggers an alarm. After evaluating its acceptability and tolerability in elderly subjects, we present its efficacy under real-life conditions. Method : Prospective observational monocenter study to determine 6-month evolution of patients above 75 years, at home, wearing or not the VigiFall device. Results : We will present preliminary results of this study involving patients in real-life conditions to obtain enhanced sensitivity and specificity through use of the complete device including an accelerometric sensor, infrared, and a verification or confirmation system. Conclusion : Few studies have efficiently assessed the sensitivity and reliability of fall detection devices for the elderly from a real-life standpoint. Automatic fall detection systems for the elderly are at the heart of today's gerontechnology research. These novel technologies need to be harmonized with the subject's environment, and that a detector cannot advantageously replace the visits of family, friends and neighbors. This real-life condition allows therefore to approach with the highest possible relevance the acceptability and tolerability of the Vigi'Fall. Keywords : Fall detector; real-life conditions

SS25 526-C

ASSISTIVE TECHNOLOGY AND SUPPORTED CARE: ROBOTS AND MONITORING

SS25 526-C-1

SYMPOSIUM OVERVIEW

Ngairé KERSE¹, Bruce MCDONALD², Elizabeth BROADBENT³, Clemens BECKER⁴ (*1. General Practice and Primary Health Care, University of Auckland, New Zealand; 2. Engineering, University of Auckland, New Zealand; 3. Psychological Medicine, University of Auckland, New Zealand; 4. Robert Bosch rehabilitation hospital, Germany*)

Introduction : With the ageing of the population new ways are needed to support older people, and reduce the impact of disability. In all settings robot and monitoring technology has the potential to improve function, empower older people and reduce cost. Method : The symposium will showcase an international collaboration between South Korean, New Zealand researchers and European researchers and companies to develop technology and provide cognitive robotic assistants delivering; companionship and entertainment, medication reminding, vital signs; activity and location monitoring with falls detection; and a plan for a large repository of falls data. Funding has been by the NZ Government, the European Commission, and the South Korean Government. Results : The group has evaluated the acceptability, feasibility, benefits and risks of the technology in an aged care facility and recently trialed 30 robots deployed in a

retirement village. The falls and activity monitoring are part of an international collaboration to capture a large database of accelerometer recordings of activity and falls to develop algorithms for recognizing falls and categorizing activity. Conclusion : The novelty of this symposium is the application of technology in real life. A demonstration will be given of an older persons care robot by Yujin Robot Ltd, Seoul . Keywords : Robotics, Assistive technology, Falls monitoring, Accelerometers, falls repository

SS25 526-C-2

ROBOTS HELPING TO CARE FOR OLDER PEOPLE ? AN INTERNATIONAL COLLABORATION

Bruce MACDONALD¹, Elizabeth BROADBENT², Ngaire KERSE³, Kathryn PERI⁴, I Han (tony) KUO¹, Chandimal JAYAWARDENA⁵, Chandan DATTA¹, Catherine WATSON¹, Rebecca STAFFORD² (1. Electrical and Computer Engineering, University of Auckland, New Zealand; 2. Psychological Medicine, University of Auckland, New Zealand; 3. General Practice and Primary Healthcare, University of Auckland, New Zealand; 4. School of Nursing, University of Auckland, New Zealand; 5. Computing and Information Technology, Unitec, New Zealand)

Introduction : The presentation will briefly introduce our healthcare robotics work and summarize the development of the New Zealand testbed for trialling the Healthbots project software on South Korean robots for care of older people, plus 1 Paro robot. Method : We have designed applications to assist with entertainment and companionship, medication management, vital, signs monitoring, as well as activity and fall detection. Results : The recent study included robots in independent living, rest home, hospital, reception, cafe, doctor's waiting room, an observational study in the dementia unit, and accelerometer studies of falls and activity. Conclusion : Development of the project and recent activities will be summarized, including a planned robot deployment at a healthcare organization in the South Island of New Zealand. Keywords : Robotics, oldercare

SS25 526-C-3

THE PSYCHOLOGICAL AND SOCIAL INTERACTIONS BETWEEN OLDER PEOPLE AND ROBOTS

Elizabeth BROADBENT¹, Bruce MACDONALD², Ngaire KERSE³, Hayley ROBINSON¹, Kathy PERI⁴, Tony KUO², Chandimal JAYAWARDENA², Chandan DATTA², Catherine WATSON², Rebecca STAFFORD¹, Lynne TAYLOR³ (1. Department of Psychological Medicine, The University of Auckland, New Zealand; 2. The University of Auckland-ETRI joint laboratory for U-healthcare robotics, School of Engineering, The University of Auckland, New Zealand; 3. Department of General Practice and Primary Health Care, The University of Auckland, New Zealand; 4. School of Nursing, The University of Auckland, New Zealand)

Introduction : Few randomized controlled trials have investigated the effects of robots in aged care settings. The aim of these six studies was to investigate the benefits and dis-benefits of robots for staff and residents in a retirement village. Method : 1) a randomized controlled cross-over trial deployed healthcare robots to individuals' homes compared to a similar period without robots. 2) a controlled comparison trial deployed healthcare robots in two rest-home/hospitals compared to two rest-home/hospitals without robots. 3) healthcare robots were observed in the cafe, reception, and medical centre. 4) interactions with a healthcare robot were compared to interactions with a companion robot in a secure dementia unit. 5) a randomised controlled trial of a companion robot in a rest-home/hospital was conducted. 6) falls were monitored using wearable accelerometers.

Questionnaires, observations, interviews, robot logs, and accelerometer data were analysed. Results : Results showed that there were no dis-benefits of the robots. Many residents with individual healthcare robots saw them as companions and as useful. Most staff and residents in the rest-home and hospital reported positive comments and residents in lounges with robots slept less and interacted more with each other than residents in lounges without robots. Residents with dementia touched, smiled and talked to the companion robot more than the healthcare robot. The companion robot significantly reduced loneliness in rest-home/hospital residents, and increased social interactions compared to the control group. Five falls were captured using accelerometers. Conclusion : These findings indicate that robots can be successfully incorporated into aged care settings with promising indications of benefits. Keywords : robot, psychology, randomised controlled trial

SS25 526-C-4

DESIGN AND BUILDING OF A SHARED DATA BASE OF REAL WORLD FALLS IN OLDER PERSONS

Clemens BECKER, Jochen KLENK (Department of Clinical Gerontology, Robert-Bosch Hospital, Germany)

Introduction : The identification of fall risk factors and the development of fall prevention programs have made considerable progress over the last 10 years. A recent meta-analysis on risk factors (Deandrea 2010) and the updates of the corresponding Cochrane reports show a growing body of evidence and knowledge (Gillespie 2012). However, many relevant questions on the pre-phase of falls and what actually happens during a fall remain unanswered. This is mainly due to the fact that fallers cannot give accurate reports on the circumstances of a fall and contextual information is often biased. Less than 10 % of all falls are witnessed and reporting bias is a similar problem for proxies and other witnesses. Method : The FARSEEING project financed by the European Commission tries to fill some of these knowledge gaps and translates these findings into diagnostic tools and therapeutic interventions. This is based upon a consensus process on a standard fall data format to assess and store fall signals, the build up of a fall signal meta-database and a new model to study falls (Becker 2012). Results : This approach classifies falls into different phases and uses body-worn sensor data to examine body movement and impact during falls. Conclusion : The presentation will present findings from real-world fall signals and demonstrate how this might translate into new approaches for fall prediction, fall detection and fall prevention approaches. Keywords : Falls, older persons

SS25 526-C-5

DEVELOPMENT OF AN ACCELEROMETER BASED ACTIVITY AND FALL MONITOR FOR PRACTICAL DEPLOYMENT IN AN AGED CARE SETTING

Chankyu PARK, Jaehong KIM (Robot/Cognitive Convergence Research Department, ETRI, Korea)

Introduction : Many researchers have studied human activity (including fall detection) recognition techniques in various domains; however none released to a commercial product satisfying the old people requirements, which are comfortable to wear it, weight-lighted and having exact accuracy to detect emergency activity and longer battery durance. Thus, to address them, we propose a practical approach procedure for getting best minimum feature sets and classification accuracy for wearable fall monitor. Method : We do experiments for comparing the two features reduction techniques and four classification techniques in order to discriminate five each basic human activities, such as fall for the aged care, walking, hand related

shocks, walking with walker and lastly steady activity which includes no movement and slow arbitrary hand and body motions. Results : The results of recognition performance of SFS-SVM pair based activity and fall detector show the best performance. These results have been measured at both wrist and waist body positions. Most recognition rates over five categories are over 95% and robust be able to apply general nursing home. Conclusion : We can find two facts; one is that FFS based feature selection is more reliable than PCA based on transformation and the other is that we don't need a lot of features. In terms of recognition rates, the overall accuracy to each combination shows that the pair of SFS-SVM is the best of all in this paper and it is enough to have 10 numbers of features to achieve tolerable recognition performance rate 95%. Keywords : fall detection, activity recognition, aged care

SS25 527-C

CLINICAL CHARACTERISTICS OF SLEEP DISORDERS IN KOREAN ELDERLY

SS25 527-C-1

CHARACTERISTICS OF OSA PATIENTS IN KOREAN ELDERLY

Eui-joong KIM¹, Seong Ho KIM², Eun-jeong JOO², Kyu-young LEE², Young-jin KOO² (1. *Psychiatry, EMC Eulji University School of Medicine, Korea*; 2. *Department of Psychiatry, Eulji University School of Medicine, Eulji General Hospital, Korea*)

Introduction : Recent studies reported characteristics of OSA in elderly patients that might different with those of middle aged including the clinical impact of OSA severity on cardiovascular disease. Authors tried to figure out the characteristics of Korean elderly OSA by the demographic, sleep architectural, OSA severity related, and heart rate variability (HRV) differences. Method : Polysomnographically proved 345 OSA patients over 40 years old were included. They filled out the Horne and Ostberg Questionnaire(HOQ), Pittsburgh Sleep Quality Index-Korean(PSQI-K), and Epworth Sleepiness Scale(ESS). We compared mean values of ESS, HOQ, PSQI-K, sleep related variables, OSA severity related variables, and HRV variables between 252 middle aged (40-59 years) group and 93 elderly (≥ 60 years) group. ANCOVA was performed between two groups after adjustment with height and weight. Results : Elderly group showed significantly higher PSQI-K and HOQ scores. In sleep architecture elderly group showed significantly longer sleep latency and REM sleep latency; lower sleep efficiency, total sleep time, and slow wave sleep%; higher wake time after sleep onset(WASO), limb movement index than middle aged group. There were no differences in AHI, mean O₂ saturation, and total arousal index between two groups. In HRV analysis, NN50 count, percent of NN50, average total power, average low frequency power, average high frequency power, and HRV triangular index were significantly lower in elderly group. Conclusion : We could describe Korean elderly OSA patients as having more tendency of morningness, and poor sleep quality in subjective and objective measures. Elderly OSA patients have lower ANS activity and lower cardiac reactivity. Keywords : Korean elderly, OSA, HRV

SS25 527-C-2

RESTLESS LEGS SYNDROME IN KOREAN ELDERLY

Seung-gul KANG¹, Hong-beom SHIN² (1. *Department of Psychiatry, Gachon University, School of Medicine, Korea*; 2. *Department of Psychiatry, Komoki Sleep Center, Korea*)

Restless legs syndrome (RLS) is a bothersome sleep disorder manifested by uncomfortable sensations in the legs and an irresistible

urge to move the legs, which impairs the quality of sleep and life. The estimated prevalence of RLS varies widely, from 1% to 15%. The prevalence of RLS increases with age until 50 years old. Recently, the prevalence of RLS in Korean elderly was reported 8.3% and 9.5% in two independent community-based samples. We previously reported that the incidence of RLS in patients with schizophrenia is more than twice that in healthy controls. We also performed the pharmacogenetic studies investigating the association between antipsychotic-induced RLS and several candidate genes (G protein $\beta 3$ subunit gene, tyrosine hydroxylase gene, monoamine oxidase genes, dopamine D1, D2, D3, and D4 receptor genes, BTBD9 gene). In this symposium, we will present the clinical characteristics of RLS patients in a Korean sleep center and report interesting and difficult cases of elderly RLS patients. [Acknowledgement] This research was supported by Basic Science Research Program through the National Research Foundation of Korea(NRF) funded by the Ministry of Education, Science and Technology(grant number; 2012-0003429). Keywords : restless legs syndrome, Korean, elderly.

SS25 527-C-3

CHARACTERISTICS OF RBD PATIENTS IN KOREA

Hongbeom SHIN (*Psychiatry, Komoki Sleep Clinic, Korea*)

Introduction : REM sleep behavior disorder(RBD) is a parasomnia characterized by a history of excessive motor activities during sleep and is associated with pathological absence of muscle atonia during REM sleep. The frequency of RBD is much higher in certain neurodegenerative diseases, especially Parkinson's disease, dementia with Lewy bodies and multiple systems atrophy. In this study, the characteristics of RBD in Korean elderly is presented in terms of polysomnographic features, clinical symptoms and responses to the treatments. Method : The clinical records of 83 RBD patients who had been underwent clinical interview and polysomnography were analyzed. Age of symptoms onset, associated feature, comorbidities of other neurological conditions and severities of violent behavior during RBD episodes were classified and described. Results : The mean age of symptoms onset was 50.5 years old. Periodic limb movements of sleep(PLMS) was common with the frequency of 70.5%. A few of patients showed the symptoms of parkinsonism and were referred to neurology to managements. The severities of violent behavior during RBD were classified 3 groups and the percentages of mild, moderate and severe group were 64%, 22% and 14%, respectively. Conclusion : In this presentation, we could verify that characteristics of RBD in Korean were comparable to those of other countries. RBD is more prevalent in degenerative neurologic disorder. Thus more extensive study is needed to figure out in depth understanding of features of Korean RBD. Keywords : RBD, Sleep disorder, Elderly

SS25 527-C-4

CHARACTERISTICS OF INSOMNIA PATIENTS IN KOREAN ELDERLY

Yu Jin LEE (*Department of Mental Health (Psychiatry), Gachon university Gil medical center, Korea*)

Introduction : Architecture of sleep changes with aging. Insomnia is not a sleep disorder, but a sleep complaint secondary to or accompanying a medical, psychiatric, behavioral or psychosocial condition. It is crucial to identify the underlying cause of insomnia especially in elderly. Up to 40% of those over age 60 complain of disturbed sleep (Miles & Dement, 1980). Over 20% of elderly report severe insomnia (Mellinger, Balter & Uhlenhuth, 1985). Insomnia is more common in women than in men. Method : In this presentation, I will discuss various causes of insomnia in elderly, assessment,

common sleep disorders and pharmacological/ nonpharmacological treatments for insomnia in elderly. Keywords : Insomnia, elderly

Wednesday June 26th

SS26 107-C

NEW APPROACHES TO IMPROVING CARE IN NURSING HOMES: THE JAMDA SYMPOSIUM

SS26 107-C-1

HISTORY OF NURSING HOMES

John E. MORLEY (*Geriatric Medicine, Saint Louis University, USA*)

Introduction : The history of nursing homes will be briefly presented starting with the first nursing homes in the Byzantine Empire under the leadership of Saint Helen. Method : Nursing homes then spread throughout Europe, predominantly being created by religious organizations. The concept of the 'Teaching Nursing Home' was developed by Leslie Libow in New York in 1967. Results : A major change in nursing homes was the medicalization that occurred in the United States with the introduction of Medicare in 1965, and the OBRA 87 regulations. Conclusion : AMDA has become a major organization for nursing homes in the United States. JAMDA is the medical journal that specializes in nursing home care. Keywords : Nursing home history

SS26 107-C-2

NURSING HOMES AROUND THE WORLD: A COMPARISON

Paul KATZ (*Medical Administration, Baycrest, Canada*)

Introduction : While senior housing and care options continue to evolve, nursing homes (NH) remain a mainstay within the long-term care (LTC) continuum around the globe. Despite their prevalence, international comparisons are sparse, particularly as regards medical care practices. Such comparisons constitute the first step in identifying and then disseminating best practices. Method : A survey of LTC physician leaders in 10 countries will be conducted in the first quarter of 2013. The survey will explore common medical care practices germane to each jurisdiction focusing on medical staff organization and quality outcomes. The survey will be complimented by a review of LTC demographics and facility specific structural characteristics. Survey questions will be scored on a 5-point Likert scale. Results : Basic descriptive statistics will be employed. Differences in care practices germane to relevant clinical outcomes will be highlighted and potential best practices reviewed. The results will be discussed in the context of health reform initiatives taking place around the world. Conclusion : Identifying and disseminating medical care best practices is key to assuring the delivery of high quality care to NH residents around the world. The survey results presented will offer valuable insights into these best practices and, at the same time, work towards establishing a community of practice of physician leaders. Keywords : Nursing Homes Around the World

SS26 107-C-3

INTEGRATING PALLIATIVE CARE IN THE NURSING HOME: AN INTERPROFESSIONAL OPPORTUNITY

Daniel SWAGERTY (*Department of Family Medicine, American Medical Directors Association, USA*)

Introduction : There is considerable evidence that nursing home (NH) residents do not receive optimal end-of-life care. Internal palliative care programs and hospice services are being used more frequently in the NH. The interdisciplinary support of the palliative care or hospice

team can be invaluable in supporting the usual care at a time when staff, family members and the NH resident are facing the increased and urgent needs associated with the dying process. Method : A defined and well resourced palliative care program can make it easier for NH staff, physicians, and other providers to give comprehensive end of life care to terminally ill patients, in the form of a specific internal program developed and maintained by the NH or by contracting with community-based hospices. This session will address the barriers to palliative care and strategies to overcome them in the NH by identifying factors important to dying residents and their families; describing gaps in end-of-life care for residents; and comparing the respective opportunities and challenges of supplemental hospice service versus internally-developed palliative care programs for improving end-of-life care in the NH. Results : There is evidence that supplemental hospice services in addition to usual NH services in terminally ill NH residents will improve medical outcomes, and family and patient satisfaction. Internally-developed palliative care programs in NHs also offer the same end-of-life care benefits to the terminally-ill residents and their families, but have associated challenges. Conclusion : A commitment to interprofessional education and practice is essential to providing quality end-of-life care in the NH. Keywords : palliative care nursing home

SS26 108-C

CANADIAN GERIATRICS SOCIETY SYMPOSIUM: INITIATIVES TO IMPROVE THE CARE OF HOSPITALIZED ELDERLY PERSONS

SS26 108-C-1

ACUTE CARE FOR ELDERLY UNITS (ACE) AND RELATED NEW DEVELOPMENTS

Roger Y. WONG (*Faculty of Medicine, University of British Columbia, Canada*)

Introduction : Since the inaugural reports on Acute Care for Elders (ACE) units, many centres around the world have implemented such programs with variable success. Method : When implemented successfully, ACE can be associated with favourable clinical, educational and research outcomes. Results : The ingredients of successful ACE implementation include maintaining continuous patient flow, managing the impact of increased patient flow on resource capacity and staff workload, and optimizing utilization within finite resources available. Adequate staffing level is essential for sustainable workforce in ACE. Best practices in ACE should focus on knowledge translation with clinical outcomes that are patient-centred. New developmental trends on ACE include modified ACE programs for various patient cohorts (such as dementia, stroke, orthopaedic patients etc.) delirium room in ACE, ACE consultation programs, ACE tracker with e-geriatrician, and elder-friendly hospitals based on delivering ACE concepts within the hospital environment at large. The effectiveness of such new developments requires further studies. Creative educational opportunities to teach postgraduate and undergraduate learners about ACE help to disseminate important principles. Finally, ACE can provide the venue for original research, including the areas of clinical investigation, health systems research, and medical education research. In summary, favourable ACE outcomes can be feasible. Conclusion : Systematic implementation of ACE can hopefully improve hospital care for vulnerable older adults. Keywords : acute, hospital, care

SS26 108-C-2

A STRATEGY TO CREATE AN AGE-FRIENDLY HOSPITAL: THE MCGILL UNIVERSITY HEALTH CENTRE (MUHC)

EXPERIENCE

Jose A. MORAIS¹, Rita CRISANTE², Nadine LARENTE² (1. Division of Geriatric Medicine, McGill University, Canada; 2. Division of Geriatric Medicine, McGill University Health Centre, Canada)

Introduction : In developed countries, the elderly comprise ~50% of the in-patient population. Many are vulnerable and experience functional decline and/or delirium caused by inadequate hospital practices. A review of the literature helped establish the guiding principles for an Elderly-Friendly Hospital (EFH) concept, which includes: 1) A favourable physical environment; 2) Zero tolerance towards ageism; 3) An integrated process to develop comprehensive services using principles of the geriatric approach; 4) Assistance with appropriate decision-making, like Levels of care and Interventions; 5) Fostering links between the Acute Care Hospital and the Community. **Method :** The Geriatrics Division and the administration of the MUHC have designed a 2-year plan to test implementation of the EFH concept. An office and a structure to ensure sustainability and continuous improvement were created to oversee the implementation since the EFH care processes require multi-dimensional solutions and inter-professional collaboration from physicians and all of the allied health professionals. **Results :** Pilot implementation projects are underway in different wards. In these wards, interdisciplinary champions knowledgeable in the EFH principals serve as a reference person for the other personnel. To complete the practical aspects of the implementation, the Hospital Elder Life Program (HELP) for delirium prevention will be applied with the support of trained volunteers and team members. An education campaign will steer the changes required both in clinical practices and in the socio-cultural behaviours towards the elderly. **Conclusion :** We hope to improve the health outcomes of older in-patients with multiple chronic conditions and contribute to maintain the hospital mission of acute specialized state-of-the-art care. **Keywords :** Elderly Friendly Hospital; strategies of implementation

SS26 108-C-3

SENIOR FRIENDLY HOSPITALS: A PROVINCE-WIDE STRATEGY IN ONTARIO

Barbara A. LIU¹, Ken WONG², Ada TSANG², Rhonda SCHWARTZ², Gary NAGLIE⁴ (1. Medicine, Regional Geriatric Program of Toronto, Canada; 2. SFH, Regional Geriatric Program of Toronto, Canada; 3. Quality, Safety and Best Practice, Baycrest, Canada; 4. Medicine, Baycrest, Canada)

Introduction : Ontario has a total population of 12.1 million, with 1.5 million seniors. In 2010-11, the Local Health Integration Networks (LHINs) in Ontario endorsed a provincial senior friendly hospital (SFH) strategy. The strategy was guided by the Regional Geriatric Program's (RGP) SFH framework, which includes the domains-organizational support; processes of care; emotional and behavioural support; ethics in clinical care and the physical environment. **Method :** 155 hospitals completed a self assessment based on the SFH framework. After writing a summary report for each LHIN (14) and a provincial summary report, we used a modified Delphi process to identify tools and accountability indicators to support the strategy. **Results :** The provincial report is an environmental scan. In it we identified two priorities for action: prevention of functional decline through early mobilization strategies; and prevention and management of delirium. We developed a web-based toolkit with a short menu of enabling tools to support the priorities. The toolkit is organized according the SFH framework and the processes of screening, prevention, management and monitoring. Four indicators for monitoring and accountability have been drafted and are undergoing pilot testing. **Conclusion :** We have conducted an environmental scan,

developed a toolkit and indicators to support SFH care in Ontario. The work is guided by the principles of evidence, feasibility, interprofessional team work, and advancing care for frail seniors. The lens for decision making also includes applicability of tools and indicators across a range of hospital care settings that include urban and rural; academic and community; large and small; acute and post acute care. **Keywords :** senior-friendly, hospital, indicator

SS26 108-C-4

A REVIEW OF HOW INNOVATIVE MODELS OF CARE CAN ADDRESS THE UNIQUE RISKS OF HOSPITALIZATION IN THE ELDERLY

Angela G. JUBY (Medicine, Geriatrics, University of Alberta, Canada)

Introduction : Acute hospitalization presents unique risks to the elderly. For example: rapid functional losses with increased morbidity and mortality; atypical disease presentation; associated dementia; higher risk of delirium and pressure ulcers; impaired nutrition and; impaired bowel /bladder function. **Method :** Various care models have been developed to try and address these issues. Some strategies focus on individual medical conditions, eg. delirium care maps. Others, on individual functions such as bowel/bladder issues, skin care, providing glasses/hearing aids, or optimising nutrition. Still others focus on a system approach either at the level of an individual specialised ward, such as an ACE unit, orthogeriatric unit, or a comprehensive consultation/treatment team. Finally, an even more comprehensive approach would be that of a provincial or national strategy to ensure all hospitals provide a basic level of appropriate specialised geriatric care, and that this flows seamlessly into a geriatric focused discharge plan. **Results :** ACE units and two provincial strategies have already been discussed. Experience with some other strategies will be discussed, and the pros and cons of all these approaches reviewed. An international symposium at this meeting will discuss different national approach to elder friendly hospital standards. **Conclusion :** This symposium helps highlight the unique challenges for the elderly during acute hospitalization. It will provide information and experience using a number of possible strategies to address these challenges. The absence of one encompassing strategy highlights the need to individualise any model of care for the unique circumstances of local cultural considerations, as well as the funding environment. **Keywords :** acute, hospital, models

SS26 109-R

JOHNS HOPKINS UNIVERSITY-PEKING UNION MEDICAL COLLEGE INTERNATIONAL GERIATRICS COLLABORATION AND PARTNERSHIP WITH CHINA MEDICAL TRIBUNE IN CHINA: A MODEL FOR GERIATRICS PROGRAM DEVELOPMENT AND KNOWLEDGE DISSEMINATION IN DEVELOPING COUNTRIES

SS26 109-R-1

INTERNATIONAL COLLABORATION BETWEEN JOHNS HOPKINS AND PEKING UNION MEDICAL COLLEGE (PUMC) IN GERIATRICS PROGRAM DEVELOPMENT IN CHINA: HOPKINS EXPERIENCE

Sean X. LENG¹, Xiaohong LIU², Ti SHEN³, Samuel Chris DURSO¹ (1. Geriatric Medicine and Gerontology, Johns Hopkins University School of Medicine, USA; 2. Geriatrics Division, Department of Internal Medicine, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences, China; 3. Internal Medicine, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences, China)

Introduction : The aging imperative is global. This is best exemplified in China, where the largest aging population in the world resides and continues to grow fast. Despite the urgent need to care for this huge older adult population, China lacks quality geriatrics program, let alone well-trained geriatricians. **Method :** To begin to address this unprecedented challenge, Johns Hopkins University School of Medicine and Peking Union Medical College (PUMC) have started an international collaboration aiming to establish a leadership program that will spearhead the development of quality geriatrics care, education, and aging research throughout China. Funded by China Medical Board (06-836) and the Milstein Medical Asian American Partnership (MMAAP) Foundation and Irma and Paul Milstein Program for Senior Health. **Results :** As a key component of this collaboration, a total of sixteen Chinese physicians and nurses obtained geriatrics training in the Division of Geriatrics Medicine and Gerontology at Johns Hopkins University School of Medicine. These include eight internists, one physiatrist, one neurologist, one nutritionist, one neuropsychologist, and four nurses who will serve as the backbone of the multidisciplinary geriatrics care team at PUMC Hospital. Geriatrics demonstration ward was initially established and now an academic geriatric division has been established at the PUMC Hospital. **Conclusion :** This international collaboration has led to the establishment of a leadership geriatrics program in China. This will serve as a successful example and useful model for geriatrics program development in other developing countries. **Keywords :** International Geriatrics Collaboration, Partnership with media, Johns Hopkins, PUMC

SS26 109-R-2

GERIATRICS PROGRAM DEVELOPMENT AT THE PEKING UNION MEDICAL COLLEGE HOSPITAL

Xiaohong LIU (*Division of Geriatrics, Peking Union Medical College Hospital, China*)

Introduction : China, while facing the unprecedented need for quality geriatrics care for its large and rapidly growing elderly population, continues to use individual organ system-based traditional subspecialty care model in geriatrics. In collaboration with the Division of Geriatric Medicine and Gerontology at Johns Hopkins University (JHU) School of Medicine, the PUMCH has since 2006 started its effort in developing a model geriatrics program that will promote modern geriatrics in China. **Method :** While sending its faculties to JHU to obtain modern geriatrics training, PUMC established a geriatrics demonstration ward in 2007, which has now developed into the Division of Geriatrics in the Department of Internal Medicine. **Results:** The Division of Geriatrics at PUMCH has begun several geriatric services, such as Comprehensive Geriatrics Assessment, integrated multidisciplinary geriatric team work in both geriatrics ward and outpatient services, polypharmacy management and preoperative consultation services. PUMCH-JHU Geriatrics Conference 2011, 2012 were held successfully and about 50 lectures on Geriatrics were given. **Conclusion :** We have got some achievements and experience on the way of developing geriatrics, together with challenges. Two key external determinants of our success include close collaboration with JHU. Introduction of modern American geriatrics and partnership with China Medical Tribune for dissemination of modern geriatrics across China. It is evident that modern geriatrics program development in China requires concerted efforts from medical community, Chinese government, and the whole Chinese society. **Keywords :** Modern Geriatrics, Collaboration Model

SS26 109-R-3

PARTNERSHIP BETWEEN CHINA MEDICAL TRIBUNE AND

LEADING ACADEMIC MEDICAL CENTERS IN PROMOTING GERIATRICS KNOWLEDGE DISSEMINATION IN CHINA

Guixiang ZHENG (*Editor Department, China Medical Tribune, China*)

Introduction : Established by the Ministry of Health with funding contribution from the Arthur F. Sackler Foundation, China Medical Tribune (CMT) is a major medical newspaper published weekly in China. CMT has a unique position in Chinese media related to healthcare. CMT reaches out to not only two million Chinese physicians, but also policy makers, business leaders, and the public with widespread influence on the medical community and a variety of healthcare issues across China. **Method :** Partnering with the Division of Geriatric Medicine and Gerontology at Johns Hopkins University School of Medicine and Peking Union Medical College Hospital, CMT has established a special series on geriatrics since October 1, 2010, the annual Senior Day in China. **Results :** Through this ongoing monthly special series, CMT has thus far introduced key principles and care models of modern geriatric medicine to the Chinese medical community. Innovative geriatrics care models described thus far include comprehensive geriatrics assessment, Program for All inclusive Care for the Elderly (PACE), hip fracture service, just to name a few. **Conclusion :** This presentation will describe how CMT has recognized the importance of the aging imperative and modern geriatric medicine to the Chinese medical community as well as the society at large, and why is important to build the partnership between CMT and the leading academic institutions. It will also describe future steps for further strengthening this partnership in promoting geriatrics program development and quality care for seniors throughout China. **Keywords :** media geriatrics Partnership

SS26 110-R

PROMOTING INTERNATIONAL EXCHANGE IN GERONTOLOGICAL RESEARCH AND EDUCATION IN THE ASIA-OCEANIA REGION

SS26 110-R-1

REGIONAL COLLABORATIONS LED BY NURSING AND ALLIED-HEALTH ACADEMICS, STUDENTS AND CLINICIANS ACROSS FOUR COUNTRIES

Yun-hee JEON¹, Younhee KANG² (*1. Nursing, The University of Sydney, Australia; 2. Division of Nursing Science, College of Health Sciences, Ewha Womans University, Korea*)

Introduction : Asia-Pacific region is home to over sixty percent of the global population, constituting over three billion people, with a stark contrast in their cultural, socio-economic, political and health attributes. Similar to other regions of the world many nations in the A-P region experience a significant growth in the older population. Despite its diversity there is much to be shared and to learn from each other in tackling health issues arising from the graying of population. **Method :** In this paper we present two cases of collaboration led by nursing and allied-health academics, students and clinicians across four countries in the A-P region. Case 1 is a one-off education and research collaboration between South Korean and Australian nurse experts with a focus to facilitate best practice in aged care (A-K project). Case 2 is an on-going collaborative endeavour- the Asia Pacific Alliance of Health Leaders (APAHL) -initially developed to improve students' learning and competencies through regional collaborations, with an aim to prepare them to be prospective health leaders. **Results :** The A-K project provided unique and far-reaching opportunities for Australian and Korean nurses and academics who

engage in research, policy development and provision of health and aged care services. The APAHL has been a great success in enriching students' learning and recently taken a first step of academic staff collaboration, beginning with exploration and exchange of each other's interests and expertise in research, education and practice in their own culture. Conclusion : Lessons for the keys to success in developing and sustaining regional collaborations will be discussed. Keywords : Asia-pacific, collaboration, education exchange

SS26 110-R-2

PROMOTING INTERNATIONAL EXCHANGE IN GERONTOLOGICAL RESEARCH AND EDUCATION: EXAMPLES BETWEEN AUSTRALIA AND MALAYSIA

Rahimah IBRAHIM¹, Keith HILL² (1. *Institute of Gerontology, University Putra Malaysia, Malaysia*; 2. *School of Physiotherapy, Curtin University, Australia*)

Introduction : Australia and Malaysia are close neighbours in the Asia/Oceania region. While there are many similarities between the two countries, there are also many differences. In terms of the ageing of populations, Australia has a rapidly ageing population (approximately 14% aged over 65 years), while Malaysia's population ageing is at an earlier stage (approximately 6% aged over 65). Method: Establishing and building international relationships for research and practice can be very rewarding, however relatively few practitioners and researchers are successful in achieving effective international collaborations. This presentation provides perspectives from clinician / researchers in Australia and in Malaysia on their learnings in establishing and building an effective bilateral collaborations. Results : Examples of collaborative research and clinical activity that the presenters have been involved in between Australia and Malaysia will be presented, and factors considered to facilitate or impede success in this type of relationship will be considered. One example that will be discussed is in building relationships in the falls prevention area. It is important to note that some factors that might limit direct translation of successful research or practice from one country to another, and this will be explored in the presentation. The potential role of the IAGG Asia/Oceania regional council will also be discussed. Conclusion : There are many benefits associated with international collaboration in research and practice. Informal and formal strategies should be developed to further strengthen emerging international collaborative activity in the ageing area between Australia and Malaysia. Keywords: international; collaboration; research

SS26 110-R-3

PT 3: PARTNERSHIPS IN RESEARCH AND EDUCATION IN GERIATRICS. ZUBAIR AMIN¹ MD MHPE; RESHMA MERCHANT¹ MBBS, MRCP; SAMUEL C SCHERER² MBBS, DGM 1 NATIONAL UNIVERSITY OF SINGAPORE; 2 UNIVERSITY OF MELBOURNE

Zubair AMIN¹, Reshma MERCHANT², Gerald Choon-huat KOH³, Samuel SCHERER⁴ (1. *Pediatrics, Yong Loo Lin School of Medicine, National University of Singapore and National University Health System, Singapore*; 2. *Yong Loo Lin School of Medicine, National University of Singapore and National University Health System, Singapore*; 3. *Saw Swee Hock School of Public Health, National University of Singapore, Singapore*; 4. *Department of Medicine, University of Melbourne (Royal Melbourne Hospital), Australia*)

Introduction : Global and regional demographic imperatives demand advancements in geriatric medical education. There is preliminary evidence that focused strategies may improve student knowledge and overcome negative attitudes to older patients. Early undergraduate

exposure to geriatric medicine and experiential and mentoring approaches may be effective. (1). Method : In 2009 the Yong Loo Lin School of Medicine, National University of Singapore completed the development of a novel two-week 'Foundations in Geriatric Medicine' Module within the second year curriculum. Australian experience contributed to strong bio-psycho-social, functional and experiential components of the teaching. The Module was significantly based around three small group interactive workshops/tutorials that employ real-life immersive experience methodologies to address core geriatric medicine competencies. Results : Pre-planned evaluation of the Module provides evidence that these educational strategies are effective in improving both the geriatric knowledge and attitudes of the students (1). Conclusion : This approach may have degrees of trans-cultural applicability within the region. (1) Koh GCH et al. *Ann Acad Med Singapore* 2012; 41: 383-9. Keywords : Geriatrics; education; attitudes

SS26 110-R-4

THE ROLE OF GERONTOLOGY JOURNALS IN THE ASIA-OCEANIA REGION

Lynne PARKINSON¹, Edward LEUNG², Anna HOWE³ (1. *Health Collaborative Research Network, Central Queensland University, Australia*; 2. *Faculty of Medicine, University of Hong Kong, Hong Kong*; 3. *Consultant Gerontologist, Australia*)

Introduction : In this presentation, the current editors of the Australasian Journal on Ageing and the Asian Journal of Gerontology and Geriatrics discuss their journals' contributions to promoting international exchange in research and education in the Asia-Oceania Region. Method : Both Journals began in the early 1980s, and the presentation begins with an account of their original objectives of developing a body of local knowledge based on research on ageing in regional countries. Publication in conjunction with professional associations in Australia and Hong Kong respectively advanced this objective and extended local readerships. Results : Factors driving wider regional interests are then canvassed, strategies for achieving this goal, such as expanding regional representation on editorial boards, are compared, and outcomes reported in terms of regional coverage in subscriptions, submissions and published papers, noting the extent of comparative research. Conclusion : Two very different challenges that now face the Journals will be addressed. The first is the impact of publishing in the digital age: both journals have readily embraced electronic access to greatly expand their regional reach, but e-access also opens up other, possibly competing avenues for research and educational exchange. The second challenge is more difficult: how can the journals provide a platform for exchange between academics and practitioners across a region that includes the world's oldest country, Japan, the rapidly ageing countries of north Asia and China, and some of the world's youngest countries such as Indonesia and the Philippines, where geriatrics and gerontology are as yet emerging disciplines. Keywords : electronic publishing

SS26 111-R

TRANSITION PROGRAMS: PERSPECTIVES FROM THREE CONTINENTS

SS26 111-R-1

AN AUSTRALIAN PERSPECTIVE ON TRANSITIONAL CARE
Leonard C. GRAY¹, Ian CAMERON², Maria CROTTY³ (1. *Centre for Research in Geriatric Medicine, The University of Queensland, Australia*; 2. *Rehabilitation Studies Unit, University of Sydney, Australia*; 3. *Rehabilitation, Aged and Extended Care, Flinders University, Australia*)

Introduction : Transitions from hospital to home are considered at a policy and service level to be events where older people are exposed to particular risk of adverse outcomes, including failure to recover, or placement in long term residential aged care. The Australian government responded to this risk by introducing a national program entitled "Transition Care Program" or TCP in 2006. In Australia, our research team undertook a 5 year program of research around the subject of transitions of care, with a particular focus on the TCP program. This presentation will provide an overview of our research and conclusions. **Method :** Studies were undertaken to examine the TCP program, including an evaluation of operation of the first year of the program, using data derived from the program and related data sets. In addition, a series of prospective studies examined the characteristics of the user group, and their outcomes. Several other projects examined other aspects of transitions. A project to develop quality indicators based on the interRAI Home Care assessment system was also completed. **Results :** The evaluations demonstrated that the program is well targeted to a high risk population, that functional recovery is generally achieved, and that the program appears to minimise the risk of transfer to long term residential care. A suite of quality indicators were successfully developed, which will be made available for general use in similar programs. **Conclusion :** Programs that are targeted at high needs patients in hospital are associated with good functional gains, and apparent minimisation of transfers to permanent residential care. **Keywords :** Transition; hospital; home

**SS26 111-R-2
TRANSITION PROGRAMS: A UNITED KINGDOM PERSPECTIVE**

Stuart G. PARKER¹, Pamela M. ENDERBY², Susan NANCARROW³
(1. SchHARR, University of Sheffield and Barnsley Hospital NHSFT, United Kingdom; 2. SchHARR, University of Sheffield, United Kingdom; 3. School of Health and Human Sciences, Southern Cross University, Australia)

Introduction : Intermediate care was introduced in England in 2000/01 in the NHS plan and National Service Framework for older people's services. It exists to serve a need for transition support between hospital and community care and caters for acute, post acute and rehabilitation care needs. **Method :** Over the past decade, we have examined the place and models, outcomes, costs and staffing of intermediate care services using systematic literature reviews, observational methods and collection of data from consecutive patients referred to intermediate care services across the UK. **Results :** Intermediate care services are safe, with few deaths. Older patients recovering from acute illness and with rehabilitation needs benefit most. The care can be provided in the patients home and in institutional settings. Evidence of the effectiveness of using non-clinical residential care settings and nursing homes as places of care for intermediate care services is sparse although these settings are widely used in practice. The majority of patients return home after an episode of intermediate care. No particular model of care is shown to be more or less effective. However the delivery of care by inter-professional teams may improve use of resources. National audit suggests that people with dementia are under-represented among intermediate care clients. **Conclusion :** The English intermediate care system has been integrated into the range of services provided for older people with acute and post-acute care and rehabilitation needs. Taken together, the results of multiple evaluations suggest that the system is safe and effective, and provides viable alternatives in acute and post-acute care and rehabilitation. **Keywords :** intermediate care, transition care

**SS26 111-R-3
CARE TRANSITIONS PROGRAMS IN THE UNITED STATES: COMMON THEMES, LESSONS LEARNED, AND BROADER APPROACHES**

Alicia I. ARBAJE (*Geriatric Medicine and Gerontology, Johns Hopkins University School of Medicine, USA*)

Introduction : Care transitions in the United States (US) are common, complicated, and costly. Suboptimal care transitions across care settings are a significant threat to patient safety, and older adults are at especially high risk for safety problems during care transitions. Older adults transition frequently to places other than home, are more vulnerable to the hazards of hospitalization, and follow more complex therapeutic regimens, all of which result in more needs after discharge. **Method :** Many different models targeting improvement in care transitions of older adults have been implemented and evaluated within the US healthcare system. We present a compilation of these models, highlight common themes, and discuss lessons learned and broader approaches for future interventions. **Results :** Care transitions programs in the US often target hospitalized patients with complex chronic conditions. Programs share similar elements, such as assigning patients a navigator to follow them through selected care transitions. Much of the research is on interventions focused on improving care transitions from hospital to home, and programs are often disease-specific or focus primarily on hospital-based discharge planning. There is very little research conducted on transitions to/from other settings. **Conclusion :** Comprehensive models are emerging from long-standing research in the US. There remains a need for innovative studies that take a systems approach to investigate factors threatening patient safety during care transitions in order to develop effective, feasible, and sustainable interventions across a variety of care settings. **Keywords :** care transitions, older adults

**SS26 112-R
STATE OF AGEING RESEARCH AND INNOVATION IN THE EUROPEAN REGION**

**SS26 112-R-1
EUROPEAN TRENDS IN BIOLOGICAL UNDERSTANDING OF AGEING AND APPROACHES FOR INTERVENTION**

Suresh RATTAN (*Laboratory of Cellular Ageing, Aarhus University, Denmark*)

In Europe, the research on the biological basis of ageing includes: (i) describing the phenotype of ageing at the level of organs, systems, tissues, cells, intra- and inter-cellular pathways, and molecules; (ii) unraveling the biochemical and molecular mechanisms of age-related changes; (iii) identifying genes that affect the quality and duration of lifespan; (iv) identifying the rate-limiting steps which lead to the emergence of age-related diseases; and (v) screening, testing and developing evidence-based effective interventions to modulate ageing and to extend the health-span. In Europe, different countries have different priority areas for research, which keep on changing and evolving in accordance with the changing social, political and economic trends. At the molecular biological level ageing is characterized by the stochastic occurrence and progressive accumulation of molecular damage. Failure of homeodynamics, increased molecular heterogeneity, altered cellular functioning and reduced stress tolerance are the determinants of health status, probability of diseases and the duration of survival. The inefficiency and imperfection of the maintenance and repair systems underlie the biological basis of ageing. Gene therapy, stem cells, and modulation through functional foods, nutraceuticals, cosmeceuticals and other life

style alterations are examples of ageing interventions. A promising healthy-ageing approach is that of hormesis by strengthening the homeodynamic ability of self-maintenance through transient and repetitive mild stress. Achieving the goal of extended health-span will depend on elucidating and exploiting successful and dynamic interactions among biological, clinical, psycho-social and environmental factors. Keywords : Biogerontology, healthspan, longevity

SS26 112-R-2
HEALTHY AND ACTIVE AGEING IN THE FOCUS OF EUROPEAN IAGG HEALTH GERONTOLOGY

Eva TOPINKOVA (*Department of Geriatrics, First Faculty of Medicine, Charles University, Czech*)

Introduction : European continent is aging. IAGG in collaboration with other professional bodies responds to this challenge and promotes a life-course approach to healthy and active ageing, which includes: promoting good health for all ages to prevent the development of chronic disease; early detection of chronic diseases to minimise their impact; creating physical and social environments that foster the health and participation of older people; and changing social attitudes to ageing. Redesign of care services to focus on prevention, early intervention, and active ageing is needed. Method : IAGG Global Aging Research Network of excellence (<http://www.garn-network.org>) has been launched recently, 253 research teams come from Europe. Results : This approach will facilitate participation of research teams in trans-national Europe-wide health research such as upcoming 'Horizon 2020 - the European Commission Framework Programme for Research and Innovation' 2012-2020. Research topics of high priority for IAGG were frailty, dementia and long-term care. In the frame of "2012 year of Active Ageing and Intergenerational Solidarity" the pilot European Innovation Partnership on Active and Healthy Ageing was started focusing on triple wins for Europe: (1) enabling EU citizens to lead healthy, active and independent lives while ageing; (2) improving the sustainability and efficiency of social and health care systems; (3) boosting and improving the competitiveness of the markets for innovative products and services, responding to the ageing challenge and creating new opportunities for businesses. Conclusion : Overall, healthy and active ageing stands firmly on European agenda. IAGG-European Region has to accept active partnership involving all three sections in these challenging activities. Keywords : Healthy Ageing, health gerontology, European Region

SS26 112-R-3
SOCIO-BEHAVIOURAL FACTORS FOR HEALTHY AND ACTIVE AGEING

Dorly J.H. DEEG¹, Clemens TESCH-ROEMER² (*1. LASA, VU University Medical Centre Amsterdam, Netherlands; 2. Social and Behavioural Sciences, German Centre on Ageing, Germany*)

Introduction : Since its early beginnings, socio-behavioural research on ageing has not only striven to describe the course of ageing and to understand basic mechanisms of ageing processes, but also to improve the process of ageing by changing the living situations of elders. One challenge of socio-behavioural ageing research concerns the question whether active ageing is possible and if so, which social and personal factors enable individuals, social groups, and societies to grow older healthily and actively. Method : We will give an overview on the socio-behavioural ageing research in Europe concerning this topic. Results : We start with discussing the conceptual foundations of the construct 'active ageing' and the relation between active ageing and quality of life, in which health, social integration, and participation are distinguished. The foundations for active ageing are laid in early life.

In particular education yields positive effects which are visible in old age. Nevertheless, also in middle and late adulthood interventions have been demonstrated to be possible (e.g. changing health behaviour, vitalizing social integration, stimulating volunteer activities). It should be emphasized, however, that the efficiency of interventions decreases with advancing age. Finally we discuss how societal frameworks may set the conditions for active ageing. Results from comparative surveys show that the extent of welfare state support - through social security systems like unemployment protection, pension system, health care system, and long-term care system - seems to be connected to opportunities for active ageing. Conclusion : European social and behavioural research on ageing is in good shape to address societal challenges. Keywords : Social, Behavioural, Active Ageing

SS26 112-R-4
GLOBAL POLICY ON AGEING AND THE HUMAN RIGHTS OF OLDER PERSONS

Astrid STUCKELBERGER¹, Astrid STUCKELBERGER² (*1. University of Geneva Public Health School, Faculty of Medicine BP CMU-IMSP 1211 Geneva 4 Switzerland, Switzerland; 2. Faculty of Medicine, University of Geneva, Switzerland*)

Introduction : The lack of progress globally in addressing old age and persistent problems of inequality and social exclusion of older persons in policy underlines the importance of addressing the human rights of older persons. Yet, there are many situations where older persons suffer from 'ageism' and multiple discrimination. Method : An analysis of global policies on ageing in the United Nations and at the European Union was conducted through a system analysis, a policy review, and the collection of documents and texts related to global policy and human rights of older persons. Results : Ageing and the human rights of older persons are rarely mentioned in the United Nations resolutions and agenda. Global ageing is not part of a regular budget in the vast majority of agencies. To date, no comprehensive international convention exists on ageing. Furthermore, there are slow progress and conflicting views on a Convention on older persons or a UN structure on ageing. On the other hand, the EU has, through its Charters and regulations been a pioneer in addressing older persons rights. Conclusion : Recently, encouraging steps have been taken at the United Nations Human Rights Council with new reports on the situation of older persons: extreme poverty, right to health, general CEDAW recommendation on older women, an open-ended working group and a consultation on human rights of older persons. A lot remains to be done to combat exclusion and discrimination of old age in global policies and to fully integrate older persons in the global agenda and the post-MDGs. Keywords : Global ageing, Human rights of Older Persons, United Nations

SS26 114-S
LUCKY AND UNLUCKY COHORTS AND LATER LIFE - CONTEMPORARY AND FUTURE OLD AGE IN DISTINCT WELFARE REGIMES

SS26 114-S-1
AGEING BABY BOOMERS AND COHORT EQUITY IN AUSTRALIA

Hal KENDIG (*Centre for Research on Ageing Health and Wellbeing, Australian National University, Australia*)

Introduction : This paper examines inter and intra-cohort equity among Australian baby boomers in the context of socioeconomic developments and public policy debates. Data were collected at a time of economic and political stress and amid concerns about retirement

incomes and the costs of population ageing. Method : Data were drawn from two sources. The Australian Survey of Social Attitudes (AuSSA) 2009-2010 (n=1525) provided generational views on between-cohort equity for baby boomers (aged 50 to 64 years) compared to 'now older/retired people' and to 'younger people'. The Life History and Health Survey 2011-12 (n=1249) provided comprehensive information on intra-cohort inequalities through investigating opportunity and disadvantage from childhood through late middle age for baby boomers aged 60 to 64 years at the time. Results : AuSSA data: overall boomers were perceived to have had had better life-long opportunities compared to those who were already 'older/retired' but worse than for those who were younger. Views differed between age groups and in terms of gender, income, and other social differences. Life history data: indicators of well-being on entry to later life were found to vary according to socioeconomic position in childhood and later occupational attainment and midlife health. Conclusion : Australia's welfare system is evolving during an uncertain economic outlook and rising concern for the adequacy of retirement incomes and fiscal sustainability along with increasing life expectancy and population ageing. Accumulating benefits in employer-funded superannuation will only partially benefit the baby boom cohort while a means-tested old age pension continues with 'pay as you go' tax funding. Keywords: Australia, baby boomers, intergenerational equity

SS26 114-S-2

ARE LUCKY BABY BOOMERS UNLUCKY IN LATER LIFE? A COHORT PERSPECTIVE ON AGING AND INEQUALITY

Gyounghae HAN (*Child Development & Family Studies, Seoul National University, Korea*)

No Abstract

SS26 114-S-3

INCOME DISTRIBUTION AND MOBILITY OVER THE LIFE-COURSE 1970-2005 - COMPARING FINNISH COHORTS 1905-1980

Marja VAARAMA¹, Pasi MOISIO¹, Susan KUIVALAINEN¹, Jani EROLA² (*1. Division of Welfare and Health Policies, National Institute for Health and Welfare, Finland; 2. Department of Social Research, University of Turku, Finland*)

Introduction : Birth cohorts born 1945-1950 were exceptionally large in Finland. This so-called baby boom generation entered labour market at the turn of 1970s, a period of welfare state expansion and period that is claimed to have been exceptionally good for young employees entering working life. This has evoked anecdotes on the "lucky baby boomers". In this paper we study in depth this fortunate generation hypothesis. Method : We utilize the Longitudinal Census Data 1970-2005 of Statistics Finland. It is a census-based register- dataset of all the consequent censuses collected gathered since 1970 until 2005. With this data we are able to follow how the cohorts born 1905-1980, who entered the labor markets during 1970-2005, and compare their socioeconomic trajectories over several decades. Results : The baby boom generation had a clearly higher position on the income distribution in their twenties, compared to those born the 1970s or later. However, when observing the life course trajectories, we can see that the good start of the baby boomers did not last. Already at the age of 35, the position of the baby boomers on the income distribution was not much different from that of the cohorts born before and after them at the same age. Conclusion : A general change during 1970-2005 seems to be that the under 30 years old age-groups have moved downwards, and the over 55 years-old age-group upwards, on the income distribution. Expansion of tertiary education, prolonged working careers and maturation of work-pension system are most

likely explanations for this shift. Keywords : Cohorts, life-course, welfare state

SS26 114-S-4

LIFE COURSES AND SOCIAL SECURITY IN LATER LIFE OF THE COHORTS 1936-1965 ? ARE THE GERMAN BABY BOOMERS WINNERS OR LOSERS?

Andreas MOTEL-KLINGEBIEL, Julia SIMONSON (*German Centre of Gerontology, Germany*)

Introduction : This paper addresses life courses of three German birth cohorts as well as their current and future outcomes in later life: the German war cohort 1936-45, the post-war cohorts of 1946-55 and the German baby boomer cohort 1956-65. Focusing on the German baby boomers and their altered life courses, resources and expectations, it is asked whether they, or relevant parts of them, are winners or losers of the ongoing economic changes and welfare state reforms. In a social policy perspective it is asked what societal, especially welfare state policies are necessary to deal with inter- and intra-cohort inequalities and inequity deriving from that. Method : To examine this question, we analyze longitudinal life course data, which combines information from survey and administrative data (namely the German Socio-Economic Panel and the Sample of Active Pension Accounts), and has been prepared within the joint research project 'Life Course, Ageing and Well-Being (LAW)'. Life courses of the baby boomers, now in the middle age, are projected until they reach age 67. Results : Results show more heterogeneous life courses and an ongoing decline in pension incomes with increases in intra-cohort inequality among the German baby boomers in the time to come. Conclusion : German baby boomers will probably be economically disadvantaged on average in future old age. Rising inequalities pose a challenge for welfare state policies. However, this comes along with a greater degree of self-government over life courses and living arrangements which may positively affect their quality of life. Keywords : future old age, lucky cohorts, life courses

SS26 115-S

WISDOM ACROSS CULTURES: AN ANCIENT CONCEPT IN DIGITAL AGE

SS26 115-S-1

WISDOM AND OLD AGE: A PROCESS VIEW

Shih-ying YANG (*Educational Policy and Administration, National Chi Nan University, Taiwan*)

Introduction : Wisdom enables us to live good lives which are not only satisfying and meaningful to ourselves but also generate positive effects for others. We tend to evaluate whether wisdom has been manifested through a person's endeavor by judging whether the results has helped both the person and those affected by the endeavor to live good lives. Hence, we must explore wisdom as it is manifested in real-life contexts. Method : I define wisdom as a real-life process manifested when a person integrates conflicting ideas, and embodies those integrated ideas in actions that generate positive effects for oneself and others. Rather than an individual trait, wisdom is a process manifested through the interaction between an individual and the real-life situation the individual faces. In real life, wisdom can be manifested in at least three forms: wisdom which (1) successfully resolves real-life problems and challenges, (2) manages one's overall life course in a satisfying way, and (3) contributes to the common good and transforms the good life. Results : The last form requires the longest period of time to manifest; this may explain the common association of wisdom with old age. Past empirical research has

focused on the other two forms of wisdom, which have a strong association with middle age. Conclusion : I use Mother Teresa's endeavor to embody an integrated idea? serving God through serving the poorest of the poor, which generated positive effects for both herself and others, and has transformed our conception of a good life, as an example of this form of wisdom. Keywords : Wisdom, Old Age, Good Lives

SS26 115-S-2

WISDOM OF EAST AND WEST: HISTORICAL INTERPRETATIONS AND PSYCHOLOGICAL DEFINITIONS
Masami TAKAHASHI (*Psychology, Northeastern Illinois University, USA*)

Introduction : One of the shortcomings in the wisdom field is that the researchers tend to ignore a potential impact of cultural contexts. That is, most of the intellectual archeology and implicit theory research involved only traditional Western literature (e.g., the Bible) and the Western populations (e.g., Americans). In this presentation, I will provide "archeological" evidences of wisdom documents both in the Western and Eastern civilizations and claim that in general the former emphasizes rationality while the latter is more concerned with affect/personality aspect of wisdom. Method : An "intellectual archeology" refers to excavating bodies of ancient literature to discover their traditional meanings while implicit theories can be discovered by simply asking people what the concept means to them. Results : The Western tradition offers an articulated yet relatively narrow definition of wisdom whereas in the East wisdom is defined more broadly with less articulation. In particular, the Eastern tradition emphasizes two unique principles: relatedness and void. Further, these differences are also implicated in how people in the respective cultures today conceptualize wisdom. Conclusion : Based on these investigations, a culturally inclusive developmental framework of wisdom will be presented with an emphasis on broadly defined Eriksonian interpretations. Keywords : wisdom inclusive developmental

SS26 115-S-3

WHAT PREDICTS WISDOM-RELATED PERFORMANCE? : FINDINGS FROM JAPAN
Midori TAKAYAMA (*Science and Technology, Keio University, Japan*)

Introduction : Wisdom has long been mentioned in developmental psychology as a favorable phenomenon associated the second half of life. Aside from research into the semantic meaning of wisdom and implicit theories about the attributes of wise persons, there have been a few empirical attempts to investigate wise judgment and the factors and processes that can be considered as antecedents, correlates, and consequences of the development of wisdom-related knowledge, especially in Asian countries. Method : In the present study, we examined the effects of social and psychological factors on wisdom using the Japanese version of the assessment of wisdom-related knowledge (Smith, & Baltes, 1990). The Participants of 197 Japanese men and women (60-85 years old) responded to eight wisdom-related tasks (four life planning tasks and four life review tasks) and completed the test battery involving personal characteristics (ex., intelligence, social intelligence, and personality traits), facilitative experiential contexts (education and former occupation), and social / daily activity (ex., present job, instrumental activity of daily living). Results : As expected, the analysis of life planning tasks revealed that wisdom score was related to intelligence, social intelligence, years of education, and instrumental activity of daily living, whereas the

analysis of life review tasks revealed that wisdom score was significantly related to intelligence and personality traits such as extroversion and agreeableness. Conclusion : The results suggested that wise judgment concerning life planning may be relatively strongly related to cognitive factors, whereas wise judgment concerning life review may be related to personality traits or emotional factors. Keywords : wisdom-related knowledge, psycho-social predictors

SS26 115-S-4

WISDOM AND WELL-BEING: AN EXTREME CASE ANALYSIS OF LAYPEOPLE'S CONCEPTIONS OF WISDOM AND WISE PERSONS, AND THE ROLES OF SOCIAL NETWORKS
Hunhui OH (*Sociology and Criminology & Law, University of Florida, USA*)

Introduction : Despite its role as a virtue for the cultivation of human growth, well-being, and greater common goods, wisdom is still a relatively new scientific construct in need of a generally applicable definition which can encompass its dynamic interplay in interpersonal and cultural contexts. This study covered new ground for its unique application of social network analysis to examine the relation among respondents' wisdom descriptors. Method : Using a sample of older and younger adults from the US and Canada (N=211), I investigated how adults with high scores on the cognitive, reflective, and affective dimensions of the Three-Dimensional Wisdom Scale (3D-WS) understand the concept of wisdom in contrast to participants with low scores on all three dimensions and how wisdom is related to well-being. Results : The findings showed that participants with high scores on all three wisdom dimensions tended to characterize wisdom as experiential knowledge and an understanding of life that was gained through learning from experiences and from others and helped them to understand other people's perspectives to develop pro-social attitudes and behavior and achieve interpersonal harmony. Those who scored low on all three wisdom dimensions also tended to characterize wisdom as (experiential) knowledge and an understanding of life but more for self-centered reasons, such as making the right decisions and knowing how to better one's situation rather than to better the situation of all. Conclusion : Overall, wisdom scores were positively related to subjective well-being, indicating that wisdom might benefit the individual through the development of eudemonic, self-transcendent welfare. Keywords : Wisdom, culture, optimal aging

SS26 116-R

LONG-TERM CARE - COUNTRIES IN THE PROCESS OF SEARCHING FOR SUSTAINABLE LONG TERM CARE POLICY STRATEGIES

SS26 116-R-1

QUO VADIS GERMANY'S LONG TERM CARE INSURANCE (LTI) ?
Gerhard NAEGELE (*Institute of Gerontology, University TU Dortmund, Germany*)

Introduction : Next year Germany's long term care insurance - which is the fourth pillar of the German social security system and which is organized according to the Bismarck model of social insurance - is celebrating its twentieth birthday. This seems to be a good time for an interim evaluation. This paper aims at informing about both (1) details of this "success model LTCI" and (2) reforms which are necessary in the near future. Since January 2013 the fourth reform is on its way. Method : This paper is based on a literature review and on secondary data analysis. Results : For most Germans the LTCI is regarded as a

success-model. However, this model needs to be adapted to economic, demographic and structural changes. The latter refers to persons being in need of long term care and their families. Significant challenges in the future are, for example, (1) stabilizing the financial basis of the LTCI, (2) helping caring families with new kinds of social services and (3) improving the benefits for people suffering from dementia. Conclusion : The LTCI in Germany is indeed a success model. If it is adapted regularly to changing framework conditions it can be "good practice" for other countries which have to manage the rising need of long term care among an ageing population. Keywords : long term care insurance, reforms in German care policy

SS26 116-R-2

TURKEY'S CHANGING DEMOGRAPHIC PROFILE AND NEED FOR SOCIAL CARE INSURANCE

Ismail TUFAN (*Gerontology Department, Chair, Akdeniz University, Turkey*)

Introduction : Demographic changes are a global phenomenon that affect societies today and promise to have very important impacts in the future. Turkey, from a socio-economic viewpoint, must be prepared for this period. While at present it has a young population, in light of its changing elderly profile, Turkey's social policies are in need of new information and innovative concepts. Based on a culture of solidarity and reliance on applied gerontological knowledge, "social care insurance" as tested in industrialized nations must be implemented. Method : GeroAtlas, a longitudinal study carried out between 2000 and 2012, provides empirical data for this research. Results : Results from GeroAtlas' 3,500 respondents from across Turkey suggest that roughly 80% of Turkey's elderly population require care insurance. Conclusion : In view of Turkey's 1.75 million bedridden care-dependent persons, it seems possible that implementation of a social care insurance program could help to establish better care and elderly services. Keywords : social care, social care insurance, care, applied gerontology

SS26 116-R-3

CURRENT LTC CHALLENGES IN ITALY

Giovanni LAMURA¹, Carlos CHIATTI¹, Francesco BARBABELLA¹, Mirko DI ROSA² (*1. Centre for Socio-Economic Research on Ageing, INRCA - Italian National Institute of Health and Science on Ageing, Italy; 2. Scientific Direction, INRCA - Italian National Institute of Health and Science on Ageing, Italy*)

Introduction : The rapid ageing of the Italian population is reflected by a growing demand for LTC services. As families are facing increasing difficulties in providing everyday elder care, the pressure on formal services is growing. At the same time, the current financial crisis is making the public response less and less able to provide the needed resources. As a consequence, the current approach of indirect public support to the private employment of migrant care workers (MCWs) through cash-for-care schemes is likely to continue. Method : The presentation is based on a detailed analysis of empirical findings and policy documents, outlining the crucial features characterising the Italian LTC system and describing also some of the main differences existing between different regional care approaches. Results : After a decade of increasing availability of publicly funded LTC services for older people, in some sectors, such as integrated home care, the audience of recipients has started receiving a lower number of hours of care. The mainly monetary focus of the Italian care regime has a clear incentivizing effect to employ foreign migrant care workers, often on an undeclared basis, to provide everyday elder care in Italian homes. Another crucial characteristic is the strong heterogeneity of Italian

regions, according to which today different clusters of regions can be identified, with strong inequalities in LTC provision. Conclusion : The lack of a coherent national LTC policy has been recently accompanied by an increasing focus on cash-for-care payments, which in the future will require a stronger attention to care quality issues. Keywords : Italy, long-term care

SS26 116-R-4

POLICY FOR LONG- TERM CARE INSURANCE AND THE STATUS OF LEGISLATION IN TAIWAN

Han-ping HUANG¹, Ku-yen LIN² (*1. Institute of Gerontology, Technical University of Dortmund, Germany; 2. Department of Social Sciences, National Open University, Taiwan*)

Introduction : Base on the definition from World Health Organization (WHO), Taiwan has become the ageing society in 1993; expectedly will entered aged society and superaged society in 2018 and 2025 respectively. With a well-deserved reputation, Taiwan earns a good service and high quality on its comprehensive Health Care Insurance around the world. However, facing the rapid demographic change, the current social security schemes would not satisfy the demand on long-term care service. Method : Since 2007 the Executive Yuan has established the Long- term Care Decade Plan, however, besides the economically disadvantaged family, the care receiver has to shoulder the copayments, which will occur the care receiver withdrawing out of the program. With the principle of social solidarity and intergenerational solidarity and the autonomous funds on social insurance scheme, by using the pay-as-you-go system, the establishment of long- term care insurance will ensure the national basic care need. Results : In order to draft a Long- term Care Insurance Act, which satisfy the demand on care service and conform the pattern in national health, currently, the Preparatory Task Force on Long-term Care Insurance extensively collects the opinions from the relative social welfare communities and holds a public hearing to seek the internal consensus on long-term care system. Conclusion : This article will discuss the following two issues: 1. To introduce the preparatory process and current situation; 2. Illustrate the contents and problem on Long-term Care Insurance Draft. Keywords : Long- term Care Insurance, Taiwan, demographic change

SS26 118-S

QUALITY OF LIFE IN OLDER ADULTS IN JAPAN AND BRAZIL

SS26 118-S-1

DETERMINANTS OF PHYSICAL HEALTH AND QUALITY OF LIFE IN OLDER ADULTS IN BRAZIL

Emilio MORIGUCHI (*Internal Medicine, UFRGS, Brazil*)

Introduction : Japanese immigrants from Okinawa living in Brazil have higher mortality from cardiovascular diseases and have their mean life expectancy shortened compared to their counterparts living in Japan. A cross-sectional study comparing Okinawans living in Okinawa (OO) and Okinawan immigrants living in Brazil (OB) was designed to characterize the dietary factors that could interfere with longevity. Method : 234 OO and 160 OB (45-59 y.o.) were recruited for medical and dietary history, blood pressure measurement, ECG, blood tests, and 24 hours food/urine collection. Results : OO presented 37% less obesity than OB. OO presented 50% less systemic hypertension than OB. OB used 3 times more anti-hypertensive medication than OO. Meat intake was 34% higher in OB than OO, while, fish intake was 7 times higher in OO than OB. Serum potassium levels were 10% higher in OO than OB. Urinary taurine (index of

seafood intake) was 43% higher in OO than OB. Urinary isoflavones (index of soy products intake) were significantly lower in OB than in OO. Among the plasma phospholipid fatty acids, EPA (20:5) and DHA (22:6) were 2 and 3 times higher in OO than OB, respectively. The rate of ischemic ECG changes in OO was only 50% of that of OB. There were no differences in the smoking rate between OO and OB. Conclusion : The results of this study suggest that coronary risk factors and cardiovascular health are not regulated only by genetic factors and that the impact of lifestyle (mainly diet) can be large enough to modulate the expression of genes. Keywords : Nutrition, longevity, dietary habits

SS26 118-S-2

THE QUALITY OF LIFE COMPARISON BETWEEN JAPANESE AND BRAZILIAN OLDER ADULTS

Priscila Yukari SEWO SAMPAIO (*Department of Human Health Sciences, Kyoto University Graduate School of Medicine, Japan*)

Introduction : Evidence showed that the quality of life (QOL) of older people differed considerably between societies due to the influence of the welfare systems; social indicators and wealth of the nation. Hence our study aimed to investigate the QOL in two different cultures, comparing the QOL between Japanese and Brazilian older adults. Method : We investigated a variety of cross-cultural studies regarding QOL in Japanese and Brazilians older adults. We selected the studies that used WHOQOL assessments because they were developed to be applicable cross-culturally. Results : In WHOQOL-100, Japanese had better scores in the physical and independence domains, while Brazilian had better score in the overall QOL and in the psychological, social, environment and spiritual domains. In WHOQOL-BREF, Brazilians had better scores in the psychological and the social domains, yet there were no statistical differences in other domains. Regarding the WHOQOL-OLD, the Brazilian had better scores in all domains (sensory abilities, autonomy; past, present and future activities; social participation; death and dying; and intimacy domains. Conclusion : Even though Japan is more developed than Brazil, the QOL comparison showed higher scores for Brazilians in most WHOQOL assessments and domains; the most evident difference was observed in the social domain. Therefore, we suggest improving wellbeing for Japanese older adults by restoring the human relations, engaging the elder in community, and providing opportunities to perform social roles and to exchange social support. Keywords : Quality of Life, Japan, Brazil

SS26 118-S-3

COMPARISON OF PHYSICAL HEALTH AND QUALITY OF LIFE IN OLDER ADULTS IN JAPAN AND BRAZIL

Ricardo Aurelio Carvalho SAMPAIO (*Human Health Sciences, Kyoto University Graduate School of Medicine, Japan*)

Introduction : Various factors are surrounding the physical health (PH), such as physical activity, physical fitness, and functional independence. One of the most investigated is the physical activity; evidence suggests that a regular practice preserves health, vitality, and social functioning, and postpones eventual functional disabilities, consequently increasing quality of life (QOL). Both PH and QOL are important issues among aged population; however, the influence of environment and lifestyle on those factors remains to be well clarified. Therefore, the purpose of this symposium was to discuss the differences of PH and QOL in Japan and Brazil and its associated factors in a cross-cultural perspective. Method : We analyzed PH and QOL in Japanese and Brazilian older adults and compared the factors that affect them. Results : We found that overall QOL scores in Japan

were lower than that found in other countries, including Brazil, but they presented better scores in the physical domain. Studies stated that QOL varies according to the activity level; in our observation, Japanese had a healthier lifestyle than Brazilian, but were lacking social activities as confirmed by the low scores in social domains. Conclusion : Environmental, cultural, and lifestyle factors are responsible for the variation in PH and QOL between Japanese and Brazilian older adults. We suggest the implementation of strong health improvement policies in both countries, extending the PA properties beyond the physical component, exploring the social component as well. Keywords : Brazil; Japan; physical health.

SS26 124-R

NEW DIGITAL DYNAMICS OF AGEING: TOOLS TO FACILITATE POLICIES AND PRACTICES TO ENHANCE WELL-BEING IN LATER LIFE

SS26 124-R-1

MALNUTRITION IN OLDER PATIENTS: DESIGNING A DIGITAL NUTRITIONAL MANAGEMENT SYSTEM THROUGH A MULTIDISCIPLINARY AND PARTICIPATIVE PROCESS

Paula MOYNIHAN (*Institute for Ageing and Health, Newcastle University, United Kingdom*)

Introduction : Forty per cent of older hospital patients in the UK are at risk of malnutrition whilst in hospital. To help address this, the mappal study aimed to re-design the food provision and nutritional management service for older patients using a multidisciplinary co-design process. Method : A research team comprising sociologists, designers, nutritionists and computer scientists worked alongside users (e.g. healthcare assistants, nurses, dieticians, older people) in an iterative co-design process. First, an ethnographic study identified the factors contributing to hospital malnutrition. These findings informed opportunities for service improvement which were developed into concepts for a novel nutritional management system. On-going feedback was elicited using qualitative and workshops methods. The concepts were developed into a prototype for a digital nutritional management system. Results : The factors that contributed to malnutrition identified included inefficient food ordering systems, lack of mealtime assistance, shortcomings in nutritional screening and monitoring, limited communication between staff and lack of accountability in nutritional care. These informed the development of the prototype, 'hospitalfoodie'; a nutritional management system comprising interactive, interlinked patient and staff digital interfaces. hospitalfoodie enables monitoring and tracking of food intake against individual targets in real time and prompts remedial action when a patient's nutritional requirements are not met. The system enables hospital-wide nutritional performance to be tracked and audited. Conclusion : A novel combination of qualitative and user-iterative design methods has produced a prototype digital nutritional management system that, based on qualitative evidence, is amenable to embedding in practice. Further research will test the system in a simulated clinical setting. Keywords : older patients hospitals nutrition

SS26 124-R-2

NEW DIGITAL DYNAMICS OF AGEING: TOOLS TO FACILITATE POLICIES - THE GREAT BRITISH PUBLIC TOILET MAP

Jo-Anne BICHARD, Gail RAMSTER (*Helen Hamlyn Centre for Design, Royal College of Art, United Kingdom*)

Introduction : The Tackling Ageing Continence through Theory Tools

and Technology (TACT3) is a 42 month multidisciplinary collaborative research programme whose overall aim was to reduce the impact of continence difficulties for older people. One of TACT3's outcomes is a digital resource for the many older people who need frequent access to toilet facilities. Method : The Great British Public Toilet Map (GBPTM) is an innovative information and service resource that utilises open data to provide information for people to access toilet provision when away from home. This interactive web based toilet locator, also acts as a campaign tool enabling citizens to request local authorities to make their data available. The publication of open data is in line with UK government policy. Results : Consolidating the information within one resource, that is accurate and frequently updated with key information, is designed to give confidence to people with continence needs. Mapping provision will enable toilet providers to identify areas of over and under provision, therefore enabling key planning decisions to be made at a local and regional level. In addition a temporal aspect to the map will highlight areas in which evening provision could be considered more problematic. Conclusion : Public toilet provision is costly and often sees no return on investment. Various attempts to privatise provision have not been successful. By consolidating the information on toilet provision through local authorities and key businesses, members of the public can see that their needs are being met through a partnership of services. Keywords : Ageing Continence Toilets

SS26 124-R-3 KEEPING SILVER SURFERS SURFING - DIGITAL INCLUSION AND AGEING WELL

Leela DAMODARAN¹, Wendy OLPHERT², Jo-Anne BICHARD³
(1. Department of Information Science, Loughborough University, United Kingdom; 2. Information Science, Loughborough University, United Kingdom; 3. Helen Hamlyn Centre for Design, Royal College of Art, United Kingdom)

Introduction : With expansion of digital services there are many challenges in promoting and achieving the widest possible digital participation. In particular digital technologies have the potential to enhance the quality of life for many older people, principally helping them to retain their independence. Keeping older people digitally 'connected' for as long as possible has wide ranging benefits to them as individuals, to societies and to our economies. Where web services are widely available many older people are already successfully using these technologies. However, their ability to sustain such usage in the face of the barriers identified (Sandhu et al, Nominet report), will depend upon the availability of appropriate learning opportunities and support. Method : 'Sus-IT' project (Sustaining the use of IT by older people to promote autonomy and independence) research is providing a rich understanding of what older people require to enable them to remain connected as they age. It has developed a comprehensive understanding of the nature of disengagement for older ICT users, developed and implemented innovative, user centred methods of engaging older people, used those tools in technology design including a framework to enable ICT users to access relevant assistive technologies and through a participative process developed a realisable specification for universal learning and support services for older ICT users, reflecting their diverse needs. Results : The argument for digital access being an important and integral part ageing well is confirmed by the research findings and is supported by the experiences of older people in Belgium and Sweden. The demand for digital inclusion exists now amongst older ICT users and it is likely to grow significantly as the next generation of much more ICT literate surfers start to encounter the barriers to being active online that become more prevalent in older age. Conclusion : The challenge now is how user

centred approaches can be used to inform technology and service design and ICT learning and support initiatives so that older ICT users can more easily remain active and independent citizens enjoying the benefits of digital inclusion ? Acknowledgements: This paper emerges from research conducted as a part of the Sus-IT Research Project which is funded by the ESRC's New Dynamics of Ageing Programme (Grant Number RES-353-25-0008) and led by Leela Damodaran and Wendy Olphert at Loughborough University, UK. Keywords : Ageing digital participation, older people

SS26 124-R-4 THE NEW DYNAMICS OF AGEING RESEARCH PROGRAMME

Alan WALKER (*Sociological Studies, University of Sheffield, United Kingdom*)

The main purpose of this short paper is to introduce the New Dynamics of Ageing (NDA) Research Programme - the largest and most complex of its kind ever mounted in the UK. The scope and coverage of the Programme are outlined and the core principle of multi-disciplinarity is discussed. Finally the important role of the digital agenda in the NDA Programme is explained. Keywords : Multi-disciplinarity, ICTs, Active ageing

SS26 125-C THE FALLS AND FRACTURES CLINIC: A PRACTICAL GUIDE TO IMPLEMENT ONE

SS26 125-C-1 HOW TO QUANTIFY RISK FOR FRACTURES, AND ACT ACCORDINGLY

Alexandra PAPAIOANNOU¹, Gustavo DUQUE², Manuel MONTERO-ODASSO³ (1. Geriatric Medicine, McMaster University, Canada; 2. Ageing Bone Research Program, The University of Sydney, Australia; 3. Geriatric Medicine, University of Western Ontario, Canada)

This presentation will summarize current evidence based recommendations for fracture prevention in the clinical setting. This symposium presentation will review treatments for individuals at high risk with prior hip, spine and non-vertebral fractures. We will review the evidence of therapeutic options for these individuals and discuss the benefits, harms and length of treatments. Risks to be discussed include osteonecrosis of the jaw (ONJ) and atypical fractures. Risk assessment for fracture will be reviewed. Keywords : Falls, Fractures, Osteoporosis

SS26 125-C-2 PREVENTING FALLS AND FRACTURES. AN UNIFIED APPROACH

Manuel MONTERO ODASSO (*Internal Medicine and Geriatrics, Gait and Brain Lab, University of Western Ontario, Canada*)

Introduction : Falls and fractures are a major issue in health care for the elderly. With ageing, the incidence of falls and osteoporosis and thus, osteoporosis fractures, increases dramatically. Several falls risk factors have been identified but it is not clear if all the risk factors should be targeted with the same intensity. Typically, the treatment of osteoporosis has been intended for increasing bone mineral density and decreasing fracture rates without a clinical approach to the prevention of falls, which, in geriatric populations, are the major factors for morbidity and mortality. Method : Current evidence indicates that the treatment of osteoporosis in older populations should include not only the gain in bone mass, but also the prevention of falls.

Recently, a new approach to the assessment and intervention of osteoporosis and falls has been implemented. This intervention consists of a risk quantification that combines both risk of falls and fractures. Depending on the level of risk, an intervention plan is designed. We consider this a most effective approach for the Geriatric population which could be easily implemented in geriatric clinics with outstanding results on the quality of care for the elderly. Keywords : gait, falls , vitamin D

SS26 125-C-3

THE FALLS AND FRACTURES CLINIC: A PRACTICAL GUIDE TO IMPLEMENT ONE

Gustavo DUQUE¹, Alexandra PAPAIOANNOU², Manuel MONTERO-ODASSO³ (1. Ageing Bone Research Program, The University of Sydney, Australia; 2. Geriatric Medicine, McMaster University, Canada; 3. Geriatric Medicine, University of Western Ontario, Canada)

The treatment of osteoporosis has been mostly intended for increasing bone mineral density and decreasing fracture rates without a clinical approach to the prevention of falls, which in geriatric populations are the major factors for morbidity and mortality. Current evidence has shown that the treatment of osteoporosis in older population should include not only the gain in bone mass but also the prevention of falls. Recently, a new approach to the assessment and intervention of osteoporosis and falls has been implemented, the "Falls and Fractures Clinic". Considering that both falls and fractures constitute major geriatric syndromes, these clinics are considered a major setting of practice and an important tool to increase the profile of geriatricians within the medical community. The suggested model for Falls and Fractures consists of a model of risk quantification that combines both risk of falls and fractures. Depending on the level of risk an intervention plan is designed. Method : In this symposium, the participants will be provided with a general overview on current evidence and practical recommendations for falls and fractures prevention in the clinical setting. Finally, a proposed model for a Falls and Fractures clinic that includes a comprehensive assessment and care planning will be presented. Keywords : Falls, Fractures, Osteoporosis

SS26 126-C

ORAL HEALTH AND ORAL HEALTH-RELATED QUALITY OF LIFE IN OLDER ADULTS: THE IMPACT OF CULTURE AND COGNITIVE FUNCTION

SS26 126-C-1

COGNITIVE FUNCTION AND ORAL HEALTH-RELATED QUALITY OF LIFE IN OLDER ADULTS

Kyung Hee LEE¹, Bei WU¹, Brenda L PLASSMAN² (1. School of Nursing, Duke University, USA; 2. School of Medicine, Duke University, USA)

Introduction : Oral health-related quality of life is an important determinant of quality of life as well as a key health indicator. The objective of this study was to examine the relationship between cognitive function and oral health-related quality of life in community dwelling older adults. Method : Two hundred twenty six residents of West Virginia completed a clinical dental examination, the Geriatric Oral Health Assessment Index (GOHAI) (score range of 12 to 60), and a comprehensive cognitive examination. We excluded individuals with moderate or severe dementia because the GOHAI has not been validated in this group. Hierarchical multiple linear regressions were performed with GOHAI total score as the dependent variable. Results : Participants with normal cognitive function had higher GOHAI total

scores (mean: 55.12), indicating better oral health-related quality of life, than participants with cognitive impairment without dementia (mean: 52.29) and mild dementia (mean: 50.95). The difference remained significant after controlling for covariates including socio-demographics, health status, comorbidity, and clinical dental status. Conclusion : It is important to evaluate oral health-related quality of life among cognitively impaired persons as a part of a screening tool for physicians to use at each routine physician visit in order to make necessary referrals. Keywords : Oral Health-related Quality of Life, cognitive function

SS26 126-C-2

THE IMPACT OF ORAL HYGIENE ON PERIODONTAL DISEASE IDENTIFIED BY CLINICAL EXAMINATIONS

Jersey LIANG¹, Bei WU², Brenda PLASSMAN³, Joan BENNETT¹, James BECK⁴ (1. School of Public Health, University of Michigan, USA; 2. School of Nursing, Duke University, USA; 3. Duke University School of Medicine, Duke University, USA; 4. School of Dentistry, University of North Carolina, USA)

Introduction : This study examined the linkages between oral hygiene and the trajectories of periodontal disease among older Americans. Data came from 810 dentate individuals aged 65 and over in North Carolina, observed repeatedly from 1988 to 1994. Method : Periodontal disease was assessed by the percentage of sites with attachment loss (AL \geq 3mm) and pocket depth (PD \geq 3mm), whereas oral hygiene was measured by brushing, flossing, and rinsing, with social stratification (e.g., education and income) and dental care use as covariates. Hierarchical linear models were employed in depicting intrapersonal and interpersonal differences in periodontal disease. Results : Although positively correlated, AL and PD exhibited distinct trajectories. On average, 49% of the sites had AL, which increased linearly over time. In contrast, PD characterized 19% of the sites and decreased with acceleration over time. Even with social stratification controlled, oral hygiene measures were significantly associated with periodontal disease. However, they had different linkages with AL and PD. In particular, flossing was correlated with less AL but not its rate of increase. Brushing and rinsing were not associated with AL. On the other hand, brushing and flossing were associated with less PD, with brushing and rinsing correlated with the acceleration of changes in PD. Conclusion : Age, gender, education, and income were significantly correlated with the levels of AL and PD but largely uncorrelated with their rates of change. Oral hygiene attenuated but did not fully account for the effects of social stratification. Supported by NIH/NIDCR (R21 DE019518-01 and 1R01DE019110). Keywords : oral hygiene, periodontal disease, elderly

SS26 126-C-3

IMPLEMENTATION SCIENCE APPROACHES TO IMPROVING ORAL HEALTH IN OLDER ADULTS WITH DEMENTIA

Eleanor S. MCCONNELL¹, Christine DOWNEY², Mary Victoria SPAINHOUR³, Eleanor MCCONNELL¹ (1. School of Nursing, Duke University, USA; 2. Geriatric Research, Education and Clinical Center, Durham Veterans Affairs Medical Center, USA; 3. Geriatrics and Extended Care and Nursing Service, Durham VAMC, USA)

Introduction : Despite availability of evidence-based practice guidelines for oral care in older adults with dementia, and well-developed training programs, serious gaps in oral hygiene care for older adults exist in residential long-term care (LTC). Implementation science methods hold promise to narrow the gap between this existence of evidence-based approaches and their implementation. Method : An inter-professional (dentistry and nursing) quality

improvement program in oral care was developed, as a platform for a research program on factors that influence implementation of evidence-based oral hygiene care. Using principles from the Diffusion of Innovation framework, we have engaged in a series of plan-do-study-act cycles, in collaboration with existing LTC staff, to identify promising implementation science questions, simultaneously identifying barriers to implementation of evidence-based oral care. Results : Barriers to implementation of oral hygiene care we have observed include patient-level factors, such as complex co-morbid illness; staff-level factors, such as knowledge of proper oral care techniques and adapting care for complex co-morbid illness, and unit-level factors such as competing priorities of managers in care. Research targets we identified include improved understanding of methods for linking specialized expertise in oral care and dementia with day-to-day implementation challenges faced by direct care staff. Raising visibility of oral care needs and the quality improvement collaboration has improved management-level support for oral hygiene care. Conclusion : Implementation science methods combined with quality improvement approaches represent a promising strategy to accelerate translation of evidence-based oral hygiene practices into routine care. Keywords : implementation science , dementia

SS26 126-C-4

ORAL HEALTH AMONG OLDER CHINESE IMMIGRANTS: ASSESSMENT OF THE LITERATURE

Weiyu MAO¹, Bei WU², Iris CHI¹ (1. School of Social Work, University of Southern California, USA; 2. School of Nursing, Duke University, USA)

Introduction : Oral health has been shown to influence quality of life and overall health status, especially among older adults. This study aimed to review the existing literature on oral health status among older Chinese immigrants and discuss interventions strategy for improving the oral health outcomes of older Chinese immigrants. Method : We conducted a systematic review of the existing empirical studies on oral health and dental care utilization among older Chinese immigrants. Articles that are written in English and published in peer-reviewed journals, older Chinese immigrants as study participants, and oral health measurements reported in the articles were included in the search. Results : There are limited studies published in the topic area. Most of the studies were published in the U.S., Canada, and UK. All studies were cross-sectional. The findings from those studies demonstrated that older Chinese immigrants had poorer oral health and less dental care use compared to the general population in their host country. English language proficiency, strong social support, and longer length of stay in the host country were positively related to dental care utilization. Individuals' cultural beliefs and knowledge were also related to oral health status. Conclusion : Overall, there is a need for further research to elucidate the complex relationships of ethnicity, socioeconomic status, and cultural factors that impact immigrants' oral health. The findings also support the need for considering the cultural characteristics and background of older Chinese immigrants when strengthening oral health promotion. It is critical to partner with Chinese community agencies to conduct community-based oral health promotion program. Keywords : older Chinese immigrants, oral health, dental care

SS26 127-C

FRAILITY IN COMMUNITY-DWELLING OLDER PEOPLE IN TAIWAN: PREVALENCE, NATURE COURSE, BIOMARKERS AND INTERVENTION

SS26 127-C-1

PREVALENCE AND CORRELATES OF GERIATRIC FRAILITY IN TAIWAN

Cheng-chieh LIN (School of Medicine, College of Medicine, China Medical University, Taiwan)

Introduction : Frailty is one of the greatest gerontological challenges faced by Taiwan. Method : A cross-sectional study was conducted in 1,347 Taiwanese elders who lived at 8 administrative units in Taichung City, Taiwan in 2009. Frailty was defined by 5 components: shrinking, weakness, poor endurance and energy, slowness, and low physical activity level. Results : Frailty was present in 17% of the Taiwan elderly population; there were substantial variations by age, education level, diabetes mellitus, stroke, and sleep impairment. Conclusion : Prevalence of frailty is high in Taiwan society. Screening programs for early detection on frailty should target at elders who own characteristics that are associated with higher risk of frailty. Keywords: frailty

SS26 127-C-2

PREDICTION OF FRAILITY AND MORTALITY BY SERUM INFLAMMATORY BIOMARKERS AND COMORBIDITY IN OLDER INSTITUTIONALIZED MEN

Hsiu-yun LAI¹, Shinn-jang HWANG², Yungling Leo LEE³ (1. Family Medicine, National Taiwan University Hospital Hsin-Chu Branch, Taiwan; 2. Family Medicine, Taipei Veterans General Hospital, Taiwan; 3. Graduate Institute of Epidemiology and Preventive Medicine, College of Public Health, National Taiwan University, Taiwan)

Introduction : The aim of the study was to determine whether serum interleukin -6 (IL-6), tumor necrosis factor- α (TNF- α), high sensitivity C-reactive protein (hsCRP), or comorbidity could predict frailty and mortality in the older institutionalized men. Method : We enrolled 386 institutionalized men aged 65 and older from a veterans home in Taiwan with 2 years follow-up. Frailty status was determined basing on the frailty phenotype including weight loss, exhaustion, slowness, and weakness except for physical activity indicator. Serum IL-6, TNF- α , and hsCRP levels were measured at baseline. Results : The mean age of the participants was 81.5 \pm 4.9, with 33.2% being frail at baseline. In the cross-sectional analysis, after adjusting for age, body mass index, use of anti-inflammatory drugs, smoking status, and comorbidities, middle and top tertile of IL-6 were associated with current frailty status [OR 2.28 (95% CI 1.24-4.18); 1.95 (1.04-3.64) respectively] . During 2-year study period, after adjusting for smoking status, use of anti-inflammatory drugs, and baseline frailty status, the predictors for deterioration in frailty status were underlying cardiovascular disease [4.93 (1.23-19.8)], mental disorders [20.7 (1.24-344.7)], and either pair of the three biomarkers levels being in top tertile [HR 7.60 (95% CI 1.01-56.0)]. The predictors for mortality were age [1.09 (1.01-1.17)], diabetes [2.39 (1.16-4.93)], chronic obstructive pulmonary disease [2.55 (1.25-5.20)], and mental disorders [2.22 (1.03-4.83)]. Conclusion : For institutionalized older men, higher serum level of IL-6 was associated with current frailty status. The comorbidity, instead of each inflammatory marker, may be a better predictor for deterioration in frailty status and mortality. Keywords : Frailty, inflammatory biomarkers, long term care facility

SS26 127-C-3

TRANSITION OF ACCUMULATION DEFICITS BETTER PREDICT OUTCOMES THAN PHENOTYPIC FRAILITY IN OLDER PEOPLE WITH CHRONIC DISEASES

Chin-Ying CHEN¹, Chih-Hsun WU², Yin-Chang WU², Ching-I CHANG³, Jaw-Shiun TSAI³, Ching-Yu CHEN⁴, Hsiu-Yun LAI⁵

(1. Family Medicine, National Taiwan University Hospital, Taiwan; 2. Psychology, National Taiwan University, Taiwan; 3. Geriatric Research, Population Health Science Institute, National Health Research Institute, Taiwan; 4. Family Medicine, National Taiwan University, College of Medicine, Taiwan; 5. Family Medicine, National Taiwan University Hospital Hsin-Chu Branch, Taiwan)

Introduction : Frailty is a dynamic process. Transition of frailty is seldom discussed for outcome prediction. Our objective is to compare the two-year outcome prediction between different frailty index transitions in older people with chronic diseases. **Method :** The elderly outpatients recruited for comprehensive geriatric assessment in a medical center of northern Taiwan were followed up for 2 years. The frailty was evaluated by Comprehensive Geriatric Assessment ? Frailty Index (CGA-FI), Fried Frailty Index (FFI), disease burden (major systemic disease number, DB) and their combination. **Results :** A total of 189 aged 65 and over outpatients enrolled into the study. After 2-year follow-up, 125 (66.1%) persons were left and 64 (33.9%) persons dropped-off, including 12 deaths (6.3%). During this period, there were 56 (29.6%) hospitalization, 64 (33.9%) Emergency Department (ED) visit, 87 (46%) falls and 13(6.9%) new care aid. Transition of CGA-FI with DB significantly predicted 12.9x risk of death. Transition of CGA-FI significantly predicted 2x risk of number of hospitalization, 3.2x risk of number of ED visits, and 1.4x risk of number of falls. Transition of CGA-FI with DB and FFI significantly predicted 6.3x risk of hospitalization. Transition of FFI significantly predicted 5.3x risk of ED visits. Transition of CGA-FI and FFI significantly predicted 20.2x risk of new foreign aid. **Conclusion :** No single frailty index transition predicts all outcomes. Transition of accumulation deficits better predict outcomes than phenotypic frailty in old people. **Keywords :** frailty, transition, aged

SS26 127-C-4

COMMUNITY FRAILTY INTERVENTIONS IN TAIWAN

Ding-Cheng CHAN¹, Hsiao-hui TSOU², Rong-sen YANG³, Jau-yih TSAUO⁴, Ching-yu CHEN⁵, Chin-fu HSIAO², Chao Agnes HSIUNG², Ken N KUO⁶ (1. Department of Geriatrics and Gerontology, Department of Internal Medicine, National Taiwan University Hospital, Taiwan; 2. Division of Biostatistics and Bioinformatics, Institute of Population Health Sciences, National Health Research Institutes, Taiwan; 3. Department of Orthopaedics, National Taiwan University Hospital, Taiwan; 4. School and Graduate Institute of Physical Therapy, College of Medicine, National Taiwan University, Taiwan; 5. Department of Family Medicine, National Taiwan University College of Medicine, Taiwan; 6 Institute of Population Health Sciences, National Health Research Institutes, Taiwan)

Introduction : We reported randomized controlled trials (RCTs) of interventions on frailty in Taiwan from 2008-2010. **Method :** Two-stage screening was applied to enroll older adults (65-79 years of age) who scored ≥ 1 on the Cardiovascular Health Study Phenotypic Classification of Frailty (CHS_PCF). The pilot RCT enrolled 117 participants in Toufen, Taiwan with 3 month interventions. The extended trial enrolled 296 participants in Toufen and Taipei with 6 month interventions. Interventions included exercise, nutrition, and problem solving therapy with various combinations. Educational booklets were provided to all. Follow up assessments were conducted at 3, 6, and 12 months. One hundred and one completed the pilot study and 259 completed the extended study. Primary outcome was improvement of the CHS_PCF by at least one category from baseline assessments. Intention to treat analysis was applied. **Results :** The exercise and nutritional program improved the primary outcome at 3 months (45% vs 27%, adjusted $p=0.008$) in the pilot study. The

program also resulted in more increase of serum 25(OH) vitamin D level and lower percentage of osteopenia at 12 months. There were no between group differences in primary outcome in the extended trial. However, intervention group subjects had better performances in several sarcopenia indices including timed up and go tests (3, 6, and 12 months), one leg stand time (6, and 12 months), and dominant hand grip strength (6 month). Site differences in several outcome measurements were observed. **Conclusion :** Both 3 and 6 month of community-based interventions improved frailty related outcomes among Taiwanese older adults. **Keywords :** frailty, community, aged

SS26 207-S

DEMENTIA IN A DEVELOPMENTAL-CULTURAL PERSPECTIVE-FROM POSSIBLE EARLY FACTORS TO LATE-AGE INTERVENTIONS

SS26 207-S-1

A WAY OF PREVENTION - EARLY EXPERIENCES

Roger Benjamin SAGES (Institute of Psychology, Lund University, Sweden)

Introduction : In China, the old saying '三看大, 七看老' means that early experiences of children can decide the later life. This can be connected to psychoanalytical theory where adult life depends in part of the child's early experience. Abnormal behavior in the adult can be traced back to childhood, and certain personality aspects can be considered beginning to take shape from a very young age. **Method :** A phenomenological approach, Meaning Constitution Analysis, was used for planning, data collection and data analysis. **Results :** Preliminary results show a beginning of repression of one's desires on controlling life. Further results will be presented at the congress. **Conclusion :** A developmental/cultural perspective will increase understanding of dementia and offer possibilities of preventing its outburst. **Keywords :** Phenomenology, dementia, early experiences, repression, procrastination, psychoanalysis

SS26 207-S-2

THE CAREMA CARE CASE - A DISCURSIVE STUDY

Peter BUSKAS (Department of psychology, University of Lund, Sweden)

Introduction : During 2011 several cases of severe maltreatment of patients (in at least one case severe enough to actually cause the death of the patient) were exposed within the Swedish system of elder care, causing quite a lot of media-driven outrage and, in response, some rather carefully worded defensive posturing among the corporate management and politicians responsible for the relevant parts of the health care system. **Method :** This paper is based on the assumption that dehumanizing language is an important factor in enabling an abusive process, by creating a discourse in which certain individuals can be seen as less-than-human and thereby making it easier or even natural for people acting through and within this particular discourse to maltreat the individuals belittled by it. Foucauldian Discourse Analysis (FDA) will be applied to a number of official debates, press releases and interviews from/with nurses, doctors, relatives of victims and corporate/political representatives of the Swedish elder care system taken from one year of newspaper articles regarding the Carema Care scandal. **Results :** The analysis will show how the article-series creates a discourse within which the elderly are repeatedly constructed as faceless, voiceless, even identity-less, victims. **Conclusion :** It will be argued that this particular discourse actually enables the nurses and doctors at the lower executive end of the system to maltreat and abuse the patients that have been placed within their care. **Keywords :** FDA,

elder abuse

SS26 207-S-3

THE PROTECTIVE FACTOR AND REDUCED RISK OF DEMENTIA: EVIDENCE FROM STUDIES ON ACTIVITIES ENGAGEMENT AMONG CHINESE OLDER PERSONS

Chuanfeng CHEN (*Psychology Department, Huzhou Teachers College, China*)

Introduction : Continued activities engagement and active social interaction are commonly believed to influence cognitive performance and dementia in old age. Although some programs of activities engagement have been shown to have positive effects for older people, there is insufficient evidence to be able to say whether or not all activities programs are beneficial for people with dementia; meanwhile the existing programmes in most studies focused on older people who suffered from dementia to examine the improvement of BPSD of dementia, while very few focused on the reduced risk of dementia in normal older people. Method : The multi-methods, such as sectional investigation, following-up investigation, retrospective investigation, and comparing study have been adopted in the research to examine the status, change, and history of the influence of different activities engagement on reduced risk of cognitive decline and dementia onset. Results : It have examined the relationship between the frequency, size and extent of physical activity, intellectual activity, social activity and amusement activity, respectively, and cognitive decline and dementia onset following an epidemiological investigation of dementia prevalence. Then the interaction between different activities engagement in the role of reduced risk of dementia have been explored and the activity model in reduced risk of dementia have been constructed. Conclusion : At last the programmes for the prevention of dementia using activities engagement have been suggested to the policy makers and service providers in society and government, and to family carers as well. Keywords : Activities engagement, risk of dementia, Chinese older person

SS26 207-S-4

CROSS-CULTURAL TECHNOLOGICAL SOLUTIONS TO INCREASE INDEPENDENCY FOR OLDER PEOPLE

Isa GUSTAFSSON JERTFELT (*Ningbo University/ Lund University, China*)

Introduction : The world is facing a demographic problem with an ageing population. In many countries the urbanization and modernization makes it difficult to keep the traditional ways to take care of the elderly. One possible solution to this problem is to use the advances we have made in technology to prolong older people's independency and decrease their need for assistance. Much has been done in this area, but it is often in form of testing new technology, instead of investigating what new technology or adaptations in old technology that is wanted and needed by the older people themselves. In this article the implications of a masculine view of technology and a single culture solution to elder care is discussed. It is proposed that the masculine view of technology might have as the effect that some type of technology is overlooked, especially household technology - a type of technology very important to older people. It is also proposed that a multiple cultural view of ageing can be beneficial. Finally a phenomenological study to see if older men and women in different cultures have need for different type of technology and what type of technology they themselves wish for is proposed. Method : Phenomenological, cross cultural. Results : Not yet finished, the results will be completed before the conference. Conclusion : The study is still ongoing. Keywords : technology, gender, cross-cultural

SS26 207-S-5

SHARING A RESIDENCE - ASSISTED LIVING FOR THE ELDERLY, DISABLED PERSONS AND CHILDREN

Ricarda LUTZ (*Psychology, Lund University / Mainz University, Germany*)

Introduction : In the past the whole family used to live together at the same place. Old people and disabled persons were not sent to special facilities. They could benefit from their different characters, knowledge and fitness. Nowadays the elderly and disabled persons often live in special facilities. Even if sometimes the family wanted to take care of their relatives they cannot do it. Another reason for sending family members with special needs in those facilities is that they need special care and treatment. Also some might think that these persons profit more if they live together with people with the same needs. But is that really true? It would be interesting to see if they could all live together. Maybe they could also benefit from each other and they would have a more normal live since it is kind of an artificial environment if they live in special residences. To see if a project like this could be realized it is important to ask the people who would be concerned. Which means the persons in charge or/and the people who are living in the facilities. Method : Qualitative research, Interviews, Software MCA Minerva. Results : Preliminary results will be presented at the congress. Conclusion : Preliminary conclusion will be presented at the congress. Keywords : residence elderly children

SS26 207-S-6

SUPPORT, LONELINESS AND WELL-BEING AMONGST VERY OLD PEOPLE IN THEIR LAST YEAR OF LIFE

Jane FLEMING¹, Jun ZHAO², Stephen BARCLAY³, Carol BRAYNE¹, Morag FARQUHAR³, Cambridge City Over-75s Cohort Study Collaboration (CC75C)² (1. *Institute of Public Health, University of Cambridge, United Kingdom*; 2. *Public Health and Primary Care, University of Cambridge, United Kingdom*; 3. *Primary Care Unit, Public Health and Primary Care, University of Cambridge, United Kingdom*)

Introduction : With increasing age social contacts often decrease. More people are dying in advanced old age, but data to inform planning for support needs are scarce. This study quantifies informal and formal support received by very old people in their last year of life, their emotional well-being, including reported loneliness. Method : UK population-based Cambridge City over-75s Cohort study: 102 men and 219 women who died < 1 year after interview (321 aged ≥85 incl. 161 aged ≥90). Results : Formal support services contact was highest for those dying aged 90+. 60% saw neighbours at least weekly. 58% of those < 90 and 73% ≥90 saw ≥1 relative ≥once a week. Regardless of age, 25% would have liked more family contact and 23% felt service support was not enough. 35% of 85/89-year-olds and 49% of ≥90-year-olds described themselves as very lonely/lonely/slightly lonely, nearly 1/5 as very lonely/lonely. Not enjoying life was three times as common for people dying after 90 (28%) as aged 85-89 (10%). Other measures of well-being confirmed this pattern: being interested, as happy as when younger or feeling things seem better than expected were less prevalent amongst those who died older. Strong predictors of loneliness were widowhood, living alone and poor self-rated-health, regardless of other factors including disability, cognition, support and social networks. Conclusion : Loneliness is common amongst very old people in the year before death. Frequency of contact with family, neighbours or services did not overcome this for those widowed, living alone or in poor health. Research is needed on supportive interventions. Keywords : Oldest old, End of life, Loneliness, Social networks, Service use, Well-being

SS26 208-C

DIABETES IN THE ELDERLY : A CHALLENGE IN MULTIPLE DOMAINS

SS26 208-C-1

COMPREHENSIVE GERONTOLOGICAL ASSESSMENT, A TOOL TO IMPROVE THE CARE OF OLDER PEOPLE WITH DIABETES, A HIGHLY HETEROGENEOUS POPULATION

Isabelle BOURDEL-MARCHASSON (*Geriatrics, CHU Bordeaux; UMR 5536 Univ Bordeaux Segalen, CNRS, France*)

Diabetes is a disabling chronic disease with an effect of accelerated ageing. Older people with diabetes have very different profiles according to their age, sex, socio-economic conditions and way of life, diabetes disease characteristics, complications and co-morbidities. Diabetes induces frailty and comprehensive gerontological assessment (CGA) is a useful tool to drive treatment targets choice, treatment strategy and follow-up fully adapted to each patient in his social context, along with interventions in other fields than diabetes when necessary. We will illustrate with clinical case reports the interest of CGA in different situations. Keywords : Diabetes

SS26 208-C-2

DIABETES, FRAILITY AND COGNITION : UPDATE ON EVOLVING CONCEPTS

Daniel TESSIER (*Medicine, Reserch Center on Aging - Sherbrooke Geriatric University institute, Canada*)

Introduction : Diabetes mellitus (DM) is a common condition in the older population. This disease has been associated with increased frailty, morbidity and mortality. DM physiopathology in the elderly is associated with sarcopenia, immobility, inflammatory state and pancreas beta cells exhaustion.. Recent large scale intervention trials on glycemic control failed to show a reduction in mortality in patients with type 2 DM on intensive treatment. Aging and cognitive dysfunction have been associated with an increased risk for severe hypoglycaemia. Multiple definitions and measurements of frailty have been proposed in the literature. Increased frailty has been associated with increased functional dependency and mortality. Hypoglycaemia recognition and management may be problematic in vulnerable elderly patients, especially when they live alone. DM has been associated with an increased risk of dementia (vascular and degenerative): the proposed mechanisms are complex and may involve the presence of genetic factors such as the presence of APO E4. Method : literature review. Results : see above. Conclusion : Management of DM in the frail elderly is a multifaceted problem: a multidisciplinary approach, the setting of reasonable goals centered on the patient condition, prognosis and early detection of cognitive problems are key elements for an optimal management in this population. Keywords : diabetesmellitus. elderly, cognition

SS26 208-C-3

PHARMACOLOGICAL THERAPY OF DIABETES IN THE ELDERLY: OLD AND NEW DRUGS

Andrej ZEYFANG (*Internal Medicine / Geriatrics, Bethesda Hospital Stuttgart, Germany*)

Introduction : Antihyperglycemic therapy in T2DM should be effective and as safe as possible for the patient. Different new oral diabetes medications have been introduced recently; their benefits and risks in older persons are discussed. The reevaluation of classical oral diabetes medication like metformin and insulin is part of this presentation. Method : We present an overview of old and new

diabetes medications in older persons. A focus is on patient safety concerning risk of hypoglycemia, errors with medication and risk of complications. Results : A review of studies on modern diabetes medications and data from the DPV-database, a standardized, prospective, multicenter, computer-based documentation of diabetes care and outcome containing 260,920 patients of all ages and diabetes-types are presented. We introduce also a new method for predicting the ability of correct insulin self-injection by the elderly using the timed-test of money counting. Conclusion : Some policies with antihyperglycemic drug treatment in older persons need to be revised. New drugs can be helpful to enhance patient safety, but older drugs like metformin or insulin still have an important rank in diabetes therapy for older persons as well. Keywords : Diabetes mellitus, pharmacotherapy, metformin

SS26 209-R

THE DEVELOPMENT AND APPLICATION OF INTERRAI IT SYSTEM FOR LONG TERM CARE SERVICES IN ASIA

SS26 209-R-1

JAPAN'S LAUNCHING OF THE HOME AND INSTITUTIONAL CARE INTEGRATED MANUAL IN THE CLOUD SYSTEM

Naoki IKEGAMI¹, Tomoaki ISHIBASHI², Takashi AMANO² (*1. Health Policy & Management, School of Medicine, Keio University School of Medicine, Japan, Japan; 2. Research, The Dia Foundation for Research on Aging Societies, Japan*)

Introduction : We have launched an integrated manual of the interRAI assessment instruments and accompanying clinical protocols (CAP) for home and > community care manager agencies, assisted living and institutional care in November, 2011. From April, 2012, the manual and the data can be accessed through the cloud system so that paper forms are no longer needed. Through the cloud system, assessment data and the manual can be accessed and data entered by tablet PC at the client's home or at the hospital. This has also allowed providers care management agencies to monitor changes in their clients' composition by using interRAI's ADL, Cognitive Performance, Pain and Depression Scales. Method : A system to transfer individual personal data from one agency to another as the person moves across the spectrum of home, assisted living and institutional care settings is being developed. A data clearing house which will enable agencies to evaluate their performance with their peer groups by the use of composite Quality Indicators is also being developed. Results : To be reported. Conclusion : Our greatest hurdle is that, since structured assessments are not mandated in Japan, care managers are not compelled to make assessments on a regular basis. Introduction of the interRAI system by the cloud system will incentivize them to do so by greatly decreasing the burden, and by providing positive feedback on their performance through the use of Scales and Quality Indicators. Keywords : cloud system, scales

SS26 209-R-2

CLINICAL BENEFITS OF SYSTEMWISE IMPLEMENTING RAI AMONG RESIDENTS OF VETERAN HOMES IN TAIWAN

Liang-Kung CHEN¹, Chung-fu LAN², Po-lun CHANG³ (*1. Center for Geriatrics and Gerontology, Taipei Veterans General Hospital, Taiwan; 2. Institute of Health Welfare and Policy, National Yang Ming University, Taiwan; 3. Institute of Biomedical Informatics, National Yang Ming University, Taiwan*)

Introduction : Taiwan has become an aging country in 1993, and is

estimated to become an aged country in 2017, which makes Taiwan one of the fastest aging countries in the world. Method : From 2006, the interRAI MDS was systematically implemented in several selected veteran homes and the health care outcomes were followed periodically. In the mean time, a PDA (Personal Digital Assistant)-based RAI was developed and was then applied in this program. Overall, the veteran home residents were old (mean age over 82 years) and were all male who were physically independent and cognitive intact through the results of RAI. Results : the complexity in long-term care for these residents was clearly shown that the residents were carrying a median of 4 care problems (surrogated by RAP triggers) and the higher comorbidities with higher number of RAP trippers were significantly associated with 1-year mortality. On the other hand, for all residents participating in this program, the quality of life was significantly improved in a year of follow-up, together with a significant reduction in Emergency Department visit and acute hospital admissions although the utilization of outpatient services remained similar. Conclusion : Further research is needed to establish a comprehensive system for RAI application to cope with the challenge of population aging in the future. Keywords : long-term care, geriatrics, minimum data set

SS26 209-R-3

DEVELOPING A COMPUTERIZED RESIDENT ASSESSMENT SYSTEM USING INTERRAI TOOLS IN KOREA

Hongsoo KIM¹, Myeonggil CHOI¹, Young-il JUNG¹, Eunsoo JUNG², Monhee SUNG¹, Jiyeon KIM¹, Ahreum YOO¹ (1. Graduate School of Public Health, Seoul National University, Korea; 2. School of Business, Chung-Ang University, Korea)

Introduction : The benefits of comprehensive resident assessment for frail older adults at home or long-term care institutions are well known, but few such assessment tools are available in Korea. In this presentation we will present the newly-developed and psychometrically-tested Korean version of interRAI Home Care(interRAI-HC) and interRAI Long-Term Care Facility(interRAI-LTCF). We will also discuss the early experience of launching a web-based version of the tools. Method : interRAI-HC and interRAI-LTCF were developed through the instrument translation process that World Health Organization(WHO) recommended. Psychometric properties of the developed tools were evaluated using patient/resident assessment data collected by nurses at long-term care hospitals, long-term care facilities, or homes. Three versions of the instrument tools were developed: paper-based, Microsoft Access-based, and web-based(proto-type). Results : The newly-developed Korean version interRAI-HC and interRAI-LTCF were reliable and valid in an analysis with data of 714 resident/patients at 24 long-term care institutions: internal consistency of major scales(ADL, IADL, depression, cognition, etc.) were 0.81~0.96 and inter-rater reliability were 0.70 in most items. Concurrent validity for function and cognition were also good. In the survey on usability, usefulness, and efficiency of assessment tools, nurses gave higher score when using electronic-based than paper-based version. Conclusion : Korean version interRAI-HC and interRAI-LTCF were reliable and valid tools for comprehensive assessment of older people who need long-term care. Long-term care employees prefer the computerized version of the assessment tools, but individual, organizational, and market barriers exist, which prevent wide adoption of the tools. Necessary are collaborative efforts to overcome such barriers among policy makers, researchers. Keywords : interRAI, long-term care, geriatric assessment

SS26 209-R-4

THE DEVELOPMENT AND APPLICATION OF INTERRAI IT

SYSTEM FOR THE ELDERLY SERVICES IN HONG KONG

Raymond CHANG¹, Samson LEUNG² (1. Physiotherapy, Hong Kong Sheng Kung Hui Welfare Council, Hong Kong; 2. Information Technology Services Department, Hong Kong Sheng Kung Hui Welfare Council, Hong Kong)

Introduction : To echo the use of Minimum Data Set - Home Care in Social Welfare Department of Hong Kong in 2000, Hong Kong Sheng Kung Hui Welfare Council (the Council) has developed a localized computerized Integrated Care Plan Management System (ICPMS) for elderly services in 2004 by using interRAI instrument to enhance clinical practice and quality management. Method : The Council has launched the ICPMS in 7 residential care homes for the elderly in 2005 and 1 pilot scheme on home care services for frail elders in 2011. The ICPMS is a web-based system which allows staff to browse through the system without software pre-installed. The system enables both frontline professional staff and management teams to work collaboratively, share information in real time and facilitate consistent decision making in care planning. The system provides automated assessment and care plan, reminder to care plan review, quality indicators and outcome measures reports. Results : Information of about 1,900 elders had been included since the launching of ICMPMS. More than 3,000 initial assessments and 10,500 re-assessments were input in the system. About 12,430 care plans were generated. Regular analysis on the outcome of quality indicators, outcome measures and case mix reports are generated for service review and planning. Conclusion : Since the system is adopting the RAI 2.0 for residential care services in the Council, adopting the newest version of interRAI instrument is needed to align all items of the interRAI Home Care Assessment System in the ICPMS for outcome and quality evaluation of the services. Keywords : interRAI, Minimum Data Set, IT system, elderly service, Hong Kong

SS26 212-R

SOCIOECONOMIC INEQUALITIES IN HEALTH AT OLDER AGES: FINDINGS FROM BRAZIL, CHINA, ENGLAND AND THE US

SS26 212-R-1

SOCIAL INEQUALITIES IN BIOMARKERS: FINDINGS FROM THE ENGLISH LONGITUDINAL STUDY OF AGEING (ELSA)

Cesar DE OLIVEIRA (Epidemiology & Public Health, University College London, United Kingdom)

Introduction : The process by which the social environment becomes translated into physiological and psychological processes that influence health remains unclear. The aim of this longitudinal study is to compare changes over time and the relationship between socioeconomic position indicators and different biomarkers in a nationally representative sample of older adults in England. Method : The study population consisted of participants aged 50 and older who took part in the 2004 and 2008 waves of the English Longitudinal Study of Ageing (ELSA), a prospective national cohort study of people aged 50 years and over. The analysis focuses on biomarkers associated with adverse outcomes as well as those associated with improved health and well-being. Risk factors included indicators of cardiovascular disease (lipid profile, fibrinogen, C-reactive protein) and anthropometric measures such as body mass index and waist circumference. Protective factors included HDL cholesterol, IGF-1 and DHEAS. The changes in these markers over time were modelled using a measure of socioeconomic status called total wealth and level of education. Analyses were adjusted for age, sex and marital status.

Results : With increasing wealth, both inflammatory markers levels decreased. Prevalence of both overweight and obese categories and raised waist circumference decreases with increases in wealth. A socioeconomic gradient is evident for both IGF-1 and DHEAS markers, with increases in levels with increased wealth. Conclusion : The present findings suggest an association between biomarkers and socioeconomic position. However, the direction of the social gradient observed varied for the different biomarkers highlighting the need for further investigation. Keywords : Socioeconomic, inequalities, health, biomarkers, elderly

SS26 212-R-2

SOCIOECONOMIC INEQUALITIES IN HEALTH IN OLDER ADULTS IN BRAZIL AND ENGLAND

Maria Fernanda LIMA-COSTA¹, Cesar DE OLIVEIRA², James MACINKO³, Michael MARMOT² (1. *Epidemiology, Centro de Pesquisas Rene Rachou, Brazil*; 2. *Epidemiology & Public Health, University College London, United Kingdom*; 3. *Nutrition, Food Studies, and Public Health, New York University, USA*)

Introduction : We examined socioeconomic inequalities in health among older adults in England and Brazil. Method : We analyzed nationally representative samples of residents aged 50 years and older in 2008 data from the Brazilian National Household Survey (n =75 527) and the English Longitudinal Study of Ageing (n = 9589). We estimated prevalence ratios for self-rated health, functional limitations, and reported chronic diseases, by education level and household income tertiles. Results : Brazilians reported worse health than did English respondents. Country-specific differences were higher among the poorest, but also affected the wealthiest persons. We observed a strong inverse gradient of similar magnitude across education and household income levels for most health indicators in each country. Prevalence ratios (lowest vs highest education level) of poor self-rated health were 3.24 in Brazil and 3.50 in England; having 2 or more functional limitations, 1.81 in Brazil and 1.96 in England; and having 1 or more diseases, 1.14 in Brazil and 1.36 in England. Conclusion : Socioeconomic inequalities in health affect both populations, despite a less pronounced absolute difference in household income and education in Brazil than in England. Keywords : Socioeconomic, inequalities, health, elderly

SS26 212-R-3

HEALTH AND SOCIO-ECONOMIC STATUS OF MID-AGED AND ELDERLY CHINESE

Xiaoyan LEI¹, John STRAUSS², Xiaoting SUN¹, Yaohui ZHAO¹ (1. *National School of Development, Peking University, China*; 2. *Economics, University of Southern California, USA*)

Introduction : China has undergone a health revolution over the past 50 years. As a result, infectious diseases have replaced by chronic diseases as the major source of ill-health and mortality. It has also been undergoing a nutrition transition. Related to the health and nutrition transitions has been China's sharp demographic transition with a fast increasing in its elderly population, which will place stress on China's health system. Method : Using the 2011-2012 national baseline of the Chinese Health and Retirement Longitudinal Study (CHARLS), we document health outcomes of the Chinese elderly and examine the relation between these health outcomes and socioeconomic status. CHARLS has a very rich set of health indicators that include both self-reported measures and biomarkers. Results : we find that Chinese elderly are facing challenges from chronic diseases such as hypertension and underdiagnosis of it is common. Overnutrition has become a bigger problem than undernutrition, reflected as higher rate

of overweight but not underweight. The problem is generally more serious for women than for men. Disability rate is also high, especially for rural women, who also report to suffer more from pain. Moreover, we find different health gradients of socio-economic status measured by education and per capita household consumption expenditure. Conclusion : The findings in this paper highlight the challenges facing China during its transition. The health system in such transition apparently takes time to re-orient and treat chronic diseases of the aging and the aged. This is an important step that the Chinese health system will need to work out in the future. Keywords : SES health gradients

SS26 212-R-4

INEQUALITIES IN ACCESS AND USE OF HEALTH SERVICES AMONG BRAZILIAN AND US ELDERLY COVERED BY TWO DIFFERENT PUBLIC HEALTH SYSTEMS

James MACINKO (*Public Health, New York University, USA*)

Introduction : This study assesses how socioeconomic position affects access to and use of healthcare services among older adults in Brazil and the United States. Method : Analysis of nationally-representative health interview surveys, 2007-2009 NHIS (US) and 2008 PNAD (Brazil). Outcome measures (over the past 12 months) include: no doctor visit, number of doctor visits, any hospitalization, number of hospitalizations, usual source of medical care, and barriers to care. Multiple Poisson and Hurdle regressions were used to model healthcare use and the intensity of use, respectively. Independent variables include: income, schooling, age, gender, presence of a spouse, urban/rural residence, private and public health insurance, and self-reported health problems and limitations. Linear and quadratic interactions among age and schooling model the effects of social inequalities on healthcare access across different ages. Results : Utilization rates for most healthcare services were higher in the US than in Brazil, except among the highest users of services, where rates were similar. Within-county inequalities (comparing highest to lowest levels of schooling) were lowest in both countries for hospitalizations, and highest for having no doctor visits in the past 12 months. For most (but not all) outcomes, education-related inequalities were most pronounced in mid-life, and subsequently diminished with older ages. Conclusion : The two countries' different approaches to providing access to healthcare have implications for treatment and prevention of chronic and other conditions across the life course. However, even among the older (aged 65+) population, where both countries provide universal access, considerable social inequalities in meeting basic healthcare needs persist. Keywords : Healthcare access and utilization, Social inequalities

SS26 213-S

COGNITIVE TRAINING IN AGING: FROM NEAR TO FAR TRANSFER EFFECTS, FROM SINGLE TO MULTI-DOMAIN TRAINING, FROM NORMAL AGING TO ALZHEIMER'S DISEASE

SS26 213-S-1

BENEFITS OF ATTENTION TRAINING ON COGNITIVE PERFORMANCES AND POSTURAL CONTROL IN OLDER ADULTS AND PATIENTS AT RISK OF COGNITIVE DECLINE

Louis BHERER (*PEFORM Centre, Concordia University, Canada*)

Introduction : Numerous studies suggest that cognitive training can help improve cognitive performances. However, studies often exclude

participants at risk of cognitive decline due to chronic diseases (e.g., coronary heart disease). It is also well established that cognitive decline is associated with reduced mobility and postural control. Another important issue is to what extent cognitive training intervention leads to significant benefits that transfer to real life situation. Method : In all studies, older adults were assigned to a cognitive training intervention or a control condition. All participants performed experimental cognitive assessment, neuropsychological tests and in one study, balance and mobility tests. Assessments were completed at pre-test and post-test. Results : Results of these studies indicated that groups that completed the cognitive training program showed larger improvement than the control groups in the training tasks and that the benefits transfer to untrained tasks of attentional control. However, some limits were also observed on attentional costs improvements in transfer tasks. Despite these limits, dual-task training was associated with improved balance and postural control. Moreover, training was beneficial for patients recovering from coronary artery bypass graft surgery. Conclusion : Our studies suggest that dual-task training leads to more than just task specific learning and support the notion that cognitive plasticity for attentional control is preserved in late adulthood. Moreover, gain in attentional control can lead to significant improvement in mobility and postural control. Results with patients at risk of cognitive decline also suggest that cognitive training is a promising non-pharmaceutical tool to help improve cognition in older adults. Keywords : Cognitive training, Chronic Disease

SS26 213-S-2

DEVELOPMENT OF MULTI-DOMAIN COGNITIVE TRAINING FOR COMMUNITY ELDERLY IN SHANGHAI, CHINA: AN EVIDENCE-BASED PROCEDURE

Chunbo LI (*Biological Psychiatry, Shanghai Mental Health Center, Shanghai Jiao Tong University School of Medicine, China*)

Introduction : There are few studies on cognitive training for healthy aging in China one decade ago. We started to explore methods of cognitive training for community elderly in Shanghai since 2004. Based on the contents of western cognitive training, we adapted and combined with some Chinese cultural components during the training. Method : At first step, we collected related strategies and methods of cognitive training, and selected evidence-based contents, combined Chinese cultural components. In order to testify the feasibility and efficacy of 'compositive cognitive training' (multi-domain cognitive training) for community healthy elderly, we further conducted no control opened trial, controlled clinical trial and randomized controlled trial. Results : The results showed that compositive cognitive training (multi-domain cognitive training) can enhance memory proficiency, while single-domain CogTr augmented visuospatial/ constructional and attention abilities, and can help maintain community-living older people functioning over time. Multi-domain cognitive training may have more advantages in training effect maintenance. Conclusion : Multi-domain cognitive training is safe, well complied, and efficient for community elderly. Individualized cognitive training should be developed in the future. Keywords : cognitive training, clinical trial, Multi-domain

SS26 213-S-3

COGNITIVE TRAINING IN AGING AND MCI: EFFECT ON BRAIN FUNCTION AND STRUCTURE

Sylvie BELLEVILLE, Samira MELLAH, Chloe DEBOYSSON, Bianca BIER, Nicolas MOFFAT (*Research Center, Institut Universitaire de Geriatrie de Montreal, Canada*)

Introduction : There is increasing interest for the use of cognitive training as a way to promote cognitive health and reduce symptoms in normal aging and persons with mild cognitive impairment (MCI). It is however critical to better understand the cognitive and brain mechanisms of those interventions. Method : I will present studies that have used functional and structural brain imaging to assess the mechanisms that support changes due to cognitive interventions in aging. The reported studies use either attentional or memory training in healthy older adults and persons with MCI. Functional brain imaging and ERPs are used as markers of cognitive training efficacy and to investigate the effect of the training on brain function. Preliminary data on cortical thickness will also be presented. Results : Results indicate that both memory and attentional training change the pattern of task-related activation in healthy older adults and in persons with MCI suggesting that brain plasticity is still active in aging and in the early phase of Alzheimer's disease. Interestingly, whether this results in increased vs. decreased activation and whether specialized or alternative regions are recruited depend on population and on training modalities. Conclusion : Brain imaging can provide unique information regarding the processes and brain mechanisms that are involved and/or modified by cognitive training. The data suggests that the effect occurs through a combination of restoration and compensation processes and that the balance between those two mechanisms depends on whether training implicates learning new strategies or consolidating cognitive modes that were already used by participants. Keywords : Cognitive training, brain plasticity, mild cognitive impairment

SS26 213-S-4

THE ROLE OF EMOTION AS A FACILITATOR OF FACE-NAME MEMORY TRAINING IN PERSONS IN MILD ALZHEIMER'S DISEASE

Anne-Marie ERGIS¹, Anne-Sophie RIGAUD² (*1. Psychology, Universite Paris Descartes, France; 2. Service de Geriatrie, Hopital Broca, France*)

Introduction : Several studies have examined the relationships between memory and emotions in Alzheimer's disease (AD). Many of them have shown that using stimuli with emotional valence improves explicit memory performance, especially with positive ones. Others have demonstrated preserved implicit memory for emotional words and pictures. Recent data showed that the emotional content of stimuli influences memory for music. All these studies open up paths for new strategies in memory rehabilitation. However, clinical applications of these findings for memory rehabilitation or stimulation are still very infrequent. Method : We proposed a face-name associations learning intervention program to patients with mild AD. Each patient was his own control, and baselines were given before and after intervention. Absurd imagery and spaced retrieval were used, and stimuli were neutral and happy faces. Results : Results showed abilities to learn these new associations in patients, and learning was better for happy faces. Conclusion : These findings show the interest of relying on emotional stimuli in order to improve memory rehabilitation in Alzheimer's disease. Keywords : Alzheimer's disease, memory rehabilitation, emotions

SS26 214-S

FAMILY DIVERSITY IN CAREGIVING

SS26 214-S-1

THE PARADOX OF COMBINING INDEPENDENCE AND LONG TERM CARE ARRANGEMENTS IN THE CONTEXT OF LAT PARTNER RELATIONSHIPS OF OLDER ADULTS

Jenny GIERVELD (*Social Demography, NIDI, Netherlands*)

Introduction : Many older adults involved in LAT relationships intend to live independently for as long as possible. They are satisfied with the realization of a LAT intimate partner relationship, in which both partners have their one-person household and share living quarters for less than 7 days per week. In case of serious illnesses and being in need of daily care, how do LAT partners arrange their lives? **Method :** In this study results of qualitative interviews with a representative sample of 23 older adults in LAT relationships are presented. The 23 interviewees are sampled from the second wave of the Netherlands Kinship Panel Survey (2008/2009; N= 6109). **Results :** Many of the LAT interviewees expect to support their partners. The majority of the interviewee's mentioned that they expect their LAT partners to take care of them, but a not negligible minority insists on not accepting care from their partners. These attitudes do not correspond with the effectively given and received care in situations of serious illness. Most of the interviewees do care for their partners and do receive care from their partners. **Conclusion :** The interpretation of the paradoxical association between giving and receiving care in LAT partner relationships is central in the discussion section of this study. **Keywords :** care arrangements, LAT partners, attitudes and behavior

SS26 214-S-2

HOUSEHOLD CARE ARRANGEMENTS FOR OLDER ADULTS : AN INTERNATIONAL COMPARISON

Nobutaka FUKUDA¹, Jenny GIERVELD² (*1. School of Social Informatics, Aoyama Gakuin University, Japan; 2. NIDI, Netherlands Interdisciplinary Demographic Institute, Netherlands*)

Introduction : Research has shown the impact of living arrangements, social values, employment, health and wealth on the household care arrangements of old adults in countries of Europe. This paper fills the gap in our knowledge by including Japan as an example of a country with a less gender equality and characterized by strong Confucianism moral values. The paper addresses individual determinants (including personal value-orientation, work patterns, economic power, health condition, and living arrangement) on household care arrangements of older adults. **Method :** Data come from the Generations and Gender Surveys, encompassing Japanese and other European data sets. In investigating the influence of socio-economic, health, emotional, familial and attitudinal factors on the household care of older adults aged 60 and over. Multivariate analyses including structural equation modelling and latent class analysis have been carried out. **Results :** Results showed that household care is more value-oriented, and socio-economic factors are less intense in Japan than in Europe, and health factors play a important role in determining the division of old adults' household care both in Japan and in Europe. These findings suggest that cultural and value factors play a more crucial role in household care for Japanese old adults than European old adults. **Conclusion :** In conclusion, this study indicates that the determinants of old adults' household care arrangements differ between Japan and Europe. Hence, the arrangements of household care are affected by not only socio-economic but also cultural factors. **Keywords :** Intergenerational Relationships, Household Care, Japan and the Netherlands, Old Adults

SS26 214-S-3

CARE ARRANGEMENTS AND OUTCOMES FOR SANDWICH GENERATION CAREGIVERS IN CANADA

Arianna WAYE¹, Janet FAST² (*1. Faculty of Medicine, University of Alberta, Canada; 2. Human Ecology, University of Alberta, Canada*)

Introduction : Sandwich generation caregivers (caregivers responsible for caring for children and dependent adults simultaneously) often are identified as being especially vulnerable to negative economic and other outcomes. However, empirical evidence supporting this claim is scarce and often contradictory. This study attempts to identify which subgroups of caregivers are in fact most vulnerable to adverse negative outcomes. **Method :** Using data from Statistics Canada's 2007 General Social Survey on Family, Social Support and Retirement to compare care arrangements and employment and quality of life outcomes for Canadian sandwich generation caregivers, those with single generation care responsibilities, and those with neither child nor dependent adult care responsibilities. Analyses included cross tabulations and multinomial logistic regression. **Results :** The sub-sample of sandwich generation caregivers was small. Nonetheless, these caregivers were more likely than those caring for only a dependent adult to reduce their hours of paid work, to miss days of work, to decline a job offer or promotion, to quit a job and to postpone planned education or training. **Conclusion :** The small number of sandwich generation caregivers in the sample may have reduced the power of the statistical tests. Nonetheless, these caregivers appear to be at greater risk of negative employment consequences than their counterparts caring only for dependent adults, which will, in turn, place them at greater economic risk. Findings suggest a need for policy makers and employers to take differences in needs of sub-groups of caregivers into account when designing caregiver support policies and programs. **Keywords :** caregiving, employment, sandwich generation

SS26 214-S-4

I GET BY WITH A LITTLE HELP FROM MY FRIENDS AND NEIGHBORS: NON-KIN AS INFORMAL CARERS OF OLDER ADULTS

Tracey LAPIERRE¹, Norah KEATING² (*1. Sociology, University of Kansas, USA; 2. Human Ecology, University of Alberta, Canada*)

Introduction : The role of non-kin as informal carers is poorly understood. The purpose of this study was to investigate the context in which friends and neighbors provide informal care for older adults. Socio-demographic and network characteristics of older adults who require instrumental assistance or personal care due to a long-term health condition were analyzed as predictors of having a non-kin member of the care network, and as factors influencing the nature of non-kin care contributions. **Method :** Data come from the General Social Survey of Canada. To be included in the sample for this study the respondent had to be an adult age 65 or older who needed assistance with one or more of the following tasks due to a long-term health condition: meal preparation, housecleaning, home maintenance, grocery shopping, transportation, bills and banking, or personal care. Statistical techniques utilized include chi-square, ANOVA and multivariate logistic regression. **Results :** More than one-third of older adults needing instrumental or personal care assistance due to a long-term health condition were receiving at least some of that assistance from a friend or neighbor. Age, gender, marital status, living arrangements, socio-economic status, family composition, having close relationships with family and friends, and the composition of the care network were all significant predictors of older adults receiving informal care from non-kin. Multiple patterns of non-kin care were observed in the care networks. **Conclusion :** Based on current population trends these findings suggest that the presence and contributions of non-kin in the informal care networks of older adults will increase in the future. **Keywords :** informal carers, non-kin.

SS26 215-S

FAMILY CAREGIVING IN TRANSITION: CARE FOR THE

ELDERLY IN EAST ASIAN COUNTRIES

SS26 215-S-1

DETERMINANTS OF SOCIAL SUPPORT EXCHANGE BETWEEN KOREAN BABY BOOMERS AND THEIR PARENTS

Junghyun KIM¹, Miae CHUN² (1. Dept. of Welfare for the Aged, Yongin University, Korea; 2. Dept. of Social Work, Chongshin University, Korea)

Introduction : This study examined the determinants of social support exchanges between Korean baby boomers (born in 1955-1963) and their parents. **Method :** Using the 2010 data titled "Survey on the living condition and the welfare needs of middle aged" by the Korean Institute for Health and Social Affairs, the current study utilized 1969 respondents as the final sample for regression analysis. Dependent variables include the frequencies of providing and receiving instrumental support, and the frequencies of providing and receiving physical support. Independent variables include demographic and family characteristics (gender, age, the level of education, the number of siblings, the number of offspring, the level of burden for providing living expenses for their offspring), need variables (parent's age, parent's health, health of respondents), and variables of cultural values (values for caregiving responsibilities for their older parents, intention for the utilization of the long-term care support system). **Results :** Results indicated that 1) providing instrumental supports was determined by gender, the level of education, the number of offspring, health of respondents, intention for the utilization of the long-term care support system; 2) receiving instrumental supports was anticipated by the number of siblings, the number of offspring, the age of mother, and parent's health; 3) providing physical supports was explained by gender, the level of education, the number of siblings, parent's health, and values for caregiving responsibilities for their older parents placed to their parents themselves; and 4) receiving physical supports was predicted by health of respondents. **Conclusion :** Suggestions were made for the future aging policies in Korea. **Keywords :** baby boomer, social support exchange, determinants

SS26 215-S-2

THE EFFECTS OF RAISING GRANDCHILDREN ON RELATIONSHIP SATISFACTION WITH CHILDREN AMONG OLDER WOMEN: FOCUSING ON MEDIATING EFFECT OF HOUSEHOLD INCOME TRANSFER FROM CHILDREN

Jihye YEOM¹, In-hee CHOI² (1. Dept. of Social Welfare, Jungwon University, Korea; 2. Center for Family and Multicultural Society, Korean Women's Development Institute, Korea)

Introduction : The purposes of this study are to examine the current level of satisfaction with adult children in terms of family relationship and to explore how household income transfer from adult children to their mother mediates the link between raising grandchildren and level of relationship satisfaction with adult children among older women in Korea. **Method :** The data selected from the Korean Longitudinal Study of Ageing (KLoSA) in 2006 consisted of female older adults who were 60 years old and over (N=215). They were raising grandchildren. Multiple regressions were run because a dependent variable was relationship satisfaction with children which was continuous. **Results :** Those who were married and living in urban were higher level of relationship satisfaction with children. As education level increased from elementary to junior high school graduation, the level of relationship satisfaction with children grew up 0.12. As self-rated health increased by 1 unit, the level of satisfaction with children grew up 0.31. The relationship satisfaction with adult

children became lower after controlling household income transfer from adult children whose offspring was cared by grandmother. **Conclusion :** In conclusion, the link between raising grandchildren and level of relationship satisfaction with adult children were mediated through household income transfer from adult children in Korea. Appropriate income level among older women is very important in family relationship in Korea. Therefore, minimum level of income for Korean older women needs to be supported by public policy. **Keywords :** Raising grandchildren, children satisfaction

SS26 215-S-3

CHILDREN'S DIVORCE AND THEIR EXCHANGES WITH ELDER PARENTS IN RURAL CHINA

Zhen CONG¹, Merrill SILVERSTEIN² (1. Human Development and Family Studies, Texas Tech University, USA; 2. Social Work, Syracuse University, USA)

Introduction : Intergenerational support has been shown to be an important factor affecting elder parents' health and well-being, particularly for Chinese rural elders who have limited access to other sources of support. This study examined the influence of children's change of marital status on their financial and emotional support to parents, as well as their parents financial help to them. We also examined whether the influences were contingent to children's gender. **Method :** The sample derived from rural Anhui Province. Our working sample included 10181 observations from 3 stacked intervals (2001-2003, 2003-2006, 2006-2009), representing 4927 unique children with 1170 elder parents. The random effects models were used. **Results :** Results show that children's divorce significantly reduced their emotional closeness with parents and their financial support to parents, but not financial support from their parents. There is no interaction between gender and children's divorce. **Conclusion :** This paper discusses these findings in the context of changing rural Chinese families where patrilineal tradition was combatting with the process of modernization. **Keywords :** divorce; intergenerational relationships, China

SS26 215-S-4

LONGITUDINAL ANALYSIS OF INFORMAL AND FORMAL CAREGIVING BETWEEN 1999 AND 2009

Emiko TAKAGI¹, Yasuhiko SAITO² (1. College of Health Professions, Towson University, USA; 2. Advanced Research Institute for the Sciences and Humanities, Nihon University, Japan)

Introduction : The Introduction of national long-term care insurance in 2000 created a new public avenue of formal caregiving support to older adults in Japan. This study is intended to delineate longitudinal trends of informal and formal care utilization of Japanese older adults 70 years and older and describe demographic and family contexts that shape patterns of informal and formal care usage. **Method :** The analysis was based on sub-sample of data from the Nihon University Longitudinal Study of Aging (N=4997). The study sample consisted with those who reported at least one ADL or IADL disability in each of the five waves of data collected between 1999 and 2009. Caregiving pattern was assessed with three categories indicating whether the older adult received: informal care only, formal care only, or informal and formal care to assist their ADL and/or IADL difficulties. Frequencies of each care pattern as well as association of demographic and family-related factors with these caregiving patterns were examined across five waves. **Results :** After the implementation of national long-term care insurance, proportion of older adults who utilize formal care service steadily increased, especially for the assistance of ADL disabilities. Utilization of formal care service has become targeted

especially to those who live alone. Despite the increase of formal care service utilization, informal care remains prevalent for many older adults. Conclusion : Increased involvement of formal care providers and continuous presence of informal caregivers require further research on optimal collaboration of informal and formal caregiving for well-being of older adults and their families. Keywords : informal and formal caregiving, Japan

SS26 216-R

AGING-IN-PLACE ACROSS CULTURES

SS26 216-R-1

DEVELOPING AN AGING IN PLACE MODEL FOR LOW INCOME ELDERLY HOUSEHOLDS

Terry LUM¹, Vivian LOU¹, Tracy TONG², Nan LU³ (1. *Social Work and Social Administration / Sau Po Center on Ageing, The University of Hong Kong, Hong Kong*; 2. *Sau Po Center on Ageing, The University of Hong Kong, Hong Kong*; 3. *Social Work and Social Administration, The University of Hong Kong, Hong Kong*)

Introduction : Most older adults want to stay in their own homes, own community where they live while they age. However, older people in low income community are more likely to be admitted in nursing home. The goals of this study is (1) to understand the service needs of older people living in low income rental estates; and (2) to understand factors associated with the aging-in-place preference of older people in low income naturally occurring retirement communities. Method : Respondents of this study came from four low income public rental estates. We conducted 9 focus group interviews with residents, their services providers, and property management staff of these states. We also conducted face-to-face interview with 400 older residents in these estates. Results : Older people who reported a neighbour support network were 6.26 times more likely to prefer staying in the community and those who had received support from family member living together were 3.1 times more like to prefer staying in the community. Respondents who lived in an estate that had an elderly center were 2.75 times more likely to prefer staying in the community than those who lived in an estate that did not have an elderly centre. Conclusion : A strong neighbour support network and a nearby elderly center are positively associated with older people's willingness to stay in their community as they are. A new AIP services model was developed based on these findings to promote aging in place for frail low income elders in Hong Kong. Keywords : Aging in place, Low income elderly, Housing

SS26 216-R-2

ROLES OF NPOS TO PROMOTE AGING IN PLACE FOR THE ELDERLY LIVING IN URBAN AREA

Mie OHWA (*Department of Social Work, School of Human Welfare Studies Kwansei Gakuin University, Japan*)

Introduction : The percentage of Japanese people aged 65 and over was more than 23% in 2011, which is widely known as the highest ratio in the world. Among the older adults, more than 20% lived alone. In recent years, older people who lived either alone or only with a spouse have increased remarkably. In urban area, there are many frail elderly who are isolated from the community and consequently, they end up being institutionalized. These statistics indicate that it becomes more difficult to maintain life at home as one gets older. Although the Long-Term Care Insurance system has been established, it is not designed to meet every need of each frail elderly. Therefore, it is not sufficient to support the independent life of the elderly in their own homes. Accordingly, the informal sector, such as NPOs and volunteer

groups, is expected to give complementary support to those people in need. Method : Roles of NPOs are examined in this study based on the fact finding survey conducted by the NPOs in Kobe. Results : As a result, NPOs are giving various services, such as cooking, shopping, house cleaning, accompanying to clinics, housekeeping, etc. They provide considerable amount of home based services to the elderly. Conclusion : NPOs play significant roles in promoting aging in place for the elderly in urban area, however, most of them are small and fragile financially. Therefore we need to recognize the roles of NPOs and support them so that they can sustain their services for the elderly in the community. Keywords : aging in place, home and community based services, NPOs (non-profit organizations)

SS26 216-R-3

SMART TECHNOLOGIES TO PROMOTE HEALTH AND WELLBEING OF OLDER AUSTRALIANS LIVING AT HOME

Elizabeth OZANNE (*Social Work, The University of Melbourne, Australia*)

Introduction : This paper will report on two projects auspiced by the Institute for Broadband Enabled Society at The University of Melbourne. Method : The first was a systematic review and critical analysis of the state of implementation of smart home, telehealth, gaming, robotics and social connectedness technologies with the older population in Australia. The second explored the utilization of tablet technologies to ameliorate social isolation in older people working closely with an aged care service provider. Results : The first study found major gaps in the research and development infrastructure needed to fully implement available technologies that could be effectively utilized by older Australians in domestic settings and made some specific recommendations about how this situation might be improved. The second study developed an adapted tablet prototype which was successfully trialed with a very old group living at home and was seen to have significant impacts on reducing social isolation. With a national competitive grant this prototype and is now being rolled out to a larger population. Conclusion : Though there is a lot of local innovation going on in Australia in relation to the utilization of new smart technologies which can be used to support older people living in domestic settings, Australia lags behind other countries in implementing national research and demonstration projects. It is hoped that the rollout of National Broadband and increasing awareness of the impact of an ageing population will ensure increased focus in this area. Keywords : Ageing-in-place, smart technologies

SS26 216-R-4

HOME MODIFICATIONS FOR URBAN COMMUNITY DWELLING OLDER ADULTS WITH FUNCTIONAL LIMITATIONS IN THE UNITED STATES

Susan STARK¹, Emily SOMERVILLE² (1. *Program in Occupational Therapy, Washington University School of Medicine, USA*; 2. *Occupational Therapy, Washington University School of Medicine, USA*)

Introduction : Community-dwelling older adults with chronic conditions are at significant risk for disability in activities of daily living. Vulnerable to barriers in the physical environment such as stairs, low lighting or unsafe bathrooms, they may develop excess disabilities caused by environmental barriers. Notably, disabled older adults also report reduced community engagement. The purpose of this study was to determine if a home modification intervention can improve daily activity performance at home and in the community among chronically diseased older adults with mobility impairments. Method : We conducted a matched controlled trial of home

modifications in a sample of 40 older adults with chronic conditions. We measured their performance before and after the intervention with a 6 month follow-up. Treatment was provided by occupational therapists according to a manualized intervention protocol. Results : The average age of the participants was 78.8 years. Most (92%) were female and widowed (53%). The average number of comorbidities was 10. The average number of daily activity problems addressed was 6. For the primary endpoints of performance of activities and satisfaction with activities, as measured by the In-Home Occupational Therapy Evaluation, there is a main effect of improved performance and satisfaction in the treatment group ($p < .000$). Conclusion : Geo-coded maps of before and after intervention community participation indicate differential patterns of community participation. The intervention and assessment procedures were well tolerated. Home modifications do improve the performance of daily activities at home and may impact community participation. Limitations of the study include a brief activity monitoring period. Keywords : Aging-in-place, home modification, home and community based services

SS26 218-S

MAKING THE CASE FOR AGE-FRIENDLY ENVIRONMENTS: AN INTERDISCIPLINARY APPROACH

SS26 218-S-1

GLOBALIZATION AND THE DEVELOPMENT OF AGE-FRIENDLY CITIES

Chris PHILLIPSON¹, Tine BUFFEL², Fleur THOMESE³ (1. School of Social Sciences, The University of Manchester, United Kingdom; 2. Adult Educational Sciences / School of Social Sciences, Vrije Universiteit Brussel / The University of Manchester, Belgium; 3. Sociology, Vrije Universiteit Amsterdam, Netherlands)

Introduction : This contribution applies issues relating to globalization and its impact on urban life to the World Health Organization concept of 'age-friendly' cities. The paper examines data exploring the inter-relationship between urbanization and population ageing and the benefits as well as challenges which living in urban areas brings to older people. Method : The paper draws on population data from a number of OECD countries to illustrate the demographic diversity of urban populations in respect of people aged 60 and over. This analysis is also linked to the variety of socio-economic contexts presented by cities and the implications for those experiencing the range of changes associated with later life. Results : The paper will demonstrate a number of major issues for older people living within cities, examining in particular the contrast between those 'ageing in place' and the highly mobile populations characteristic of cities; evidence about the impact of global industrial change on everyday life in old age; and evidence for the role of amenities and services in cities in providing significant resources for old age. Conclusion : The findings indicate the need for a new strategy to be developed to support older people living in cities. The paper will explore this in relation to three areas: first, developing the idea of the 'social city'; second, developing 'rights to the city' to reflect changing needs across the life course; third, developing strategies for creating 'social networks' within cities. Keywords : urbanisation, globalization, ageing in place

SS26 218-S-2

AGEING AND PSYCHOLOGICAL WELL-BEING IN A GLOBAL CITY: THE ROLE OF AFC FACTORS IN TUEN MUN, HONG KONG

Elaine Yuen Ling YAU (Lingnan University, Hong Kong)

Introduction : Hong Kong is one of Asia's more demographically-aged

cities, with 14% of population aged 65+ in 2012, projected to be 23% by 2025. Facilities and transport are generally good by world standards although the urban environment may not be particularly 'age friendly'. This research was interested in socio-cultural variables and AFC characteristics in its predominantly Chinese population, and relationships with psychological well-being (PWB). Method : Drawing on a range of urban sub-areas, a modified AFC questionnaire collected 503 valid responses in Tuen Mun, a 'new town' of half a million population. Detailed analyses including explanatory factor analysis (EFA) and confirmatory factor analysis (CFA) were conducted to investigate relations in the data. Results : EFA identified four factors: Factor 1, "social participation"; 2, 'Community participation and information exchange'; 3 'transportation and housing arrangements'; 4, 'Social infrastructure'. However, CFA indicated the intuitively-acceptable four factor structure did not fit the empirical data well. Further exploration of the theoretical underpinning of the AFC items used a second-order model although again the fit was not good. Conclusion : Findings supported the notion that, when older dwellers reported positive perceptions of physical and social infrastructure, they also tended to report better PWB. Most AFC dimensions were positively related to PWB, though associations were statistically small to medium. Whilst social configuration and infrastructure might relate to PWB, other proximal factors, such as physical health, might be more salient determinants. As findings were mixed on latent dimensions underlying AFC characteristics, further analysis and eventually larger samples are planned. Keywords : Age friendly cities; psychological well-being; Hong Kong

SS26 218-S-3

BEYOND CITY LIMITS: EXPLORING AGE FRIENDLINESS IN NON-URBAN SETTINGS

Thomas SCHARF¹, Norah KEATING² (1. Irish Centre for Social Gerontology, NUI Galway, Ireland; 2. Research on Aging, Policies, and Practice (RAPP), Department of Human Ecology University of Alberta, Canada)

Introduction : The literature on age-friendly communities predominantly focuses on a model of urban ageing, failing to reflect the diversity of the community settings in which people age. This paper addresses this gap by examining the concept of community in non-urban contexts, asking what makes a good fit between older people and their environment. Method : The question is explored in relation to two types of non-urban context using data from separate empirical studies in Canada and England. In Canada, data encompass autobiographical and biographical accounts of older adults with different needs and resources ('marginalized' and 'active') living in two contrasting rural communities ('bucolic' and 'bypassed'). In England, data arise from interviews, observations and directed writing exercises with older adults living in a purpose-built retirement community that has recently undergone substantial redevelopment. Results : Comparative analyses at the interface of communities and older adults highlight two issues. First, people with similar characteristics and needs ('marginalized' or 'active') experience a good fit in some community settings, but not in others. Second, communities themselves benefit differently from their 'active' and 'marginalized' residents within the context of available community resources. Such features emerged in different ways in the rural communities in Canada and the retirement community in England. Conclusion : We argue that age friendliness should be reconceptualized, moving from the original WHO definition (2007) to explicitly accommodate different community needs and resources, to be more inclusive as well as more interactive and dynamic incorporating change over time in people and place. Keywords : age

friendly communities, comparative perspectives, non-urban settings

SS26 218-S-4

HOW DO URBAN ENVIRONMENTS INFLUENCE CHANCES FOR INDEPENDENT LIVING IN OLD AGE?

Josefine HEUSINGER¹, Birgit WOLTER² (1. SGW, University of Applied Sciences Magdeburg-Stendal, Germany; 2. Research, Institute for Gerontological Research - IGF e. V., Germany)

Introduction : Due to increasing frailty the radius of activity of most older people focuses more and more on the neighbourhood. Therefore the quality of nearby infrastructure such as medical care, shops, pleasant public spaces or public transport becomes more relevant for an independent live. Furthermore, empirical findings of several German studies provide evidence that the unequal distribution of cultural, economic and social resources among different social milieus generates specific strengths and weaknesses concerning the dealing with demands on support needed by elderly people (Blinkert/Klie 1999, Heusinger/Klunder 2005). Method : In the research project "Neighbourhood" (2008-2011 funded by the German Ministry of Education and Research) we investigated the sociospatial infrastructure of three neighbourhoods and the milieu specific resources and attitudes of old care recipients living in private households. We explored how these dimensions interact and influence a self-determined everyday life in spite of frailty. The three research areas were a working class tenement quarter in former West Berlin, a high density housing area in former East Berlin, and a rural area. Results : The results show that especially deprived old people with similar individual resources have different chances for care and everyday life organization according to their desires and needs in the compared neighbourhoods. Crucial is access to counseling, supporting services and medical care; an infrastructure for daily needs and opportunities for socializing; as well as the cooperation and networking of local stakeholders. Conclusion : The findings of our investigation show issues for further local political strategies strengthening more equitable chances for independent living in old age. Keywords : age-friendly environment, sociospatial resource, social milieu, frailty, self-determination

SS26 222-C

BUILDING A GERIATRIC-FRIENDLY EMERGENCY DEPARTMENT

SS26 222-C-1

GERIATRIC TRAINING IN EMERGENCY MEDICINE RESIDENT EDUCATION

Melissa STILES (Family Medicine, University of Wisconsin School of Medicine and Public Health, USA)

Introduction : Emergency medicine residents in training and practicing physicians are not prepared to deal with the "silver tsunami". In the US in 2006 there were 17 million geriatric emergency department visits. This number will grow exponentially as the number of US elders will increase to 71 million people by 2030. The Institute of Medicine (IOM) and the American College of Emergency Physicians (ACEP) have both advocated for a geriatric core curriculum for residents in training and practicing physicians. Method : The session will provide an overview of model geriatric curricula for residents and practicing physicians. The session will focus on specific competencies that comprise a core geriatric emergency medicine curriculum. We will also discuss novel ways of using emerging technologies for curriculum delivery (i.e. Simulation, IBooks and Podcasts). Additionally, we will discuss the evolution of geriatric emergency

medicine fellowships for practicing EM physicians, and models of continuing medical education in geriatrics for practicing EM physicians. Results : There are various models of geriatric curriculum that can be utilized for both residents and faculty physicians. In 2010, an expert panel developed the minimum geriatric competencies that should be included in future curricula. Conclusion : Emergency medicine physicians need to be trained to effectively manage the growing geriatric population. Enhanced training in geriatric emergency medicine will lead to higher quality of care, lower hospitalization rates and decreased medical errors. Keywords : Emergency Medicine, Education

SS26 222-C-2

THE GERIATRIC ED: ESSENTIAL INFRASTRUCTURE AND CLINICAL CARE PATHWAYS

Kathleen Eleanor WALSH (Emergency Medicine, University of Wisconsin, USA)

Introduction : The global population is aging at an accelerated rate. A central question is whether this aging population will be accompanied by sustained or improved health. The answer lies partly in the ability of families and communities, as well as health service delivery systems, to provide optimal support to older persons. Method : Various models of care have been developed to improve the pre-hospital and hospital medical evaluation and treatment of older geriatric patients in the emergency department. There have been variable results on functional and health outcomes, as well as health services utilization. These emergency department models include geriatric consult service, physician led assessment teams, nurse-led intervention and post-discharge review. Results : Older patients have distinct patterns of service use and care needs. Future emergency department geriatric care models will require a robust and adaptable organization that incorporates appropriately trained personnel; reliable streams of communication between prehospital, emergency department, inpatient, and outpatient services, valid protocols and a geriatric-friendly infrastructure. We will discuss evolving management models within the context of contemporary emergency care for geriatric adults. Conclusion : Emergency departments are at the front line to face the forthcoming increased use of the health care system by the world's aging population. Emergency care services will need to adjust system wide to manage the impact of these demographic changes. International collaboration between emergency care providers and health care systems is critical during this worldwide healthcare reform. Keywords : geriatric emergency department, clinical care models, systems

SS26 222-C-3

THE ROLE OF PALLIATIVE CARE IN GERIATRIC EMERGENCY MEDICINE

Mark ROSENBERG (Emergency Medicine, St Josephs Healthcare System, USA)

Introduction : People die and they die of one of four possible trajectories: sudden death, terminal illness, organ failure, and frailty. All but sudden death benefit by palliative care. Geriatric Emergency Medicine must include an understanding of disease trajectory, prognostication, and symptom management in end of life care. This presentation will define palliative care, discuss benefits of palliative care and how it can be incorporated into Geriatric Emergency Department patient care and management. Method : Research focusing on palliative care delivery in emergency medicine will be discussed with case study review. Surveys from around the globe find that most people want to die in familiar surroundings, in a place that is

comfortable both physically, psychologically, and spiritually. Results : Research supports the use of palliative care interventions early in the disease trajectory to promote quality of life as well as reduce costs associated with treatments. Studies have consistently demonstrated that palliative care consultations and interventions result in reduced symptoms, greater emotional support, and improved patient and family satisfaction. Conclusion : Palliative Medicine Programs in the Emergency Department focus on providing better care for patients with severe and life limiting illness. Implementing a palliative medicine program in the Emergency Department provides the opportunity to change the existing paradigm of care for chronic disease. Specifically, palliative care in Geriatric Emergency Medicine, may alter the trajectory of care by discussing treatment options with patients and their families. Keywords : Palliative Care, End of Life, Emergency Department

SS26 222-C-4

“SELLING” GERIATRIC EMERGENCY MEDICINE TO HOSPITAL ADMINISTRATORS: QUALITY METRICS AND COST-EFFECTIVENESS

Chik Loon FOO (*Emergency Department, Tan Tock Seng Hospital, Singapore*)

Introduction : Despite the imminent Epidemic of the Elderly, many emergency departments (EDs) continue to face resistance from administrators in establishing a geriatric emergency medicine (GEM) service. Showing cost-effectiveness of a GEM model is an uphill task: geriatric emergency interventions are time-consuming, results in the literature have been mixed, outcomes take months to demonstrate, and positive outcomes show limited sustainability. Method : GEM has two broad aims: to reduce inappropriate admissions, and to avoid high-risk discharges. In the face of current ED pressures of bed block and high litigation, these two goals may persuade administrators to relent. A small group of ED elders ? while unsuitable to return to their pre-morbid environment due to acute illness or injury ? may also not require acute high-level medical care. Their admissions can be avoided by right-siting them to cheaper yet competent alternatives such as subacute, transitional, community and home care. Results : On the other hand, GEM also serves as a safety net to prevent high-risk elders from being discharged from ED. To achieve this, there must be adequate and ongoing training of ED staff in the typically atypical presentations of elderly emergencies. Providing geriatric screening also unravels unmet needs otherwise hidden behind the primary complaint. Failure to address these needs put patients at risk of future ED reattendance and hospitalization. Conclusion : Pure health economics and quality indicators may not be helpful arguments for a GEM service. Instead, admission avoidance and reducing ED reattendance are more achievable outcomes and hence likely to be more persuasive. Keywords : geriatrics, emergency

SS26 222-C-5

ACUTE EMERGENCY DEPARTMENT PAIN MANAGEMENT IN THE GERIATRIC ADULT

Andrew K. CHANG¹, Christopher CARPENTER² (*1. Emergency Medicine, Montefiore Medical Center, USA; 2. Emergency Medicine, Washington University in St. Louis, USA*)

Introduction : Older adults are at high risk for untreated and undertreated pain. A pharmacologic regimen must combine satisfactory analgesia with sufficient safety. We compared a rapid, 2-step IV hydromorphone titration protocol against usual care in older ED patients. Method : ED patients ≥ 65 years with severe pain were randomized to the hydromorphone titration protocol or usual care.

Hydromorphone titration patients received 0.5 mg IV hydromorphone. Usual care patients received any dose of any IV opioid. At 15 minutes, both groups were asked, “Do you want more pain medication?” Hydromorphone titration patients who answered “yes” received a second dose of 0.5 mg IV hydromorphone. Usual care patients who answered “yes” had their treating attending notified, who then could administer any (or no) additional medication. The primary outcome was satisfactory analgesia defined as the patient declining additional analgesia at least once when asked at 15 or 60 minutes after administration of initial opioid. Dose was calculated in morphine equivalent units (MEU: 1 mg hydromorphone = 7 mg morphine). Results : 83.0% of 153 patients in hydromorphone titration group achieved satisfactory analgesia compared to 82.5% of 166 patients in the usual care group ($p=0.91$). Patients in the hydromorphone titration group received lower mean initial doses of opioids at baseline than patients in UC (3.5 MEU vs. 4.7 MEU, $p<0.001$) and lower total opioids through 60 minutes (5.3 MEU vs. 6.0 MEU, $p=0.03$). Conclusion : Titration of IV hydromorphone in increments of 0.5 mg provides comparable analgesia to usual care with less opioid over 60 minutes. Keywords : Pain, Emergency Department, Elderly

SS26 223-C

STRESS: PREVENTION OR INDUCTION OF AGEING AND AGE-RELATED DISEASES? AN INTERDISCIPLINARY APPROACH

SS26 223-C-1

CELLULAR STRESS IN BIOLOGICAL AGING: A DOUBLE-EDGED SWORD

Andreas SIMM (*Cardiothoracic Surgery, University Hospital Halle (Saale), Germany*)

Introduction : Biological ageing is induced by the gradual accumulation of cellular and molecular faults. An important cause of faults is intense stress like oxidative or glycolytic stress. Whereas high stress induces premature aging, low stress can induce the genetic repair/defense systems leading to increased life span. An example for such a stressor are advanced glycation endproducts (AGEs). AGEs can induce inflammation, oxidative stress, protein dysfunction and cell death. They are considered as biomarkers of ageing and are associated with cardiovascular diseases. Besides endogenous formation, significant amounts of AGEs are taken up with food. Although nutritional AGEs are considered as undesirable, proinflammatory agents, they may also enclose potentially beneficial antioxidants. Method : Mouse cardiac cells were stimulated with bread crust (high AGEs) and the activation of signal transduction pathways as well as gene expression were analysed. Mice were fed with bread crust containing diet to prove the in-vivo relevance for the heart. Results : In mouse cardiac fibroblasts, bread crust extract induced a moderate elevation of ROS production causing an activation of p42/p44MAPK, p38MAPK and NF- κ B, followed by increased expression of antioxidative enzymes. Preconditioning studies demonstrated that this was sufficient to protect cardiac fibroblasts and rat adult cardiac myocytes against severe oxidative stress. Furthermore, mice, fed a bread crust containing diet, exhibited a similarly improved cardiac expression of antioxidative defence genes. Conclusion : The consumption of AGEs can therefore contribute to an improved antioxidant status of the heart, thus exhibiting cardioprotective effects in case of severe oxidative stress as in ischemia reperfusion injury. Keywords : multidisciplinary, stress response, hormesis

SS26 223-C-2

AGING BABY BOOMERS: SOCIAL STRESS AND QUALITY

OF LIFE

Franz KOLLAND, Anna WANKA (*Institute of Sociology, University of Vienna, Austria*)

Introduction : The cohorts born in the first decades after World War II are on the basis of socio-demographic data referred to as the “Baby Boomer” generation. Baby Boomers, born between 1946 and 1964, are an important group in most western countries because they are numerous and entering the phase of life when morbidity is likely to become prevalent. Baby boomers will be ageing in a unique demographic context in which there has been a significant shift from a youth dominated age structure to one in which there are much higher percentages of people over 65. Baby Boomers, in general, have often been characterized in popular and scientific literature as narcissistic, individualistic, demanding, and focused on self-realization. These values are in contradiction to care taking and volunteering obligations, a misfit that causes stress. **Method :** Literature review and analysis of SHARE-Data. **Results :** For Baby Boomers research findings indicate cohort effects, effects of value changes, familial obligations and poor health behaviours as stressful events. In particular, Baby Boomers are getting stressed out by caring for different family members (parents, children, grandchildren), which causes a triple threat. Qualitative studies demonstrate (Guberman et al. 2012; Seaman 2012) that they feel stressed being obliged to care for their parents and to integrate themselves into volunteer work. And Baby Boomers are exhibiting worrying health trends, e.g. higher obesity rates, diabetes, and cardiovascular diseases. **Conclusion :** To moderate these stressors Baby Boomers intend to identify less with their family commitments and the obligation to care. **Keywords :** Baby Boomers, Social stress, health, care

SS26 223-C-3

STRESS OF LATE-LIFE SENSORY IMPAIRMENT: A DIFFERENTIAL VIEW

Hans-Werner WAHL¹, Vera HEYL², Philipp DRAPANIOTIS¹ (*1. Department of Psychological Aging Research, Heidelberg University, Germany; 2. Institut für Sonderpädagogik, University of Education, Germany*)

Introduction : The experience of vision and hearing loss is commonly considered as a major stress factor in advanced old age, because of its immediate impact on day-to-day functioning in dealing with spatial and social environmental interactions. We considered a broad range of successful aging indicators and simultaneously compared older adults with vision impairment, hearing impairment, and without sensory impairment. We also included a small group of dual sensory impaired older adults. **Method :** Data came from samples of severely visually-impaired (VI; N=121; mean age: 82.6 years), severely hearing impaired (HI; N=116; mean age: 82.7 years), dual sensory impaired (DI; N = 43; mean age: 83.4 years), and sensory-unimpaired older adults (UI; N=150; mean age: 82.3 years). Participants underwent a wide-scale assessment, including everyday competence, cognitive functioning, social resources, self-regulative strategies, as well as cognitive and affective well-being. We also assessed the 4-year survival status (except DI). **Results :** The most pronounced difference between groups appeared in the area of everyday competence (lowest in VI and DI). Multi-group comparisons in latent space revealed similar but also different strength of relations between health, everyday competence, social resources, self-regulation and overall well-being, depending on sensory status. After four years, mortality in VI (29%) and HI (30%) was significantly higher than in UI (20%) at the bi-variate level, but the difference disappeared after controlling for confounders in a multi-variate analysis. **Conclusion :** A multi-

dimensional approach to the understanding of stress related to the experience of sensory impairment in old age reveals a complex picture of loss and maintenance in psychosocial adaptation. **Keywords :** Stress, Coping, Sensory Impairment

SS26 223-C-4

STRESS AND HEALTHY AGING ? GERIATRIC PERSPECTIVES

Manfred GOGOL (*Geriatric Department Hospital Lindenbrunn, German Society of Gerontology and Geriatrics, Germany*)

Introduction : As stress can induce premature aging and chronic morbidities it is questionable how to manage this condition. **Method :** In cardiovascular disease there is a growing evidence that chronic inflammation constitutes a chronic stress situation which leads to structural organ damage, manifestation of disease and functional decline. **Results :** Because chronic inflammation is discussed as a possible mechanism of aging itself primary or secondary prevention strategies are required. **Conclusion :** The biological basis for this strategies is the fact that nutritional factors, activity and training, successful models of managing negative life events, and the active involvement in societal life are beneficial for healthy aging. **Keywords:** Stress, healthy aging

SS26 224-R

MALNUTRITION-, FALLS- AND SARCOPENIA-RELATED PROBLEMS IN FRAIL OLDER PEOPLE

SS26 224-R-1

PREDICTING FALLS IN THE ELDERLY RECEIVING HOME CARE: THE ROLE OF MALNUTRITION AND IMPAIRED MOBILITY

Judith Mm MEIJERS¹, Jos Mga SCHOLS², Jacques NEYENS¹, Yvette LUIKING³, George VERLAAN³, Ruud Jg HALFENS¹ (*1. Health Services Research, Maastricht University, Netherlands; 2. General Practice and Health Services Research, Maastricht University, Netherlands; 3. Centre for Specialised Nutrition, Danone Research, Netherlands*)

Introduction : Malnutrition and falls are major care problems in frail older people receiving home care, and may contribute to increased morbidity and care dependency as well as subsequent institutionalization. This study explores the relationship between malnutrition, mobility and falls in Dutch frail older people receiving home care. **Method :** This study is part of the annual National Prevalence Measurement of Care Problems of Maastricht University (LPZ). This cross-sectional prevalence measurement included 2971 clients (older than 65 years) from 22 home care organizations. The number of fallers was prospectively registered during 30 days; malnutrition was assessed by low BMI, undesired weight loss and low nutritional intake. The mobility item in the Care Dependency Scale (CDS) questionnaire was used to assess mobility dependency. Univariate and multivariate logistic regression analysis were used to test the relationships. **Results :** 2971 clients from 22 home care organizations participated. Clients had a mean age of 81.5 years (Sd 7.0) and received home care for about 2.75 years. The prevalence of malnutrition and falls was respectively 16.2% and 12.2%. Most importantly the study indicated by multivariate analysis that fallers could be predicted by the risk factors immobility ((OR 2.516 95% CI 1.144-5.532), high care dependency (OR 1.684 95% CI 1.121-2.532) and malnutrition (OR 1.978 95% CI 1.340-2.920). **Conclusion :** The findings of this study confirm that malnutrition, impaired mobility and care dependency are potential reversible factors related to falls.

Consequently early identification and management of nutritional status, impaired mobility and care dependency are vital facets for a potential fall prevention strategy. Keywords : Falls, Malnutrition, Mobility

SS26 224-R-2

MALNUTRITION IS ASSOCIATED WITH AN INCREASED RISK OF FALLS AND IMPAIRED ACTIVITY IN ELDERLY PATIENTS IN DUTCH RESIDENTIAL LONG-TERM CARE

Jacques NEYENS¹, Ruud HALFENS², Marieke SPREEUWENBERG², Judith MEIJERS², Yvette LUIKING³, George VERLAAN³, Jos SCHOLS⁴ (1. Health Services Research, Maastricht University, Belgium; 2. Health Services Research, Maastricht University, Netherlands; 3. Centre for Specialised Nutrition, Danone Research, Netherlands; 4. General Practice and Health Services Research, Maastricht University, Netherlands)

Introduction : Falls are frequent in long-term care, with considerable health consequences. This study explores the relationship between malnutrition, activity, and falls in Dutch long-term care (LTC) residents and the influence of nutritional intervention on this relationship. Method : A secondary data analysis of a cross-sectional, multi-centre point prevalence and incidence measurement. Setting: 81 long-term care settings in The Netherlands. Participants: 6.701 long-term care residents aged 65 and older; mean age 84; 70% female. Prevalence measurements of nutritional status and activity, and a 30 days incidence measurement of falls. Results : Of all participating residents, 9.8% sustained at least one fall, and 22.8% was malnourished. Malnourished residents were more often a faller (OR 1.78; $p < 0.01$) and inactive (OR 1.7, $p < 0.01$) than non-malnourished residents. Multivariate analysis confirmed the relation between malnutrition and fallers, without interference of activity. In the malnourished group with nutritional intervention, the percentage of fallers was lower than in the malnourished group without nutritional intervention (OR 0.738; $p = 0.056$). Conclusion : Malnutrition is associated with an increased risk of being a faller and with impaired activity in Dutch LTC residents. Malnourished residents who receive nutritional intervention have a lower risk of being a faller. Keywords : Nutrition, falls, LTC

SS26 224-R-3

RATIONALE AND DESIGN OF A CROSS-SECTIONAL STUDY ON THE PREVALENCE, CHARACTERIZATION AND HEALTH AND ECONOMIC CONSEQUENCES OF SARCOPENIA IN COMMUNITY-DWELLING OLDER PEOPLE IN THE NETHERLANDS

Donja MIJNARENDS¹, Judith MEIJERS¹, Ruud HALFENS¹, Sovianne Ter BORG², Yvette LUIKING², Sjors VERLAAN², Jos SCHOLS¹ (1. Health Services Research, School CAPHRI, Maastricht University, Netherlands; 2. Nutricia Advanced Medical Nutrition, Danone Research, Centre for Specialised Nutrition, Netherlands)

Introduction : Sarcopenia is defined as low muscle mass, muscle strength and physical performance, and has a negative impact on health outcomes. The aim of this study was to design a cross-sectional study with validated and feasible tools to measure the prevalence of sarcopenia, characterize lifestyle parameters and determine health and economic consequences of sarcopenia in community-dwelling older people. Method : A literature review was performed to select the most valid and reliable tools to measure muscle mass, strength and physical performance. Next, a pilot study was performed in two settings (community dwelling older people in homes for older people and in

assisted-living facilities; age ≥ 65 years). Home visits (n=8) were performed, applying the selected tools from literature, blood sampling and questionnaires. The feasibility of the study design was evaluated by two questionnaires, one filled in by each participating older person, one filled in by the researcher. Results : Based on the review, bio-electrical impedance, handheld dynamometry and the Short Physical Performance Battery were selected to measure muscle mass, strength and physical performance, respectively. Home visits took approximately two hours and all measurements were perceived as feasible according to both the participants and researcher. Overall, tests could be easily performed (n=7). Conclusion : The design of the cross-sectional study in community-dwelling older people was considered feasible, using validated and reliable tools to measure parameters of sarcopenia. The cross-sectional study will be executed in 2013. Keywords : Sarcopenia, feasibility

SS26 224-R-4

SARCOPENIA IN ACUTELY ILL HOSPITALIZED GERIATRIC PATIENTS. PREVALENCE AND FEASIBILITY STUDY

Walther SIPERS¹, Jos SCHOLS² (1. Geriatric Medicine, Orbis Medical Centre, Netherlands; 2. Caphri/ Faculty of Health, Medicine and Life Sciences, Maastricht University, Netherlands)

Introduction : Acute hospitalization is a hazardous event for frail elderly with 30 -50 % of the survivors decline in their level of daily function. Accelerated muscle loss is an important causal factor for functional decline and loss of physical performance. This loss of muscle mass, strength, and/or functioning with aging is called sarcopenia. Currently, clinicians do not look for sarcopenia as a target for treatment in hospitalized older people. In 2010 the European Working Group on Sarcopenia in Elderly People first came to a consensus on diagnostic criteria and on a diagnostic workup for sarcopenia. Yet, the workup is not completely suitable for clinical practice. For example to determine muscle mass Dual-energy X-ray absorptiometry (DXA) and Bio impedance analysis are advised, both methods with advantages and disadvantages. In this study was looked for the prevalence of sarcopenia and the feasibility of the diagnostic work up in acute ill hospitalized elderly admitted to a geriatric ward in Orbis Medical Centre in the Netherlands. Method : In this study, which started in April 2012, was chosen for the bio impedance spectrometry (BIS) because in contrast to DXA it is possible to measure separately intra-cellular and extra-cellular water. Subsequently, BIS may be less sensitive to changes in hydration state, inexpensive, easy to use and appropriate for bedridden patients. To determine muscle strength, assessment of hand grip strength was used and for muscle function the Short Physical Performance Battery. Results : The study is still on going. Conclusion : The preliminary results of this study will be presented. Keywords : sarcopenia, hospitalized geriatric patients

SS26 225-C

THE ACUTE CARE FOR THE ELDERLY (ACE) UNIT IN THE DIGITAL AGE: UNDERSTANDING THE INTERFACE BETWEEN "HIGH TECH" AND "HIGH TOUCH" IN ELDERS ADMITTED TO THE ACUTE CARE HOSPITAL SETTING

SS26 225-C-1

OVERVIEW OF INPATIENT CARE & THE ACUTE CARE FOR ELDERLY UNIT MODEL (DR. OAKES)

Sandra Liliana OAKES (Family and Community Medicine, University of Texas Health Science Center, San Antonio, USA)

Introduction : Acute care of the elderly unit is a specialty area of practice. This model of care has 3 major components. Specialized environmental design to tailor to the needs of older adults, daily inter professional team work, nurse driven protocols and emphasis on quality improvement systems of care. **Method :** Review of the evidence behind ACE units will be done and description of the ACE development and implementation in San Antonio Texas will be briefly describe. 1. initial steps in developing and ACE 2. Developing a business model 3. Building bridges in all inter-professional areas 4. ACE and technology 5. tracking outcomes 6. Quality improvement. **Results :** Ace units have demonstrated savings in hospital care in USA by decreasing length of stay, improving functional outcomes and making a difference in quality and patient center care. ACE can improve processes of care, satisfaction, and potentially function and discharge location **Outcomes** depend heavily on local environment, resources, commitment. **Conclusion :** ACE units are one of the hospitalized models that can make a difference in the care of older adults. The evidence suggest that the model is cost effective. ACE model units can take different shapes depending the sites. **Keywords :** ACE unit, Acute Care of Elderly, quality improvement

SS26 225-C-2

A REAL-TIME QUALITY IMPROVEMENT CHECKLIST: THE ACE TRACKER

Ariba KHAN (*Geriatrics, AUWMG, USA*)

Introduction : The Acute Care for Elders (ACE) unit is characterized by an environment that fosters patient self-care, guidelines to maintain and restore patient functional status, interdisciplinary team rounds, discharge planning and medical care review. There may be challenges to implementing and disseminating ACE principles through out the hospital. The electronic medical record (EMR) may be used effectively to meet these challenges. **Method :** "ACE Tracker" (Acute Care for Elders Tracker) is a real-time report electronic resource that summarizes information from the electronic medical record (EMR) of patients 65 years and older. This report requires no additional evaluations of the patient by the health care team. The geriatrician may collaborate with the inter-disciplinary team to identify vulnerable elderly. **Results :** Data from the electronic medical record is compared over 13 hospitals across a health care system. **Conclusion :** ACE tracker is a real-time report that accesses data from the electronic medical record that can widely disseminated across health care systems and improves the quality of care. **Keywords :** Hospital Care, EMR

SS26 225-C-3

BRIDGING THE GAP AND IMPROVING THE QUALITY: CARE TRANSITIONS BETWEEN THE HOSPITAL & NURSING HOMES

Yanping YE (*Division of GeriatricCommunity and Family Medicine, University of Texas Health Science Center at San Antonio, USA*)

Introduction : In ACE unit, new patients are screened for personal risk factors, which are closely monitored during their stay. An interdisciplinary team that meets daily to discuss every currently admitted patient, ensuring that all members of the ACE team are on the same page about treatment and discharge plan. For the hospitals that do not have a physical ACE unit, this process improvement concept can be used to facilitate a safe discharge and quality transitional care. **Method :** An interdisciplinary team (IDT) meets every week day for 30 minutes to discuss every admitted patient. Using risk assessment tools and ACE tracker, team members are able to identify the individual patient's risk for readmission. The

geriatrician works as a team leader to strategize the risk factors and collaborate with other team members to ensure the safety and quality of transitional care. The patients who are discharged to nursing homes will be seen by physician or nurse practitioner within 72 hours. **Results:** The average length of stay at our ACE unit is only 3.2 days. Our ACE unit 30-day readmission rate for the same diagnosis is just over 3 percent, compared with the national rate of 14 percent. **Conclusion :** Hospitals are full of hazards for our frail elders. ACE unit is designed to reduce all the complications that elders may suffer in hospitals. It is the first place to ensure a high quality of transitional care. The interdisciplinary team approach is proven an excellent model to facilitate the care transitions between the hospital and nursing homes. **Keywords :** ACE unit, transitional care, IDT

SS26 225-C-4

DELIRIUM REDUCTION PRACTICES IN THE ACE UNIT

Sandra Liliana OAKES (*Family and Community Medicine, University of Texas Health Science Center/ Christus Santa Rosa Hospital, USA*)

Introduction : Delirium is a sudden change in mental status characterized by severe confusion that can last hours or days. It is not a disease, but rather a set of symptoms that are usually caused by pre-existing diseases or medications. Delirium patients have increase morbidity and mortality up to 2 years from first episode, it increase length of stay, health care utilization, patients have high risk of institutionalization Delirium patients are only diagnose accurately by MD 20 % of the time, by the RN's 50 % of the time. The ACE unit has implemented evidence based delirium protocols to prevent it. **Method :** Implementing a culturally competent delirium protocol. Phase 1: (2/6) Increase utilization of the Cognition and Mobility components at the Acute Care of Elderly(ACE) unit by 90% in the next 3 months at a health care system in San Antonio, Texas Measure observations using Quality improvement tools: Shadow nursing personnel (day & night shifts) Figure out barriers/fish bone Illustrate ideal processes through flow charts Make decisions for implementation Standardization of procedures. **Results :** Implementation of cognition protocol perform by nurses increase by 67%. This include utilization of mini-cog. Development of bilingual communication boards to reinforce cognition, visual , auditory, hydration and sleep hygiene. Implement mobility protocol increase by 80% by optimizing the work of a trained restorative aid and nurse training in functional status and prevention of functional decline. Bilingual brochure was develop to engage and educate patients & families in delirium prevention. **Conclusion :** Delirium prevention protocols is achievable by promoting quality improvement processes. **Keywords :** ACE unit, delirium, quality improvement

SS26 226-C

ICT IN DEMENTIA: FROM ASSESSMENT TO STIMULATION

SS26 226-C-1

ALZHEIMER PATIENT ACTIVITY ASSESSMENT USING MULTI-SENSOR SYSTEMS

Francois BREMOND (*STARS, INRIA, France*)

Introduction : We present several sensor-based technologies to support the diagnosis and evaluation of dementia progress in early stage of Alzheimer Disease (AD). **Method :** We compare 2 systems based on the analysis of video and accelerometer data to assess older people performance in instrumental activities of daily living (IADL) and physical tests defined in the clinical protocol developed by the Memory Center of the Nice Hospital and the Department of Neurology at National Cheng Kung University Hospital ? Taiwan. This clinical

protocol defines a set of IADLs (e.g., preparing coffee, watching TV) that could provide objective information about dementia symptoms and be realistically achieved in the observation room of both sites. The proposed system uses a constraint-based ontology to model and detect events based on different sensor readings (e.g., 2D video stream data is converted to 3D geometric information which is combined to a priori semantic information, like defined zones of interest or posture estimations given by accelerometer). The ontology language is declarative and intuitive (as it uses natural terminology), allowing medical experts to define and modify the IADL models. Results : The proposed system has been tested with 44 participants (healthy=21, AD=23). A stride detection algorithm has also been developed by the Taiwanese team for the automatic acquisition of patient gait parameters (e.g., stride length, stride frequency) using a tri-axial accelerometer embedded in a wearable device. It has been tested with 33 participants (healthy=17, Alzheimer = 16) during a 40 meters walking test. Conclusion : This new system by combining accelerometer and video data can assess. Keywords : analysis of activities of daily living, multiple sensor monitoring systems, Alzheimer's dementia.

SS26 226-C-2

SWEET-HOME: WALKING PATTERN MEASUREMENT FOR ASSESSING ALZHEIMER DISEASE PATIENTS

Yu-Liang HSU¹, Chien-Wen LIN¹, Chun-Yao WANG¹, Ming-Chyi PAI², Hao-Li WU¹, Robert PHILIPPE³, Francois BREMOND³, Pau-Choo CHUNG¹ (1. *Electrical Engineering, National Cheng Kung University, Taiwan*; 2. *Institute of Gerontology, National Cheng Kung University, Taiwan*; 3. *Centre Mmoire de Ressources et de Recherche, Universit de Nice Sophia Antipolis, France*)

Introduction : Alzheimer disease (AD) is becoming one critical healthcare issue for the study of gerontology. Among the various approaches for the detection of AD, walking pattern has been considered as one invasive and convenient biomarker. Method : In our France-Taiwan integrated project, an inertial sensor based approach has been proposed to measure the walking patterns combined with video based behavior analysis for the assistance of clinical diagnosis of AD. In this presentation we will focus on the discussions of gait parameters obtained from the computation of the inertial sensors for the analysis of walking patterns when the subjects are under different mental loadings. Results : Our experiments show that with heavy mental loading, even the healthy control (HC) normal subjects will be disturbed causing the gait parameters change. However, some parameters show that the disturbances to the AD subjects are more influential than the normal subjects. Balance evaluation is also considered as a biomarker. Therefore, a balance measurement design with the inertial sensors is also developed. Conclusion : In the results of static balance test it shows that several balance postures demonstrate the difference between AD and HC. The AD group was easier losing their center of mass and could not maintain balance until fifteen second. Keywords : walking pattern, balance, Alzheimer's dementia

SS26 226-C-3

USE OF ICT FOR THE ASSESSMENT OF ACTIVITY OF DAILY LIVING

Athina KOKONOZI¹, Ioannis KOMPATSIARIS², Alexandr KONIG³ (1. *ITI - Information Technologies Institute, CERTH, Greece*; 2. *ITI, CERTH, Greece*; 3. *Neuropsychology, MHeNS School for Mental Health and Neuroscience, Maastricht, France*)

Introduction : The relation of behavioural, lifestyle and cognitive

monitoring parameters with dementia-specific patterns can provide a promising and objective dementia assessment due to the long-term nature of the measurements. On top of this, technologies that monitor activities of daily living can allow a person with dementia to remain independent, reducing the burden on family/friends and decreasing healthcare costs. They also increase the sense of safety, since emergencies can be detected with appropriate feedback provided. Method : Dem@Care is a four years EU funded research project, which started in November 2011 targeting the development of an integrated solution for the remote monitoring, diagnosis and support of people with very mild or mild dementia. Dem@Care investigates the use of multiple sensors (wearable sensor devices for physiological monitoring, ambient and wearable 2D and 3D optical sensors and microphones) for the recording, among others, of daily activities, lifestyle patterns, emotions, speech impediments, and vital signs, as well as the use of intelligent mechanisms for the assessment of the individual's condition and for the appropriate care treatment. Results : Dem@Care will evaluate its methodologies and system in different settings addressing various scenarios and use cases: a controlled lab environment simulating home activities, real homes and nursing homes. The project website is: <http://www.demcare.eu/>. Conclusion : Through intelligent processing of heterogeneous data, Dem@Care seeks to minimize the subjectivity characterizing current clinical diagnosis protocols and to enable the formation of a comprehensive and objective picture of the individual's overall condition. Feedback will be provided to the clinicians and directly to the patients and their carers. Keywords : Multi-parametric behaviour interpretation, Personalised health, Continuous multi-sensor monitoring

SS26 226-C-4

NON PHARMACOLOGICAL APPROACH USING ICT FOR TREATMENT OF BEHAVIORAL DISTURBANCES

Philippe ROBERT¹, Pierre David PETIT¹, Gregory BEN-SADOUN¹, Julie PIANO¹, Alexandre DERREUMAUX¹, Patrick MALLEA¹, George DRETTAKIS² (1. *CoBTeK, EA CoBTeK Memory Center, CHU Nice Sophia Antipolis University, France*; 2. *REVE unit, INRIA Sophia Antipolis, France*)

Introduction : Non pharmacological approaches are considered the first line treatment to manage behavioral disturbances in dementia (BPSD). This presentation will describe two research projects aiming the development of Information and Communication Technologies (ICT) tools in this field. Method : The studies presented come from the European Commission project FP7 and from the French Investissement d'Avenir first call (Az@game). Results : In the FP7 VERVE for Vanquishing fear and apathy through E-inclusion: Personalised and populated Realistic Virtual Environments for clinical, home and mobile platforms two serious game are in development: 1/ The autobiographical memory motivation scenario. The scenario use an immersive 3D environment that is being developed for participants with subjective memory complaints. It explore the acceptability of the setting and describes the parameters enhancing engagement and, in particular, autobiographical memory. 2/ The kitchen scenario was developed for mobile platform in order to equip Nursing Homes and have ambulatory patients practice in the outpatient during day clinic visits. To this end, the "Kitchen Scenario" is a serious game intended to serve as a support for patients suffering from Alzheimer's disease and related disorders. The basic concept is to involve subjects dealing with executive functions impairment by food recipes in a virtual environment. A virtual agent will intervene to help patients whenever the system should detect particular difficulties or errors while performing required actions. Conclusion : Within the Az@game project the development of the Serious Game is not patient oriented

but aims to teach professional nursing home staff members how to manage well BPSD in daily life situations. Keywords : ICT Behaviour Dementia

SS26 227-C
IMPROVING OUTCOME OF EMERGENCY CARE IN OLDER POPULATION

SS26 227-C-1
ANALYSIS OF ISSUES AND RECOMMENDATIONS FOR IMPROVING EMERGENCY CARE OF THE OLDER PATIENTS

A.B. DEY (*Geriatric Medicine, All India institute of Medical Sciences, India*)

Older people often face acute health problems which require emergency treatment. Accessing emergency room has several determinants: availability of care giver to accompany, financial allocation for such intervention and appreciation of the need for emergency care by the patient and care-giver. These socio-economic factors along with health system response may affect outcome of emergency care. Health professionals may not appreciate the gravity of the situation and older patients succumb to their illness during and after hospitalization. This indicates a serious lacuna in the health system in managing older patients in emergency. The area of geriatric emergency care remains largely underdeveloped as it is seen as unrewarding in frail older patients with multiple diseases and disabilities with atypical clinical presentation. It is not uncommon for the older patient to present with multiple and confusing symptoms that need a provider with at least the basic knowledge and training in care of older people to decipher the root cause. In the health system, Emergency Department is a critical unit, where appropriate and timely intervention can reduce mortality but also prevent life time morbidity in older patients. It is essential that the state of emergency health care for older people in different levels of health care and the determinants of health system response to such patients are analyzed. The strategy needs include develop standard operating procedure for common emergencies and health care providers need to be trained in handling older clients with life threatening health problems. Keywords : Emergency care, policy formulation, strategy

SS26 227-C-2
OLDER PEOPLE IN EMERGENCY

P.C. DAS (*Department of Geriatric Medicine, All India Institute of Medical Sciences, India*)

As a result of demographic transition, older patients account for a quarter of all emergency department attendance. Atypical clinical presentation of illness, a high prevalence of cognitive disorders, and the presence of multiple co-morbidities complicate their evaluation and management. Several age-associated issues lead to increased hospitalization, length of stay and resource utilization. The reasons for emergency room visit in old age can be grouped under three major groups: infection, vascular events and accidents and injury. However, there would always be a miscellaneous group which may be multi-factorial in causation. In old age infections may have typical features, patients may present with altered sensorium necessitating early broad spectrum, renal-safe parenteral antibiotics. Cardiovascular events, stroke, pulmonary embolism, peripheral vascular events are common vascular emergencies with high of risk adverse outcome. Accidents, injuries and falls are the common in urban and suburban centers and have major socioeconomic and health impact. A number of studies suggest that approximately a quarter of elderly patients have mental

status impairment, one sixth have potential depression, and two-thirds have some functional impairment. Older persons are at increased risk of adverse events, with higher rates of missed diagnoses, revisit after discharge and medication errors. Considering the high morbidity and mortality for older patients, evidence based management and systematization of emergency care needs to be considered as an universal requirement with attendant training in essentials of old age care for emergency room health professionals.

SS26 227-C-3
EMERGENCY CARE OF PATIENTS IN AIIMS HOSPITAL, NEW DELHI

Prasun CHATTERJEE (*Geriatrics, All India Institute of Medical Science, India*)

Introduction : Emergency attendance on the part of older patients has increased at par with rising number and proportion of older people in the society. However, information on this issue from India is scanty. Method : A prospective longitudinal study was conducted in the Emergency Department of All India Institute of Medical Sciences (AIIMS), New Delhi from 01/01/ 2009 to 30/06/2013 examine the status of older patients in emergency department. 1,643 (56% male) patients aged 60 years or more (self reported) who reported to emergency between 9 AM and 5 PM from Monday to Friday were subjects of the study. After initial data collection they are followed telephonically the next 1 year at the end of 1month, 6 month and 1 year. Results : Most common complaint was shortness of breath (~20%). 90% have one or more co-morbidities. 137(8.33%) patient died at emergency, 227 (13.82%) got admitted in ward for further management and 1118 (68.05%) discharged after stabilization. After one month 381 (24.72%) died of 1547 cases and after 1 year, 683 (48.51%) died of the 1408 cases. Physical inactivity, cancer, organ failure, coma and use of naso-gastric tube and urinary catheter were predictor of short term as well as long term mortality. Conclusion : Managing older patients in emergency department is challenging and needs special care as they have multiple co-morbidities, varied diagnosis and late presentation. Physicians/ primary care givers should be oriented in assessment and management of frail older patients especially in emergency setting. Keywords : comorbidity , organ failure, mortality

SS26 307-C
APPLYING QUALITY IMPROVEMENT PROCESSES AND MODELS OF CARE IN LONG TERM CARE PRACTICE: CHALLENGES AND OPPORTUNITIES FROM INTERNATIONAL PERSPECTIVES

SS26 307-C-1
BEST PRACTICES IN DIABETES MELLITUS MANAGEMENT IN LTC

Sabine VON PREYSS-FRIEDMAN (*Medicine, Division of Gerontology and Geriatric Me, University of Washington, USA*)

Introduction : Diabetes is highly prevalent in LTC patients in the United States and likely worldwide as Diabetes is an independent risk factor for LTC placement. About 26% of patients admitted to nursing homes carry the diagnosis of diabetes. Evidence suggests that patients with diabetes residing in LTC facilities do not receive medical care that meets recommended guidelines. Objective is a system wide analysis of care of patients with diabetes to devise interventions to meet standards of care in diabetes management in this vulnerable

population. Method : Medical Director of several LTC facilities in the Seattle , WA, USA conducted surveillance of Nursing Home patients with diabetes. The subsequent QI process focused on monitoring of diabetes control, appropriate medications, prevention of hypo- and hyperglycemia and complications via regular health maintenance exams. Special focus was on quality of life in frail elderly diabetic patients. Results : Surveillance confirmed evidence in the literature that diabetes management was suboptimal in the LTC setting. Blood sugar checks and sliding scale use was excessive, especially in frail elderly patients. There was a lack of individual goal setting appropriate to the health status of the patient and a lack of system wide approach to health maintenance. Several QI approaches were designed, including policies and procedures for uniform approach to glucose monitoring, elimination of sliding scale use and regular health maintenance. These resulted in significant improvement in glycemic control, health maintenance and quality of life. Conclusion : The Medical Director and the interdisciplinary team significantly improved standards of care for patients with Diabetes via CQI process. Keywords : Diabetes Mellitus, Quality Improvement, Nursing Home

SS26 307-C-2

SPICE-A DAY NURSING HOME PROGRAM FOR INTEGRATED CARE OF ELDERLY IN SINGAPORE

David Hock Hean YONG¹, Mui Lang LOW², Lay Lay PEE³
(1. Geriatric Medicine (Community Geriatrics Division), Changi General Hospital, Singapore; 2. PeaceHaven Nursing Home, PeaceHaven Nursing Home, Singapore; 3. Bedok MultiService Centre, PeaceHaven Nursing Home, Singapore)

Introduction : Singapore faces a rapidly ageing population with increased long term care needs. The most frail elderly are often cared for either in their own homes in the community or in nursing homes (NHs). Innovative care models allow for efficient use of resources to deliver cost effective long term care in a manner suited to and well received by the elderly and their family caregivers. Instead of an either community or nursing home choice for long term care, an integrated approach combining advantages of both allowed the older patient to remain living with their families and supported the caregiver as well as reduced strain on the healthcare system for nursing homes. Method : This is a description of a program that employed day-care for otherwise nursing home suited clients and assisted families to continue to provide care in their own homes and delayed nursing home admissions. This pilot program called Singapore Program for Integrated Care of the Elderly (SPICE) was adapted from the US On-Lok PACE model. Results : Preliminary results at 6 months showed that the program reduced caregiver stress, improved carer satisfaction, improved clients' self rated health scores and maintained their functional status. There was also a significant reduction in healthcare use in terms of emergency department visits, hospitalisations and lengths of stay for the clients. Conclusion : Instead of an 'either/or' approach to choice for long term care, a 'both/and' approach that integrated and utilised the combined community and institutional resources is successful in delivering care for frail elderly in Singapore. Keywords : long term care, day nursing home

SS26 307-C-3

IMPLEMENTING INTERPROFESSIONAL EDUCATION CURRICULUM TO REDUCE AVOIDABLE REHOSPITALIZATIONS (INTERACT) AT NURSING HOMES

Yanping YE (Division of Geriatric, Community and Family Medicine, University of Texas Health Science Center at San Antonio, USA)

Introduction : INTERACT is a quality improvement program designed

to improve the early identification, assessment, documentation, and communication about changes in the status of residents in skilled nursing facilities. The goal of INTERACT is to improve care and reduce the frequency of potentially avoidable transfers to the acute hospital. Such transfers can result in numerous complications of hospitalization, and billions of dollars in unnecessary health care expenditures. INTERACT program has targeted on the three domains of transitional care: Information, Destination, and Education. Method : Design: Quality Improvement Aim: Reduce the preventable acute care transfer at NHs Process: Charts were reviewed and baseline data were collected Interdisciplinary team (IDT) was formed at NHs Brain storm for root cause analysis by team members INTERACT tools were implemented Core IDT members attended live distance learning curriculum over 6-month period Acute care transfer cases were reviewed and discussed at weekly team meetings Acute care transfer rates were measured per 1000 residents' bed days. Results : Total number of acute care transfer from 4.72 to 3.69 per 1000 bed days. There is 21% reduction of all causes of 30-day re-hospitalization. This is about to reduce 37 transfers per year in this nursing home. Conclusion : INTERACT is a cost effective quality improvement program that can widely disseminated across health care systems and improves the quality of care at Long Term Care Facilities. Keywords : INTERACT, Nursing Homes, Quality Improvement

SS26 307-C-4

BEST PRACTICE IN REDUCTION OF PSYCHOTROPIC MEDICINES IN THE LTC

Sandra Liliana OAKES (Family and Community Medicine, University of Texas Health Science Center, Buena Vida Nursing Home and Rehab., USA)

Introduction : Inappropriate use of psychotropics can lead to significant adverse consequences in the elderly. New regulatory requirements, effective December 18, 2006, mandates that "each resident's drug regimen must be free from unnecessary drugs." Long Term Care centers (LTC) providing services under Medicare and Medicaid must meet minimum requirements structured by law in USA. AMDA's policy states that only an interdisciplinary team can make decisions to reduce inappropriate medications, such as psychotropics. Method : Buena Vida Nursing and Rehab Center (BV), a 230 bed community based long-term care facility in San Antonio, TX. At BV an independent psychiatry group (on contract) and the geriatrician medical director are responsible for all psychotropic prescriptions. INTERVENTION: Time: September 2007 to August 2012 Formation of an interdisciplinary team consisting of the medical director, consultant pharmacist, director of nursing, MDS coordinator, two social service representatives, the nurse manager and the psychiatry group's nurse practitioner. Team ensured that all prescribed psychotropic medications had a specific diagnosis linked to them. Team met every other month to review all psychotropic medications prescribed within the preceding month, discussed concerns about each patient and made recommendations for reduction or discontinuation of medications. Results : Change in prevalence rate of drug use over the years: Antipsychotics reduced from 21% to 5.6% Anxiolytics reduced by 22.8%. Stimulants reduced by 12.6%. A total of 90% reduction of global psychotropics use in low risk older adults in the LTC facility was achieved over 2 year period. Conclusion : Team approach is effective in systematic evaluation and reduction of psychotropics medications in the LTC. Keywords : psychotropic medication, drug reduction, long term car

SS26 309-R

A RESEARCH AND POLICY TRANSLATION PARTNERSHIP

FOR REDUCING FALLS AMONG OLDER PEOPLE

SS26 309-R-1

A FRAMEWORK FOR A TARGETED POLICY RESPONSE TO PREVENTING FALLS AMONG COMMUNITY-DWELLING OLDER PEOPLE

Lesley DAY (*Monash Injury Research Institute, Monash University, Australia*)

Introduction : Despite decreasing hip fracture hospitalisation rates in Victoria, the numbers and rate of fall hospitalisations are increasing. A new Australian grant program offered an opportunity for researchers and policy makers to work together on this issue to enable a more effective policy response to the falls prevention challenge in Victoria. **Method :** The RE-AIM framework was used to identify strategies required for an effective program. Research objectives were developed following an analysis of the current state of knowledge relative to these required strategies. **Results :** Planning and evaluation approaches for the five core RE-AIM dimensions as these related to falls prevention in Victoria were identified. Relevant research objectives included: (1) identification of sub-groups of older people most frequently admitted to hospital; (2) examining the acceptability of proven falls interventions to those sub-groups; (3) identification of factors that encourage and support relevant lifestyle changes; (4) identifying opportunities to incorporate proven falls interventions in existing programs and services; (5) developing and testing guidelines for sustainability within agencies and programs. The research results are guiding strategy details for falls prevention policy. **Conclusion :** Using a model which supports the whole process from planning a state-wide falls prevention approach, identifying the necessary evidence-base, through to designing the evaluation provides coherence, ensures systematic consideration of critical factors, and incorporates feedback into program planning from the outset. **Keywords :** falls prevention, research translation, policy

SS26 309-R-2

UPTAKE INTENTION AND PARTICIPATION IN HOME AND GROUP-BASED EXERCISE TO PREVENT FALLS

Terry HAINES¹, Lesley DAY², Trang VU³, Caroline FINCH², Lindy CLEMSON³, Keith HILL⁴ (*1. Allied Health Research Unit, Monash University & Southern Health, Australia; 2. Monash Injury Research Institute, Monash University, Australia; 3. Occupational Therapy, University of Sydney, Australia; 4. Physiotherapy Department, Curtin University, Australia*)

Introduction : Personal attitudes and beliefs towards falls and their prevention have previously been investigated in relation to intention to participate in exercise interventions to prevent falls. However, it is not known whether these attitudes and beliefs are prospectively related to actual participation. **Method :** Design: Prospective cohort study with baseline survey (n=394) and 1 year follow-up (n=244). **Participants:** Community-dwelling older adults (>70 years) in Victoria, Australia. **Measurements:** The health belief model was used as a starting theoretical model to guide development of items examining domains of threat appraisal, self efficacy, social norms, perceived intervention efficacy, confidence to participate, and intention to participate. Participation was classified as 'any' participation since the baseline assessment and 'current' participation. **Analysis:** A path development model analysis approach was employed using Bayesian Markov chain Monte Carlo modelling. **Results :** Key predictors of intention to participate in group exercise were a perception of personal effectiveness, having a broken bone since turning 60, previous exposure to group exercise in the past 5 years, and a heart condition other than congestive heart failure. Participation was associated with

intention to participate, previous exposure to group exercise, not being born in Australia, and not being married. Key predictors of intention to participate in home exercise were self-perceived risk of harm from falls, perception of personal effectiveness, and previous exposure to group exercise. However, intention was not associated with participation. **Conclusion :** Personal beliefs are predictive of participation in falls prevention exercise interventions though the assumption that participation follows intention did not hold for home exercise. **Keywords :** falls exercise intention

SS26 309-R-3

CHALLENGES IN IMPLEMENTING PERSON-ENVIRONMENT APPROACHES TO FALLS PREVENTION

Lindy CLEMSON¹, Alex DONALDSON², Lesley DAY³, Keith HILL⁴, Terry HAINES⁵ (*1. Ageing, Work & Health Research Unit, The University of Sydney, Australia; 2. Monash Injury Research Institute, Monash University, Australia; 3. Victorian Injury Surveillance Unit, Monash Injury Research Institute Monash University, Australia; 4. Head, Physiotherapy, Curtin University, Australia; 5. Southern Physiotherapy, Allied Health Research Unit, Southern Health Monash, Victoria, Australia*)

Introduction : Home safety assessments by occupational therapists are effective in reducing both rate of falls and risk of falling, particularly among at-risk people?for example, history of falling, recent hospitalisation or severe vision impairment. It is also one of two interventions proven to be cost saving by health economic cost effectiveness studies. Despite this evidence emergent over the past decade there is limited uptake within community services. Therefore, as part of our translational project we are exploring issues underlying the implementation of home safety services. **Method :** We are conducting in-depth interviews with stakeholders including program coordinators, delivery agents and occupational therapists from six community agencies contracted to deliver home safety services. The RE-AIM framework and Diffusion of Innovations theory underpinned the interviews which examine the enablers and barriers to adopting home safety falls prevention interventions and in integrating into routine community preventive practice. **Results :** Preliminary results suggest that investment in home safety is supported from management and therapists alike, however a number of themes emerged to slow adoption. These included diminished community capacity with funding and local staffing continuity issues, information and assessment resources not viewed as easily accessible or user-friendly and a mismatch between preventive approaches and core values of occupational therapy practice related to independence, a 'safety' versus 'doing' dilemma. We will present the final analysis and propose strategies to enable sustainability. **Conclusion :** This project provides insights and opportunities to increase the translation of the home safety research into practice and move to sustainability over the longer term. **Keywords :** translational research, falls prevention, home safety

SS26 309-R-4

A RESEARCH AND POLICY TRANSLATION PARTNERSHIP FOR REDUCING FALLS AMONG OLDER PEOPLE: FALLS PREVENTION SUSTAINABILITY GUIDELINES

Keith HILL¹, Freda VRANTSIDIS², Lindy CLEMSON³, Meryl LOVARINI³, Melissa RUSSELL⁴, Lesley DAY⁵ (*1. School of Physiotherapy, Curtin University, Australia; 2. Public Health Division, National Ageing Research Institute, Australia; 3. School of Occupational Therapy, The University of Sydney, Australia; 4. The School of Population Health, The University of Melbourne, Australia; 5. Monash Injury Research Institute, Monash University, Australia*)

Introduction : Many community-based falls prevention programs may not be sustained over time. This project, part of an NHMRC funded Partnership Grant Project co-funded by the Victorian Government Department of Health (DoH), aimed to develop and trial best practice sustainability guidelines and an associated training program to help organisations achieve falls prevention program sustainability. **Method :** A literature review informed guideline development (workbook and supporting document) and training program. The guidelines were trialled by four community organisations conducting falls prevention programs in four Victorian DoH regions. A training session was conducted prior to the guidelines trial. Following the session participants developed a sustainability plan for their program based on the guidelines. In monthly teleconferences (with written summary report updates), progress and issues were discussed. Post-trial interviews were conducted with participants to determine achievements, facilitators and barriers to embedding changes in their organisation. **Results :** Participants found the guidelines useful in targeting and tracking actions and in providing a framework for all areas to be considered. Aspects of sustainability targeted by trial participants included improving marketing/referrals, networks, and program documentation. Participants identified that management support was a key facilitator and time restrictions a key barrier to program sustainability. The trial resulted in modifications to the guidelines, with the final version available from the Monash University website: www.monash.edu/miri/. **Conclusion :** The Sustainability Guidelines and training program will assist agencies plan sustainability for falls prevention programs from the outset, improving likelihood of sustaining effective programs long term for older people at risk of falls. **Keywords :** falls prevention; sustainability; community

SS26 311-R
ART AND MUSEUM PROGRAMS FOR PEOPLE WITH DEMENTIA: AN INTERNATIONAL COMPARISON

SS26 311-R-1
ART AND ALZHEIMER'S PROGRAMS AT THE NATIONAL GALLERY OF AUSTRALIA

Adriane Victoria BOAG (*Learning and Access, National Gallery of Australia, Australia*)

Introduction : The success of the National Gallery of Australia's Art and Alzheimer's Pilot Program, conducted in 2007, compelled the Gallery to implement an ongoing program of tours for people living with dementia. In 2009 the Gallery implemented a national Art and Alzheimer's Outreach Program. **Method :** The knowledge and expertise gained at the NGA and through the findings of the evaluation was developed into a two-day workshop which has been delivered in diverse communities in regional and remote galleries across Australia. A training DVD has been developed to support and supplement this workshop, and a seminar has since been held to bring arts and health professionals together to reflect their shared experiences. **Results :** The evaluation of the Pilot Program was evaluated and a paper published summarising the findings in 2009. The evaluation demonstrated that participants were engaged in the tour from the outset and that they remained engaged for over 80% of the tour. The program has far-reaching benefits that reinforce the value of cultural engagement and the role of museums and galleries in promoting health and wellbeing in their communities. **Conclusion :** This program represents a unique approach to the non-pharmacological treatment of people living with dementia in Australia. The Art and Alzheimer's Program at the National Gallery of Australia exemplify how a holistic approach can assist not only the person living with dementia, but their carers,

healthcare providers and their community. **Keywords :** Dementia, Australia, Gallery programs

SS26 311-R-2
IMPLEMENTATION OF ARTS PROGRAM IN SENIOR CARE IN JAPAN: CHALLENGE OF ARTS ALIVE

Yoko HAYASHI (*Arts Alive, Japan*)

Introduction : Arts Alive started ACP, a discussion based art program for people with Dementia and their caregivers in Japan. We also trained ACP educators as facilitators. This paper deals with the issues of implementation of the program including its qualitative evaluation, public acceptance, logistical and operational issues at museums and care facilities. **Method :** We evaluated the responses and feedbacks of the participants and museum professionals who observed the programs. For logistical issues, the structure and financing of educational programs at Japanese museums are examined. Further, the required knowledge and skills, the content of the training program are analyzed. **Results :** Despite different cultural background ACP was well received both by people with dementia, care professionals and museum professionals. There are still issues of acknowledging benefits of the programs among people with dementia and public at large, transportation, financing and maintenance of quality of educators to be dealt with. The key elements of the training program and required qualifications for educators are communication skills and positive attitudes toward the program and the participants and strong interest in art. **Conclusion :** The initial implementation demonstrated great improvement to quality of life for the participants and possibility of educators who are neither art historian nor care professionals as facilitators. For further implementation, acknowledging the benefits of these programs and redefining the life with dementia among both museum and care professionals as well as public at large is necessary. Our study indicates more evidence based research on the impact of arts on aging would be very useful for further implementation. **Keywords :** arts, museum, dementia

SS26 311-R-3
ART AND DEMENTIA AT MOMA: PROGRAM DEVELOPMENT, EVALUATION, AND REPLICATION

Laurel HUMBLE, Meryl SCHWARTZ (*Education, The Museum of Modern Art, USA*)

Introduction : In 2006 The Museum of Modern Art (MoMA) developed gallery discussion programs for people with dementia and their caregivers and in 2008 partnered with New York University (NYU) to evaluate the efficacy of these programs. MoMA also developed in-person and online training resources for arts and health professionals on how to replicate their dementia programming. In 2011 MoMA commissioned Audience Focus, Inc. to survey museum programs developed with MoMA's support. **Method :** For the NYU study researchers administered self-rating and observer-rated scales, and conducted focus groups. For the Audience Focus, Inc. study researchers used case studies of select museum sites to create an online survey for additional museums. **Results :** The NYU evaluation quantitatively and qualitatively demonstrated the benefits of making art accessible to people with dementia and their care-partners. Moreover, it helped to identify the specific programmatic aspects that coalesce to create these benefits. Measurable quality of life benefits included positive changes to participants' mood directly after the program and in the days following the museum visit. Evaluators from Audience Focus, Inc. found that implementing an arts engagement program for people with dementia has far-reaching effects on practitioners and host institutions: programs lead many museum

educators to consider new ways of serving older adults, and to greater institutional awareness of the dementia audience. Conclusion : Together, these studies illustrate the many benefits of arts programming for people with dementia: programs improve quality of life for participants and contribute to an ideological shift in the way both institutions and practitioners think about the dementia audience. Keywords : Dementia, Museum, Art

SS26 312-R

GERONTECHNOLOGY: OPPORTUNITIES AND CHALLENGES

SS26 312-R-1

MOBILE COMPREHENSIVE GERIATRIC ASSESSMENT FOR OLDER PEOPLE IN DIFFERENT HEALTHCARE FACILITIES

Po-Lun CHANG (Taiwan)

No Abstract

SS26 312-R-2

TELE-SURVEILLANCE FOR FALLS IN AMBIENT ASSISTED LIVING FACILITIES

William D ;KEARNS¹, James L; FOZARD² (1. *Rehabilitation and Mental Health Counseling, University of South Florida, USA*; 2. *Ageing Studies, University of South Florida, USA*)

Introduction : Telesurveillance is the use of technology to monitor the activities of persons or objects at a distance. Telesurveillance capacities have advanced significantly. Introduction of wireless networked handheld devices whose processing and storage capabilities rival that of workstations but they have a long history of use. With increasing frailty elders are at heightened risk for injurious falls which may result in disability and death. A wide variety of telesurveillance devices are in use in community settings, formal care and private residences, ranging from devices employing coarse heat sensors that cover a few square meters to those employing radar to precisely assess an elder's position to within 20 cm. Not all telesurveillance technologies lend themselves to fall prediction, detection and prevention, however. Method : A brief history of telesurveillance and current commercial offerings for fall detection and prevention is followed by an overview of cutting edge technologies addressing the more difficult task of fall prediction. Results : The relative strengths and weaknesses of each technological approach are compared and contrasted in the context of the monitoring requirements. Conclusion : Low cost sensor systems have been most successful in circumstances where the identity of the monitored person is known by other means or highly detailed information on movement parameters is not required. Highly exact systems present opportunities for deriving movement information which can significantly improve fall prediction. Keywords: Elderly Fall Prediction.

SS26 312-R-3

BUILDING PHYSICS REQUIREMENTS (BPR) FOR LIFE ENRICHMENT CARE FACILITIES (LECF)

Helianthe KORT¹, William KEARNS², James FOZARD² (1. *Built Environment, Eindhoven University of Technology, Netherlands*; 2. *Department of Rehabilitation and Mental Health Counseling, College of Behavioral and Community Sciences University of South Florida Tampa, Florida 33612, USA*)

Introduction : LECF include all environments designed to improve the social and physical functioning of elderly people. Current building requirements (BR) focus on safety, security, energy requirements and

comfort. The increasing numbers of older people many with chronic diseases requires further BR modifications. Specifically, The International Classification of Functioning and disabilities(1) identifies BR requirements access to daylight, acoustics, cooling, heating and indoor air quality. Method : Older adults are the subject of gerontechnology research which includes the total technological environment supporting ageing people(2). In gerontechnology health, housing, and daily living fall within the five life domains for technology intervention goals: enhancement / satisfaction; prevention / engagement; compensation / assistance; care support/ organization(3). Results : The philosophical basis for a healthy environment can be traced to Epicurus (341 -270 v Chr) writings on the healing environment (HE) and LECF. HE is the theoretical basis of Evidence Building Design of structures that enhance patient recovery. Current literature provides few links between BPR and HE although access to proper lighting has a positive effect on patient recovery and daily living of older adult(4,5). Conclusion : Additional research according to gerontechnology principals with the broad perspective on older adults demands, needs to be conducted in order to determine whether more BPR has an effect on older adults functioning and to have evidence to create LECF. References 1.WHO 2001 2.Bouma, H. 2012 3.Bouma, H., et all. 2009 4.Huisman, E.R.C.M., Morales, E., van Hoof, J. & Kort, 2012 5.Hoof, J. van, Aarts, M.P.J., Rense, C.G. & Schoutens, A.M.C. 2009. Keywords : Gerontechnology; , Physical environment, Building requirements

SS26 312-R-4

USE OF TELEPRESENCE ROBOTS TO FACILITATE AGEING IN PLACE

Jun-ming LU¹, Yeh-liang HSU² (1. *Gerontechnology Research Center, Yuan Ze University, Taiwan*; 2. *Dept. ME / Gerontechnology Research Center, Yuan Ze University, Taiwan*)

Introduction : Thanks to the rapid progress of robotics, now we have a wide variety of robots to help the elderly people to "age in place." Autonomous robots are often employed to assist or entertain the elderly people, but the elderly people may prefer staying with those who they are familiar with. Telepresence robots further help to take mental health care through interpersonal interaction, by means of serving as the agent or avatar of their family members who live far away. From this point of view, telepresence robots tend to have greater potential in the field of elderly care and assistance. Method : The purpose of this paper is to summarize such applications of telepresence robots, as well as the key factors contributing to the successful "ageing in place" with these robots. In the use of telepresence robots, the principle is to rebuild the experience of face-to-face interaction between the remote controller and the senior user who stays with the robot. This paper discusses the user acceptance at both ends in terms of robot factors and human factors. Results : From the robot's perspective, its anthropomorphism, physical characteristics, and personality are critical. From the senior user's perspective, the user's backgrounds, experiences, and attitude toward robots need to be emphasized. Conclusion : The findings can offer some practical guidelines for researchers, professionals and practitioners in this field. Finally, the current development of telepresence robots in Gerontechnology Research Center Yuan Ze University is presented as an example to illustrate how the guidelines can be implemented to facilitate ageing in place. Keywords : telepresence robot, aging in place, interpersonal interaction

SS26 313-S

LEARNING AND USING TECHNOLOGY IN ASIAN CHINESE COMMUNITIES

SS26 313-S-1

USING TECHNOLOGY IN SUPPORTING ELDERLY AT NEIGHBORHOOD LEVEL: A CASE IN SHANGHAI CHINA

Limei CHEN (*Scholl of Social Development, East China Normal University, China*)

Introduction : Technology can make important contributions to elder care and enhance the welfare of the elders. However, technology assisted living and technology assisted care have been usually seen in institutions. They are new and rapidly developing in communities. This paper is aimed at finding out the projects initiated by local government and the users' views upon them. Method : This research employs case study method to collect quantitative and qualitative data in neighborhoods in Shanghai. "Ankangtong" system and '96890 community service hotline' are the main projects this paper focus, relevant project officers, neighborhood organization staff and community dwell elders are interviewed. Results : This research finds that government plays important role in introducing the equipments to elders and providing subsidies for the technology assisted living. The equipment system is easy to use for elders. The technology makes important contributions in helping elders in occasions of emergency. Conclusion : Technology assisted living for elders is not widely spread in China but government-initiated projects are well accepted by elders. Elders in different ages have various needs and different views towards the technologies. Keywords : technology elder care

SS26 313-S-2

ADVOCATE A TECHNOLOGY-FRIENDLY ENVIRONMENT FOR OLDER ADULTS: A STUDY IN TAIWAN

Yen-jen CHEN (*Department of Health Care and Social Work, Yu Da University, Taiwan*)

Introduction : Baby-boomers in Taiwan are moving into the Age Wave. In the face of the current Technology Wave, how to employ the power of gerontechnology to enable the elderly of an aging society to live independently has become one important issue for promoting national elderly policies. In recent years, Taiwan has included elderly care industry in the national economic construction scheme in the hope of introducing the force of gerontechnology into the care market and reducing the pressures of care. Therefore, this study intends to investigate the development and employment of gerontechnology in Taiwan, such as the acceptance of gerontechnology, internet interaction and service resource employment. Method : It used the method of in-depth interview from qualitative research to collect first-hand data for a comparative analysis. Results : As this study finds, the primary task of aging policies is to build a technology-friendly environment for the elderly. Those who supply and demand must also change their concepts and behaviors. Elderly users must adapt themselves to the interactive model of a technological society and learn to use technology in their daily life. The suppliers must also invent elderly-appropriate and all-purpose technological products and develop service strategies. In this way, the goal of active aging can be reached. Conclusion : A technology-friendly for older adults is advocated so as to maximize participation of older adults in this digital area. Keywords : technology-friendly environment, Chinese, Taiwan

SS26 313-S-3

MOTIVATION & BEHAVIOR OF LEARNING TECHNOLOGY AMONG SOON-TO-BE AGED & OLDER ELDERS IN HONG KONG

Ko SIU FONG (*Elderly Service Department, Hong Kong Young Women's Christian Association, Hong Kong*)

Introduction : Just like other modernized cities, application of IT knowledge in Hong Kong has closely been linking up with almost every aspect of our daily life. Previous studies showed that learning and using computer would have positive impacts in dealing with daily tasks among the elders in the West (Adler, 2002, Kelly et al., 1999 Morrell et al. 2000). Our research aims to investigate the situations and motivation of IT knowledge learning among soon-to-be-aged and older adults in Hong Kong. There are four aspects of area that we have explored: 1) factors associated with their learning motivation ; 2) expectations toward learning ; 3) internet using behavior; 4) impacts of using computer on well-being. Method : Our research has conducted both quantitatively and qualitatively since June, 2011. Over 500 self-administered questionnaires from 500 HKYWCA service users have been collected. Besides, two focus groups had been implemented to investigate those computer users who have joined the learning program as well as those non-computer users who haven't joined learning program. Results : In our findings, we found that age, education level, income source and possession of computer are the variable factors which affect our elders' motivation of IT learning. Besides, the more the elders who had joined computer program thought learning computer was useful to them, the higher they rated in problem solving and meaning in life index. Conclusion : The findings are inspiring. We suggest improving the "hardware" and "software" of IT facilities in order to help them remove the barriers of learning technology. Keywords : Active Aging, learning and using technology, Asian Chinese

SS26 315-S

PALLIATIVE CARE EDUCATION FOR NURSES WORKING IN AGED CARE ENVIRONMENTS

SS26 315-S-1

PALLIATIVE CARE IN AGED CARE EDUCATION - AN AUSTRALIAN PERSPECTIVE

Margaret O'CONNOR¹, Edward WING-HONG POON², Hyun Sook KIM³ (*1. Palliative Care Research Team, School of Nursing, Monash University, Australia; 2. Nursing, Thye Hua Kwan Hospital, Singapore; 3. Social Welfare, Korea National University of Transportation, Korea*)

Introduction : Care of the older person who is dying is a perennially contentious health and social issue in Australia, akin to many other parts of the world. Community discourses and images about older people conflict, either focusing on happiness, independence and company, or neglect, dependence, frailty and dementia. Results : There are many commonalities in the client groups who are either in an aged care facility or in receipt of palliative care, most obviously that both groups are reaching the end of life. Despite this, both disciplines have historically developed independently with little connection to each other. However, the consequence is very visible organisational disparities in care models, access to medical and nursing care, funding and access to bereavement support services. The Aged Care Act (1997) introduced a range of sweeping changes in the system and was the beginning of work to bring palliative care and aged care services more closely together. The Australian Government, through its National Palliative Care Programme, provided significant funding for the development of 'Guidelines for a Palliative Approach in Residential Aged Care' (the Guidelines). Conclusion : This paper discusses these changes and the application of the Guidelines across the country, as well as issues arising in their dissemination, educational preparation and ongoing usage. Keywords : Education, end of life, aged care

SS26 315-S-2

THE USE OF NARRATIVE AND EXPLORATORY METHODS IN TEACHING PALLIATIVE CARE IN GERIATRIC SETTINGS

Wing Hong POON (*Nursing Service, Ang Mo Kio-Thye Hua Kwan Hospital, Singapore*)

Introduction : Every individual have tended to describe and define themselves by telling, receiving and holding stories about themselves. Such stories help to reflect on life and become a very powerful tool to educate people. In teaching older people issues, the older person's stories become a very important essence as the story is the key to understand older person's journey and suffering. The aim of this workshop is to demonstrate the power of using narrative and exploratory to teach older people issues. Method : Role play, videos, self exploration, poems will be used in this workshop. Results : Nil. Conclusion : At the end of this workshop, we hope that participants will have more inner exploratory of their own self and will be able to use their stories in teaching older people. Keywords : Narrative, older people

SS26 315-S-3

PALLIATIVE CARE IN AGED CARE EDUCATION : A KOREAN PERSPECTIVE

Hyun Sook KIM (*Department of Social Welfare, Korea National University of Transportation, Korea*)

Introduction : Over the last 10 years Korean government and academic societies have made significant progress in developing hospice and palliative educational programs for interdisciplinary team. Despite such progress, however, hospice palliative care services are currently available only for terminally ill cancer patients in Korea. The population of aged patients with chronic disease and long trajectory to death in long term care facilities has dramatically increased since 2008, the year Korean government introduced social insurance for long term care. The need for quality end-of-life care service should be available to any patients including the aged with incurable disease not just for terminal cancer patients. While the education courses for nurses in hospice palliative care have been relatively well established, few nurses are trained in palliative care for aged care settings. Method: NIL. Results : This presentation discusses nurse's education programs in Korea: they are, Hospice Advanced Practice Nurse (HAPN) program by Ministry of Health and Welfare, Certification Program by Korean Hospice Palliative Nurses Association, and End-of-Life Nursing Education Consortium (ELNEC)-Geriatric Program. Of those, ELNEC-Geriatric Program was initiated in February 2006 in the US to prepare nurses as educators and leaders to improve the quality of end-of-life care in geriatric care facilities, and introduced to Korea in 2010 through the ELNEC project-Korea (established in 2008). Conclusion : The effectiveness of all available palliative and hospice care education programs in Korea will be discussed. Keywords : End-of-life, nursing education, ELNEC project

SS26 316-R

NATIONAL PROGRAMME FOR HEALTH CARE OF THE ELDERLY (NPHCE): A MAJOR INITIATIVE IN OLD AGE CARE IN INDIA

SS26 316-R-1

INTRODUCTION AND SITUATION ANALYSIS OF OLDER PEOPLE IN INDIA

Indrajeet Singh GAMBHIR (*Head division of Geriatric Medicine, Banaras Hindu University, India*)

The increased longevity across the globe has also been experienced in India. 60+ population has tripled in last 50 years. In year 2013 there are 100 million Indian elderly and in the year 2050, the number will be over 300 million. National Sample Surveys have shown that there is high burden of morbidity in old age, mostly comprising of non-communicable diseases. Disabilities resulting from these non-communicable diseases compromise quality of life in later years. The management of these chronic diseases is very costly thereby making it out of bound for elderly whose income decreases post retirement, more so for persons in unorganized sectors and dependent elderly women. 8% of older Indians above 60 years are confined to home or bed. This figure rises to 27% in 80+ age group and women are worst affected. There is no model of health care for older people in India. Presently elderly are provided health care by the general health care delivery system in the country. The infrastructure is grossly deficient at the primary care level. Elderly suffer from multiple co-morbidities and require multidisciplinary, comprehensive and dedicated health care, such model is imperative to provide quality health care to meet elderly needs. In India, family is still the primary care giver and there is lot of scope for training this lot to improve elderly health care. Keywords : older people, healthcare delivery system

SS26 316-R-2

COMPONENTS OF NATIONAL PROGRAMME FOR HEALTH CARE OF THE ELDERLY

Arvind MATHUR (*Medicine, Dr S N Medical College, India*)

Introduction : NPHCE plans to address health needs of elderly comprehensively at primary, secondary and tertiary level of health care delivery. There is an effort to have continuum of care from institution to home. Besides providing therapeutic services there is an important objective of training for medical, paramedical and caregivers. Program also encompasses thrust on research in various areas of geriatrics. Method : In order to achieve its objectives NPHCE has various activities at different levels. Results : At Sub-centre health education related to healthy ageing, domiciliary visits for attention and care to home bound / bedridden elderly persons along with linkage with other support groups and day care centres. At Primary Health Centre there is provision of clinical services for common ailments, provision of medicines, proper advice on chronic ailments and referral for diseases needing further investigations. Community Health Centre is First Referral Unit (FRU) for the Elderly from PHCs and below. Besides Geriatric Clinic a rehabilitation unit for physiotherapy is provided. At District Hospital a regular dedicated OPD and ten bedded in patient services to the Elderly along with facilities for laboratory investigations is provided. Regional Geriatric Centre would be tertiary level institutions with Geriatric Clinic, 30-bedded Geriatric Ward and facilities for advanced multidisciplinary treatments. These centres would be actively involved in training and running post graduate degree courses. There are plans to establish two advanced institutes of ageing in the country. Conclusion : NPHCE envisages to provide health care to elderly at every level thereby promoting healthy and active ageing in India. Keywords : Health delivery Elderly NPHCE

SS26 316-R-3

NATIONAL PROGRAMME FOR HEALTH CARE OF THE ELDERLY (NPHCE): A MAJOR INITIATIVE IN OLD AGE CARE IN INDIA

A.B. DEY (*Geriatric Medicine, All India Institute of Medical Sciences, India*)

Responding to social needs, national policies and legislations; and international commitments, Government of India, announced the

National Programme for Health Care of the Elderly in 2010. The vision of the NPHCE was to provide accessible, affordable and high-quality long-term, comprehensive and dedicated care to an ageing population; creating a new "architecture" for ageing; to build a framework to create an enabling environment for "a society for all ages" and overall to promote the concept of active and healthy ageing. Core Strategies of the programme included community based primary health care by trained health workers, dedicated facilities at District Hospitals, and dedicated regional tertiary centers to provide postgraduate and undergraduate medical training. The NPHCE also aimed at promoting health awareness through mass media to reach out to the target community. Eight institutions were announced as regional centers; some with interest while others without. Inaccessible districts without functional health system were identified for the new activity without consultation with State Governments. While it sounded politically correct, in practice the programme had neither implementers nor takers. Large states showed no interest because of the financial implication. As the programme was stretched to its limit, the salaries were unattractive and contractual nature of appointment did not attract talent for faculty positions, essential to start post-graduate programme as per regulatory norms. Overall this national programme has nothing to show on the ground. This is typical of the current system of governance where political will is not translated to action in the ground. Keywords : National policy, implementation, appraisal

SS26 318-S

IDENTIFYING ELDER ABUSE AND NEGLECT- AN INTERACTIVE WORKSHOP

SS26 318-S-1

IDENTIFYING ELDER ABUSE: AN INTERACTIVE WORKSHOP

Sara ALON (*Eshel, JDC-ESHEL (The Association for planning and Developing Services for the Aged in Israel), Israel*)

Introduction : Elder abuse is defined as a single or repeated act. or lack of appropriate action, occurring in any relationship where there is an expectation of trust, that causes harm or stress to an older person (WHO, 2002). Elder abuse is underidentified and under reported by social and health care professionals. Screening for abuse, using validated and efficient tools, has been suggested for increasing the identification rate. Such a validated tool encompassing the three dimensions of identification of risk factors that has been developed recently (Cohen et al. 2006, 2007). Method : In order to implement the three dimensional risk assessment tool an interactive workshop was developed by the Ministry of Health and JDC-Eshel. During this workshop participants will learn about the assessment tool as well as be trained in the use of it through case examples in the same manner developed in Israel. Results : As a result of these workshops there was: 1. An increased willingness by the multidisciplinary professionals in the use of the assessment tool. 2. An improvement of elder abuse assessment skills. 3. Increased willingness to routinely use the assessment tool. Conclusion : The development of a risk assessment tool must be accompanied by training in order to understand the benefits of it and it's use. This will increase the rate of identification of abused elderly. Identifying abused elderly is the first step in helping these victims in realizing their rights and aiding in stopping the abuse. Keywords : abuse, screening, training

SS26 318-S-2

IDENTIFYING ELDER ABUSE: AN INTERACTIVE WORKSHOP

Barbara LANG (*Social Work, Ministry of Health, Israel*)

Introduction : Elder abuse is defined as a single or repeated act. or lack of appropriate action, occurring in any relationship where there is an expectation of trust, that causes harm or stress to an older person (WHO, 2002). Elder abuse is underidentified and under reported by social and health care professionals. Screening for abuse, using validated and efficient tools, has been suggested for increasing the identification rate. Such a validated tool encompassing the three dimensions of identification of risk factors that has been developed recently (Cohen et al. 2006, 2007). Method : In order to implement the three dimensional risk assessment tool an interactive workshop was developed by the Ministry of Health and JDC-Eshel. During this workshop participants will learn about the assessment tool as well as be trained in the use of it through case examples in the same manner developed in Israel. Results : As a result of these workshops there was: 1. An increased willingness by the multidisciplinary professionals in the use of the assessment tool. 2. An improvement of elder abuse assessment skills. 3. Increased willingness to routinely use the assessment tool. Conclusion : The development of a risk assessment tool must be accompanied by training in order to understand the benefits of it and it's use. This will increase the rate of identification of abused elderly. Identifying abused elderly is the first step in helping these victims in realizing their rights and aiding in stopping the abuse. Keywords : abuse, screening, training

SS26 318-S-3

IDENTIFYING ELDER ABUSE AND NEGLECT WORKSHOP FOR PROFESSIONAL STAFF

Ayelet BERG-WARMAN (*Center for Research on Aging, Myers-JDC-Brookdale Institute, Israel*)

Introduction : Elder abuse is defined as a single or repeated act. or lack of appropriate action, occurring in any relationship where there is an expectation of trust, that causes harm or stress to an older person (WHO, 2002). Elder abuse is underidentified and under reported by social and health care professionals. Screening for abuse, using validated and efficient tools, has been suggested for increasing the identification rate. Such a validated tool encompassing the three dimensions of identification of risk factors that has been developed recently (Cohen et al. 2006, 2007). Method : In order to implement the three dimensional risk assessment tool an interactive workshop was developed by the Ministry of Health and JDC-Eshel. During this workshop participants will learn about the assessment tool as well as be trained in the use of it through case examples in the same manner developed in Israel. Results : As a result of these workshops there was: 1. An increased willingness by the multidisciplinary professionals in the use of the assessment tool. 2. An improvement of elder abuse assessment skills. 3. Increased willingness to routinely use the assessment tool. Conclusion : The development of a risk assessment tool must be accompanied by training in order to understand the benefits of it and it's use. This will increase the rate of identification of abused elderly. Identifying abused elderly is the first step in helping these victims in realizing their rights and aiding in stopping the abuse. Keywords : abuse, screening, training

SS26 322-C

HOW TO ENGAGE ORGANIZED MEDICINE IN GERIATRIC EDUCATION, RESEARCH, AND KNOWLEDGE TRANSLATION

SS26 322-C-1

GETTING STARTED: ENGAGING THE LEADERSHIP OF ORGANIZED MEDICINE TO ESTABLISH GERIATRIC

SECTIONS

Mark ROSENBERG (*Emergency Medicine, St Josephs Healthcare System, USA*)

Introduction : The most rapidly growing portion of society is the geriatric age group. Populations have been experiencing longevity and improved health forcing health professionals around the globe to struggle to keep up with the effects of this shifting paradigm of aging. Elderly patients often present with vague complaints, comorbid conditions, coexisting chronic medical problems, and polypharmacy necessitating an alternate model of care. **Method :** Discuss strategies to embrace this segment of the population focusing on approaches to engage key individuals in the benefits of providing an environment for the older patient which may also benefit the general population. Case studies in the establishment of Geriatric Emergency Departments will be highlighted. **Results :** Infrastructure and design planning may demand significant attention from leadership considering improving care to geriatric populations. A paradigm shift is required in thought and action through leadership and training. Developing a Geriatric Emergency Department will improve operational efficiencies and will focus on improving healthcare for older patient. The success will be measured in better outcomes, improved patient satisfaction, and cost savings. **Conclusion :** In many situations, using existing resources and specific operational strategies will provide improved care to an aging population. With minimal investment geriatric programs can translate into better healthcare for both functionally Independent older persons as well as those institutionalized. Ultimately, the success of any Geriatric initiative rests with individuals from leadership positions to staff members. **Keywords :** Geriatric, Emergency Department, Cost Savings

SS26 322-C-2

DEVELOPING A VALUE-ADDED PRODUCT FOR DUES PAYING MEMBERS: THE AGEM JOURNAL CLUB EXPERIENCE

Alison SOUTHERN (*Emergency Medicine, Summa Akron City Hospital NEOMED, USA*)

Introduction : The Academy of Geriatric Emergency Medicine (AGEM) Journal Club product has been developed to give dues paying members of SAEM AGEM and the ACEP Geriatric Section (GS) an added membership benefit. High-yield clinically relevant geriatric emergency medicine (EM) articles are identified, and critically reviewed. The end result will be a repository of up-to-date, high-yield, geriatric EM educational material available to members. **Method :** Members from both AGEM and GS volunteered to participate in identifying high-yield geriatric EM articles, defined as either practice-changing or practice-affirming research. A PubMed search strategy was designed by two medical librarians. Surveys were created containing the abstracts of potentially high-yield manuscripts. Participants received bimonthly surveys with 20 manuscripts to rate using the BEEM Rater Tool. BEEM Rater scale $\geq 5/7$ was used to distinguish high-yield from others. A critical appraisal is written for high-yield articles and provided to the members as a valuable resource. **Results :** Analysis of the results from 5 surveys determined eleven articles were rated with a BEEM Rater scale $\geq 5/7$. This rating is given to articles which are deemed new and important and would probably change practice, would change practice, or are a "must" know for emergency physicians. Critical appraisals of these articles provided by leaders in the field were then distributed to the AGEM and GS members. **Conclusion :** This journal club product is an added benefit to geriatric interest group members. Providing this resource may encourage membership, provide quality continued education, and

result in research collaborations in geriatric EM. **Keywords :** Geriatrics, Critical appraisals

SS26 322-C-3

GERIATRIC SECTIONS IN SPECIALTY MEDICINE ORGANIZATIONS: THE PROS, THE CONS, AND HINTS FOR SUCCESS

Carrie CREGAR (*Emergency Medicine, Akron General Medical Center, USA*)

Introduction : Two North American Emergency Medicine professional organizations, American College of Emergency Physicians and Society of Academic Emergency Medicine have geriatric interest groups whose mission is to improve the quality of emergency care received by older patients. We explore barriers and successful tools and products within these specialty medicine organizations. **Method :** First, we will outline the goals of these specialty medicine organizations. Second, we identify value added tools such as journal clubs and continuing education modules. **Results :** This presentation highlights the favorable aspects of a specialty medicine organization including communication, idea sharing and education; and the difficulties including support, consensus and replication of work. **Conclusion :** The geriatric sections of Emergency Medicine offer education to students, residents, practicing physicians and educators through information summaries and videos of clinical topics pertinent to geriatric emergency medicine. These geriatric sections offer information to research funding opportunities, collaboration, and dissemination of information however they have a small base of physicians with a lack of interdisciplinary peers. **Keywords :** organized medicine, geriatric, education

SS26 322-C-4

PROFESSIONAL TRADE SOCIETIES: BRIDGING THE TRANS-DISCIPLINARY GAP TO IMPROVING GERIATRIC HEALTHCARE

Christopher Robert CARPENTER (*Emergency Medicine, Washington University in St. Louis, USA*)

Introduction : Professional trade societies, like the American College of Emergency Physicians and the American Geriatrics Society, are key allies for healthcare providers with overlapping missions to improve overall medical care delivery via education and research. We explore barriers and successful mechanisms to link geriatric healthcare efforts across professional organizations. **Method :** Identifying education and research opinion leaders across disciplines with active roles in their respective trade organizations is essential. A seasoned mentor and external funding sources facilitate collaboration, in addition to providing a mechanism to disseminate work products. **Results :** Via a collaborative effort between AAEM, CORD, EMRA, ACEP, SAEM, AMA, AGS, and others, we developed educational core competencies for three levels of physicians: medical students, emergency medicine residents, and post-graduate physicians. Similarly, the John Hartford Foundation funded New Frontiers to establish multidisciplinary, high-yield research priorities. We review the work products and ongoing efforts for both of these initiatives. Multinational geriatric-focused collaborations within emergency medicine are the next evolution of organized medicine's engagement in improving older adult care processes in the 21st Century. **Conclusion :** Organized medicine's trade societies traditionally function in isolated silos lacking consistent trans-disciplinary communication streams or recognition of complementary objectives. Efficient, cost-effective medical care of an aging society necessitates cross-disciplinary engagement at the individual provider, hospital, and trade organization level. We provide

successful examples of these principles. Keywords : Organized medicine, implementation science, geriatrics

SS26 302-C

THE WAR AGAINST POLYHARMACY (2): THE TRIPLE WIN-GAME OF REDUCING POLYPHARMACY - IMPROVED HEALTH AND REDUCED COST OF DRUGS & HOSPITALIZATIONS

SS26 302-C-1

THE OLDER THE BETTER: ARE ELDERLY STUDY PARTICIPANTS MORE NON-REPRESENTATIVE?

Marcella Angelina EVANS (*School of Medicine, University of California Irvine School of Medicine, USA*)

Introduction : Clinical guidelines are based on the results of clinical research. However, study participants can differ from the target population they are taken to represent. Individuals who are less healthy/vigorous may self-select to not participate in studies. We hypothesized that elderly individuals who elect to participate in research studies may be less representative of the general elderly population. Method : Using both a clinical trial sample (N=1,016 aged 20-85) and an observational study sample (N=2,404 aged 40-79), we assessed age-trends and health outcomes in how active participants deemed themselves to be relative to others their age. This self-reported measure was validated against assessments of actual exercise and objective tests with known relation to exercise. Results : Successively older study participants reported successively greater activity relative to others their age ($p < 0.001$). Relative activity significantly predicted actual activity, and numerous self-rated and objective health-predictors (general self-rated health, CES-D depression score, sleep, tiredness, energy, BMI, waist circumference, serum glucose and lipids, white cell count). Reference: Golomb et. al. *British Medical Journal Open*, 2012; 2(6):e000833. PMID: PMC3533104. Conclusion : Since healthier people have a better risk-benefit balance with drugs and procedures, our results suggest that departures from representativeness may be amplified with increasing age which could lead to studies that convey progressively more strongly (typically favorable) distorted estimates of risk-benefit balance. Even if studies are designed to focus on the elderly, increasing age of study participants and patients may increase the disparity between what is recommended based on 'evidence' and what is best for the patient. Keywords : Clinical guidelines, Elderly, Non-representative

SS26 302-C-2

REDUCING INAPPROPRIATE PRESCRIBING OF PSYCHOTROPIC DRUGS IN OLDER ADULTS

Mirko PETROVIC (*Geriatrics, Ghent University Hospital, Belgium*)

Introduction : Frailty at old age and institutionalization in nursing homes are often associated with multiple chronic diseases (multimorbidity) requiring multiple medications (polypharmacy). Among these chronic conditions, psycho-organic and mental health problems e.g. dementia with behavioural and psychological symptoms, insomnia and depression are common. Psychotropic drugs are frequently used as a treatment approach for these conditions. The prevalence of their use is high among community-dwelling older adults but even higher in nursing homes. Furthermore, within the problem of polypharmacy and inappropriate prescribing, psychotropic drugs (i.e. antipsychotics, benzodiazepines, antidepressants) constitute a significant proportion. Method : An overview of the main findings of several recent studies from own research group has been presented and supported by existing evidence with regard to (inappropriate

prescribing of psychotropic drugs in frail older people. Results : The use of psychotropics in older adults remains controversial given the risk of adverse effects, in contrast to the limited effectiveness and adverse effects. Guidelines advise a thorough risk-benefit analysis for psychotropics, in addition to time-limited use and discontinuation. It has been shown that the majority of chronic psychotropic drug users among frail older patients can be withdrawn from psychotropic medication without detrimental effects. Conclusion : In the future, more efforts should be undertaken to tackle the burden of inappropriate psychotropic prescribing in frail older adults by incorporating a multidisciplinary approach (physicians, nurses and pharmacists), and by offering convincing non-pharmacological and pharmacological alternatives. It is necessary to bridge the gap between evidence and clinical practice, making sure that the evidence has been applied in good clinical practice. Keywords : Psychotropic drugs, older adults

SS26 302-C-3

STRATEGIES TO REDUCE THE RISK OF IATROGENIC ILLNESS IN COMPLEX OLDER ADULTS

Graziano ONDER (*Geriatrics, Universita Cattolica del Sacro Cuore, Italy*)

Introduction : Older patients are particularly vulnerable to Adverse Drug Reactions (ADR) because age is associated with changes in pharmacokinetics and pharmacodynamics that may alter drug metabolism. In addition, other conditions, which may be observed in complex older adults, may increment the risk of ADR in the older population (including polypharmacy, comorbidity, cognitive and functional limitations). ADRs are frequently preventable, suggesting that screening and prevention programs aimed at reducing the rate of iatrogenic illness are necessary in this population. Method : We reviewed available approaches which may be used to screen and prevent the occurrence of ADR in older adults, including conducting medication review, avoiding the use of potentially inappropriate medications, using computer-based prescribing systems and performing comprehensive geriatric assessment. Results : Available evidence on the examined approaches is mixed and controversial and none of them showed a clear beneficial effect on patients' health outcomes. Limitation of these interventions is the lack of standardization and these differences may give reason for the variability of the results documented in randomized clinical studies. Most of the available research is focused on a single intervention targeting either clinical or pharmacological factors causing ADR. When these approaches are combined, positive effects on patients health outcomes can be shown, suggesting that integration of skills from different health care professionals is needed to address medical complexity of older adults. Conclusion : The challenge for future research is to integrate information obtained by existing instruments and methodologies in a complete and global approach targeting all potential factors involved in the onset of ADR. Keywords : ADR, polypharmacy, CGA

SS26 302-C-4

PRESIDENTIAL/SUBMITTED SYMPOSIUM LESS IS MORE - THE GARFINKEL METHOD FOR IMPROVING DRUG THERAPY IN THE ELDERLY

Doron GARFINKEL (*Palliative Geriatric, Shoham Geriatric Medical Center, Pardes Hana, Israel 37000, Israel*)

Introduction : Clinical Practice Guidelines (CPGs) are based on 'single disease model' studies performed in adults. Applying these CPGs to include elders with co-morbidity, dementia/disability and limited life

expectancy is inappropriate, increases the severity of polypharmacy leading to decreased quality of care. Method : The Garfinkel method combines ethics, EBM and clinical judgment; it involves comprehensive meetings with patient/guardian/family (PGF) to discuss benefit/risk ratios of all medications based on available EBM considering age, co-morbidities, functional, mental/cognitive status. Following rethinking/reevaluation for each drug while respecting PGF's preferences, simultaneous drug discontinuation (DD) of as many 'non-lifesaving' drugs as possible, is performed. Results : In nursing departments DD was performed for 332 drugs in 119 patients without significant adverse reactions (ADRs). DD failure rate was 10%. Annual mortality rate was 45% in controls, 21% in the DD group ($P < 0.001$), referrals to acute care facilities were also significantly reduced ($P < 0.002$). In community dwelling elders age 82.8 ± 6.9 consuming 7.73 ± 3.7 medications, DD was recommended for 57.5%, but eventually performed in 47% (3.7 ± 2.5 drugs/patient). Follow up was 19.2 ± 11.4 months. 5/256 drugs had been restarted (DD failure 2%), successful DD achieved in 80.7% without significant ADRs. 80% of PGFs reported medical functional- mental -cognitive improvements (significant in 37%). Conclusion : The sum total of negative effects of polypharmacy outweighs the sum of beneficial effects of the specific drugs. The Garfinkel method is highly ethical and beneficial having no significant risks. Applying the Garfinkel method globally may significantly decrease medication burden, improve quality of life with substantial cost reductions (a triple win-win game). Keywords : Polypharmacy, elderly, Garfinkel method, drug discontinuation

SS26 325-C

AGING IN A LIFE-SPAN DEVELOPMENTAL AND MULTIDISCIPLINARY PERSPECTIVE. THE PROS AND CONS OF LONGITUDINAL COHORT STUDIES

SS26 325-C-1

RESERVE AND LATE LIFE COGNITIVE TRAJECTORIES: EFFECTS OF DISTAL INFLUENCES AND SURVIVAL IN THE H70 AND LUND 80+ SWEDISH POPULATION-BASED LONGITUDINAL STUDIES

Boo JOHANSSON¹, Valgeir THORVALDSSON¹, Torbjorn SVENSSON² (1. Dept of Psychology, University of Gothenburg, Sweden; 2. Dept of Health Sciences, Lund University, Sweden)

Introduction : To compare late life (70+) cognitive trajectories in two Swedish population-based representative samples and their relations to education/SES and subsequent survival within the theoretical context of cognitive reserve in old age. Method : Data was drawn from the Gerontological and Geriatric Population Studies in Gothenburg (H70) and from the Lund 80+ Study. The cognitive battery in both studies included several tests common across the studies. Results : Despite large heterogeneity in cognitive trajectories on all measures we found a consistent pattern of terminal decline, based on within-person estimates, across all domains and within both study samples. Terminal decline accounted better for the data as compared with chronological age in all fitted models. Between-person estimates of cognitive decline were moderately to highly correlated across domains. Within-person estimates were attenuated, except on measures tapping similar cognitive domains e.g., recall and recognition. Education was a significant moderator of the decline processes across most domains, in both studies, where higher education was associated with later onset, but also steeper decline in cognitive functions. These moderating effects of education were somewhat stronger in the Lund 80+ sample. Conclusion : Cognitive decline in late life is associated with subsequent survival; a terminal decline pattern was confirmed in both

studies despite the fact that the samples vary considerably in overall health, demographics and other background variables. Notably, differential patterns of decline were related to distal education suggesting neuro-protective effects that seem to persist into very late life in terms of cognitive reserve. Keywords : Life-span development, Cognition, Longitudinal, Population-based

SS26 325-C-2

LONGER LIVES AND BETTER HEALTH? RESULTS CONCERNING CHANGES OF HEALTH IN THE SECOND HALF OF LIFE BASED ON THE GERMAN AGEING SURVEY (DEAS)

Clemens TESCH-ROEMER, Svenja M SPULING, Oliver HUXHOLD, Sonja NOWOSSADECK, Susanne WURM (Research Department, German Centre of Gerontology, Germany)

Introduction : Cohort-sequential surveys like the German Ageing Survey (DEAS) combine cross-sectional and longitudinal data collections. While it is possible to trace societal change using repeated cross-sectional surveys, longitudinal data allow the analysis of intra-individual change over time. Method : Cross-sectional data for the age groups 40 to 85 years come from three nationally representative DEAS waves in 1996, 2002, and 2008 (sample sizes vary between 3,000 and 6,000). Longitudinal data come from DEAS waves in 1996, 2002, 2008, and 2011 (comprising health trajectories between 3 and 15 years). Three health indicators were used: number of self-reported diseases, functional health, and self-rated health. Results : Healthy life expectancy increases between 1996 and 2008. For the indicator 'self-reported diseases' (good health: 4 or less diseases) the proportion of healthy life expectancy increased from 64 to 77 percent, and for the indicator 'self-rated health' (good health: ratings of good or very good health) from 79 to 84 percent. In a developmental perspective, health changed depending on educational status (the ISCED was used as indicator of educational status). There were substantial education related differences in health trajectories. While education related differences in the trajectories of 'self-reported diseases' and 'self-rated health' diminish with age, education related differences in the trajectories of 'functional health' expand with age. Conclusion : The results suggest that despite a trend toward compression of morbidity on the population level in Germany, there are still substantial inequalities in the decline of health in later adulthood due to educational status. Keywords : health, change, education

SS26 325-C-3

TIMES ARE CHANGING - AND DOES AGEING CHANGE WITH IT? RESULTS FROM TWO COHORTS IN THE LONGITUDINAL AGING STUDY AMSTERDAM

Dorly J.H. DEEG, Majoge VAN VLIET, Martijn HUISMAN (LASA, VU University Medical Centre, Netherlands)

Introduction : A longitudinal study per definition is performed over a longer period of time, which makes it important to acknowledge the disentanglement of ageing, cohort and period effects on the findings. In a cross-sequential design, where different cohorts are compared in periods when they have the same age, each of these three effects can be studied. One important question is, to what extent the often-observed decline in mobility with ageing has accelerated or decelerated as of the mid-2000's versus the mid-1990's. Method : Using data from the Longitudinal Aging Study Amsterdam (LASA), significant 3-year decline in mobility and ADL disability was compared across the periods 1996-1999 and 2006-2009 for two cohorts ($n=1634$ and $n=1103$, respectively) ages 68-87 years. Results: Using multinomial regression analyses adjusted for age, sex, and

mortality, the age group 68-77 years showed less decline in 2006-2009 as in 1996-1999. This difference in decline was for 20% explained by the increased level of education in the more recent cohort. There was an interaction effect of period with hypertension and of period with arthritis, indicating decelerated decline for hypertension and arthritis patients in 2006-2009 as compared to 1996-1999. In the oldest age group of 78-87 years, no period difference in disability was observed. Conclusion : These findings suggest more favorable courses of disease and disability in the recent cohort of younger-olds, partly due to higher levels of education reflecting a more favorable life course. Keywords : Disability decline, Period, Cohort

SS26 325-C-4

CANADIAN LONGITUDINAL STUDY ON AGING AS A PLATFORM FOR STUDYING TRANSITIONS AND TRAJECTORIES OF AGING AND HEALTH

Parminder RAINA¹, Christina WOLFSON², Susan KIRKLAND³
(1. *Clinical Epidemiology and Biostatistics, McMaster University, Canada*; 2. *Epidemiology and Biostatistics, McGill University, Canada*; 3. *Community Health and Epidemiology, Dalhousie University, Canada*)

Introduction : Despite long-standing awareness that the aging process involves complex changes during an individual's lifetime (from the cellular level, to individual behavioural and psychological factors, to broad social contexts) a clear picture of the combined effects has not yet emerged. Method : The CLSA plans to investigate the transitions and trajectories of aging and health that are influenced by the interrelationship among intrinsic and extrinsic factors. In recent years, our ability to study aging has increased with biological and technological advances, such as the sequencing of the human genome. Thus in this new era of longitudinal research, we are conducting a study that moves beyond a mere description of change over time to actually studying the dynamic determinants of change within and between individuals over time. Results : The CLSA is a 20-year longitudinal study of 50,000 Canadian men and women between the ages of 45 and 85 years at baseline. All participants are asked to provide a common set of information on demographic, social, physical/clinical, psychological, economic, and health service use aspects relevant to health and aging. Thirty-thousand of the 50,000 participants are also asked to provide additional in-depth information through series of unique physical examinations and biological specimen collection (blood, DNA and urine). The individual data will also be linked to administrative health service utilization records, disease registries, mortality files, as well as contextual and environmental indicators. Conclusion : This presentation will provide details about the design and preliminary results, and future application of this platform to understand the trajectories of aging population. Keywords : CLSA, longitudinal study, trajectories

SS26 326-C

MIDLIFE OBESITY, COGNITIVE FUNCTION, AND DEMENTIA - PROSPECTIVE ASSOCIATIONS AND CAUSAL PATHWAYS

SS26 326-C-1

THE ASSOCIATION BETWEEN MIDLIFE PHYSICAL ACTIVITY WITH COGNITIVE/PHYSICAL FUNCTION IN LATE LIFE: AGE GENE/ENVIRONMENT SUSCEPTIBILITY - REYKJAVIK STUDY

Milan Chang GUDJONSSON¹, Jane SACZYNSKI², Jon SNAEDAL³, Sigurbjorn BJORNSSON³, Bjorn EIRNARSSON⁴, Thor ASPELUND⁵, Maria K. JONSDOTTIR⁴, Vilmondur GUDNASON⁶,

Tamara B. HARRIS⁷, Lenore J. LAUNER⁷, Palmi V. JONSSON⁸
(1. *Reykjavik Universi, Geriatric Research Center, Landspítali University Hospital Reykjavik University, Sport Science, Iceland*; 2. *Division of Geriatric Medicine and Meyers Primary Care Institute, University of Massachusetts Medical School, USA*; 3. *Geriatric Research Center, Landspítali University Hospital, University of Iceland, Iceland*; 4. *Geriatric Department, Landspítali University Hospital, University of Iceland, Iceland*; 5. *Icelandic Heart Association, Faculty of Science, University of Iceland, Iceland*; 6. *Icelandic Heart Association, Faculty of Medicine, University of Iceland, Iceland*; 7. *Laboratory of Epidemiology, Demography and Biometry, National Institute on Aging, National Institute of Health, USA*; 8. *Geriatric Department, Landspítali University Hospital, University of Iceland, Faculty of Medicine, Iceland*)

Introduction : Lack of physical activity (PA) in earlier life is considered to be a risk factor for dementia. However, the long-term effect of midlife PA on various cognitive dimensions and mobility performance among dementia free older adults is still unclear. We explored the long-term associations between midlife PA with late-life cognitive function and mobility performance among Icelandic older adults. A population based cohort of men and women (born 1907-1935) participated in the Age Gene/Environment Susceptibility - Reykjavik Study. The interval between midlife and late-life was 26 years. Method : Study population included 5445 subjects (58% women; active=1664, and inactive=3781; mean age 77±6 yrs), after excluding individuals with dementia (n=319). Main outcomes were composite scores of speed of processing (SP), memory (MEM) and executive function (EF), created from a neuropsychological test battery. Measures of lower extremity function (LEF) in late-life included gait speed from 6m walk (meter per second, m/s), Timed Up and Go (TUG, second), and Knee Extension (KE) strength (kg) tests. Results : Compared to those who were inactive at midlife, those who were active at midlife had significantly faster SP, and better MEM and EF in late-life, after controlling for demographic and health risk factors. The active group also had significantly faster gait speed, TUG time, and greater KE strength in late life even with further adjustment of various cognitive functions in the secondary-analysis. Conclusion : Our study suggests that midlife PA is strongly associated with better cognitive function and better performance of LEF in later life. Keywords : physical activity, cognitive function, mobility

SS26 326-C-2

OBESITY AND COGNITIVE AGING: A SYSTEMATIC REVIEW

Linda HASSING (*Department of Psychology, University of Gothenburg, Sweden*)

Introduction : Obesity is a health problem that has reached epidemic proportions. Given the high prevalence of obesity, even a small adverse impact of obesity on cognitive aging might have a serious effect on public health. The purpose of the systematic review was to examine the relation between obesity and cognitive function in late life among persons not diagnosed with dementia and to evaluate the evidence for a causal association. Method : Medline was used to search for the following terms: obesity, overweight, cognition, cognitive, age, and aged. To be included, studies must have had a population-based, dementia-free sample and a 5-year minimum interval between measurement of the predictor and the outcome. Results : Only 11 studies met the criteria. Of these, 7 studies assessed obesity in midlife and cognitive function in later life, and 4 studies assessed obesity and cognitive function in late life. The reviewed studies showed clear evidence that midlife obesity was associated with

cognitive aging, whereas this association was weaker in late life; thus, no firm conclusions could be drawn. Conclusion : The findings of this review suggest that, although there is evidence for an association between midlife obesity and low cognitive abilities in late life, the direction of the association and the causality remain to be clarified. Keywords : Obesity, Cognitive function, Aging

SS26 326-C-3

MIDLIFE BODY MASS INDEX, GENETIC RISK OF OBESITY, AND LATE LIFE COGNITIVE FUNCTION

Anna K. DAHL¹, Chandra A. REYNOLDS², Linda B. HASSING³, Nancy L. PEDERSEN¹ (1. Dept. Medical Epidemiology and Biostatistics, Karolinska Institutet, Sweden; 2. Department of Psychology, University of California Riverside, USA; 3. Department of Psychology, University of Gothenburg, Sweden)

Introduction : A growing body of evidence links high midlife body mass index (BMI) to low late life cognitive function, but the effect of BMI on cognitive abilities and cognitive change in the presence of genetic risk of obesity has not been evaluated previously. Method : We investigated the association between midlife BMI and an individual obesity genetic risk score based on 32 single nucleotide polymorphisms and cognitive change in verbal and spatial abilities, memory, and processing speed across two decades in the Swedish Adoption/Twin Study of Aging (SATSA). Results : Latent growth curve models fitted to data from non-demented participants showed that both a higher midlife BMI and a higher genetic risk score were associated with significantly lower mean level cognitive performance across domains in late life, independently of each other. However, higher obesity genetic risk was not associated with cognitive decline. Conclusion : Being overweight/obese in midlife has a negative effect on cognitive abilities later in life. This study also indicates that higher genetic risk of obesity is associated with lower mean level cognitive function, even when midlife BMI is controlled for, but not with cognitive decline. Keywords : obesity genotypes cognition

SS26 327-C

B-PROOF SYMPOSIUM: THE EFFECT OF B-VITAMIN SUPPLEMENTATION ON OSTEOPOROTIC FRACTURE INCIDENCE IN ELDERLY

SS26 327-C-1

THE B-PROOF STUDY, RATIONALE AND METHODS

Nathalie VAN DER VELDE (Internal Medicine - Geriatrics, AMC, Netherlands)

Introduction : Elevated homocysteine is common in older persons and poor vitamin status is the main cause for this particular age group. Increased homocysteine in turn leads to increased risk of several diseases, including a.o. osteoporosis and cardiovascular diseases. Since vitamin B12 and folate intake and status play a large role in homocysteine metabolism, it is hypothesized that supplementation with these B-vitamins will reduce fracture incidence in elderly and potentially improve other homocysteine-related outcomes including physical function and cardiovascular disease. Method : The B-PROOF (B-Vitamins for the PRevention Of Osteoporotic Fractures) study is a randomized double-blind placebo-controlled trial. The intervention comprises a period of two years, and includes 2919 subjects, aged 65 years and older, independently living or institutionalized, with an elevated homocysteine concentration ($\geq 12 \mu\text{mol/L}$). One group receives daily a tablet with 500 μg vitamin B12 and 400 μg folic acid and the other group receives a placebo tablet. In both tablets 15 μg (600 IU) vitamin D is included. Keywords : Homocysteine

SS26 327-C-2

EFFECTS OF TREATMENT WITH HOMOCYSTEINE-LOWERING B-VITAMINS ON OSTEOPOROTIC MEASURES IN MILDLY HYPERHOMOCYSTEINEMIC ELDERLY

Anke ENNEMAN¹, Karin SWART², Carola ZILLIKENS¹, Suzanne VAN DIJK¹, Janneke VAN WIJNGAARDEN³, Natasja VAN SCHOOR², Paul LIPS², Rosalie DHONUKSHE-RUTTEN³, Lisette DE GROOT³, Joyce VAN MEURS¹, Andre UITTERLINDEN¹, Nathalie VAN DER VELDE¹ (1. Internal Medicine, Erasmus MC, Netherlands; 2. EMGO, VUmc, Netherlands; 3. Human Nutrition, Wageningen University, Netherlands)

Introduction : Osteoporosis and osteoporotic fractures are a major health problem worldwide. Mild hyperhomocysteinemia is associated with increased incidence of osteoporotic fractures. Whether this is a causal relationship and what the underlying mechanism is, remains uncertain. The B-PROOF study was designed to investigate whether supplementation with homocysteine-lowering B-vitamins is able to reduce fracture incidence in mildly hyperhomocysteinemic elderly people. Method : 2919 men and women aged 65 years and over with a plasma homocysteine level of 12 $\mu\text{mol/l}$ or higher were randomized to receive either a daily supplement containing 500 μg of vitamin B12 and 400 μg of folic acid or a placebo for 2 years. Both treatments also contained 400 IU of vitamin D. In subsamples, bone mineral density (BMD) and bone quality were measured. A DXA-device was used to measure femoral neck and lumbar spine BMD before and after the intervention ($n=\pm 1200$). Effects of the intervention on bone quality were assessed using quantitative ultrasound in the calcaneus ($n=\pm 1400$). Results : The B-PROOF-intervention will be finished in spring of 2013. Results of the intervention will be available in June 2013 and will be reported at the symposium. Conclusion : The B-PROOF-study is the first large trial with B-vitamins investigating the effect of lowering homocysteine levels on osteoporotic measures. If effective, it could be a relatively cheap and easy way to help maintaining bone health. Keywords : Hyperhomocysteinemia, osteoporotic fractures, bone mineral density

SS26 327-C-3

THE EFFECT OF 2-YEAR SUPPLEMENTATION OF B-VITAMINS ON PHYSICAL FUNCTIONING, MUSCLE STRENGTH, AND FALLING

Karin M. SWART¹, Anke W. ENNEMAN², Janneke P. VAN WIJNGAARDEN³, Evelien SOHL¹, Suzanne C. VAN DIJK², Elske M. BROUWER-BROLSMA³, Annelies C. HAM², Nikita VAN DER ZWALUW³, Carola M. ZILLIKENS², Tischa VAN DER CAMMEN², Johannes BRUG¹, Joyce B. VAN MEURS², Rosalie A. DHONUKSHE-RUTTEN³, Nathalie VAN DER VELDE², Lisette C. DE GROOT³, Andre G. UITTERLINDEN², Paul LIPS⁴, Natasja M. VAN SCHOOR¹ (1. Department of Epidemiology and Biostatistics and the EMGO Institute for Health and Care Research, VU University Medical Center, Netherlands; 2. Department of Internal Medicine, Erasmus Medical Center, Netherlands; 3. Department of Human Nutrition, Wageningen University, Netherlands; 4. Department of Endocrinology and the EMGO Institute for Health and Care Research, VU University Medical Center, Netherlands)

Introduction : In the elderly, elevated homocysteine levels have been linked to a reduced physical functioning in several observational studies. In particular, inverse associations were reported between homocysteine and physical performance and muscle strength. Homocysteine-lowering by B-vitamin supplementation might provide insight in the causality of homocysteine in these associations. However, randomized clinical controlled trials are lacking until now.

Method : In this study, the effect of daily supplementation of 500 µg vitamin B12, 400 µg folic acid, and 600 IE vitamin D was compared with 600 IE vitamin D supplementation only within the B-Vitamins in the PREvention Of Osteoporotic Fractures (B-PROOF) study (n=2,919). The follow-up duration comprised a period of two years. Outcome measures were physical performance, hand grip strength, and falling. Physical performance was assessed with a timed walking, chair stands, and balance test. Falling was reported prospectively during follow-up, using a weekly calendar. Two-year change scores of physical performance and grip strength will be compared between the intervention and control group. Time to falling will be analyzed with Cox-regression models. Both intention-to-treat and per protocol analyses will be performed. **Results :** Follow-up will be completed in March 2013. The results will be presented in this symposium. **Conclusion :** This is the first study that examines the effect of homocysteine lowering on physical functioning in the elderly. Positive findings might prevent or delay physical decline in the elderly. **Keywords :** Homocysteine, B-vitamins, Physical functioning

SS26 327-C-4

THE EFFECT OF B-VITAMIN SUPPLEMENTATION ON ARTERIAL STIFFNESS IN ELDERLY

Suzanne VAN DIJK (*Internal Medicine - Section of Geriatrics, Erasmus Medical Center, Netherlands*)

Introduction : Homocysteine alone has been shown to be a better predictor of cardiovascular mortality in very old persons than models based on classical risk factors. The pathophysiological pathway is however still under debate. Current view is that hyperhomocysteinemia leads to impaired endothelial function, and finally arterial stiffness. Since several intervention trials reported a lack of short-term benefit of B-vitamin supplementation, arterial stiffness might be the link between hyperhomocysteinemia and adverse cardiovascular outcomes. B-vitamins may fail to demonstrate beneficial effects since arterial stiffness is a structural abnormality, which is not easily and rapidly reversible. The B-PROOF study forms an excellent opportunity to investigate the direct effect of B-vitamins on arterial stiffening processes. **Method :** Data of the B-PROOF study are used to determine the effect of B-vitamin supplementation on different outcomes of vascular function and structure. A subgroup of the B-PROOF study was included (n=560). We assessed carotid distensibility, using ultrasonography, and aortic pulse wave velocity (PWV) and augmentation index (AIX), measured with applanation tonometry. Furthermore, office blood pressure measurements (n=560) and 24-hour blood ambulatory pressure recordings (n=70) were performed. **Results :** This trial is still in progress and all follow-up measurements will be completed in March 2013. **Conclusion :** We will therefore present the longitudinal outcomes regarding the effect of B-vitamin supplementation on arterial stiffness at the B-PROOF symposium. **Keywords :** B-PROOF, B-vitamins, Arterial stiffness

SS26 407-R

INTEGRATED CARE APPROACHES AIMED AT OLDER ADULTS WITH COMPLEX AND LONG-TERM CARE NEEDS

SS26 407-R-1

COMPREHENSIVE CARE PROGRAMS FOR PATIENTS WITH MULTIPLE CHRONIC CONDITIONS: A SYSTEMATIC LITERATURE REVIEW

Simone Renate DE BRUIN¹, Nathalie VERSNEL², Lidwien C. LEMMENS¹, Claudia CM MOLEMA¹, Francois G. SCHELLEVIS², Giel NIJPELS³, Caroline A. BAAN¹ (*1. Centre for Prevention and Health Services Research, National Institute for Public Health and the*

Environment, Netherlands; 2. NIVEL, Netherlands Institute for Health Services Research, Netherlands; 3. Department of General Practice/EMGO+ Institute for Health and Care Research, VU University Medical Centre, Netherlands)

Introduction : To provide insight into the characteristics of comprehensive care programs for patients with multiple chronic conditions and their impact on patients, informal caregivers, and professional caregivers. **Method :** Systematic literature search in multiple electronic databases for English language papers published between January 1995 and January 2011. Wagner's chronic care model (CCM) was used to define comprehensive care. After inclusion, the methodological quality of each study was assessed. A best-evidence synthesis was applied to draw conclusions. **Results :** Forty-two publications were selected describing thirty-three studies evaluating twenty-eight comprehensive care programs for multimorbid patients. Programs varied in the target patient groups, implementation settings, number of included interventions, and number of CCM components to which these interventions related. Moderate evidence was found for a beneficial effect of comprehensive care on inpatient healthcare utilization and healthcare costs, health behavior of patients, perceived quality of care, and satisfaction of patients and caregivers. Insufficient evidence was found for a beneficial effect of comprehensive care on health-related quality of life in terms of mental functioning, medication use, and outpatient healthcare utilization and healthcare costs. No evidence was found for a beneficial effect of comprehensive care on cognitive functioning, depressive symptoms, functional status, mortality, quality of life in terms of physical functioning, and caregiver burden. **Conclusion :** Because of the heterogeneity of comprehensive care programs, it is as yet too early to draw firm conclusions regarding their effectiveness. More rigorous evaluation studies are necessary to determine what constitutes best care for the increasing number of people with multiple chronic conditions. **Keywords :** Comprehensive care programs, Effectiveness, Multimorbidity

SS26 407-R-2

EFFECTIVENESS OF CASE MANAGEMENT IN COMORBID DIABETES TYPE 2 PATIENTS

Nathalie VERSNEL¹, Caroline A. BAAN², Giel NIJPELS³, Francois G. SCHELLEVIS¹ (*1. NIVEL, Netherlands Institute for Health Services Research, Netherlands; 2. Centre for Prevention and Health Services Research, National Institute for Public Health and the Environment, Netherlands; 3. Department of General Practice/EMGO+ Institute for Health and Care Research, VU University Medical Centre, Netherlands*)

Introduction : Many people and especially elderly are multimorbid. They meet different care providers to manage specific illnesses, problems or care needs. Often, care programs are single-disease oriented and not designed to coordinated care between programs. Leaving patients at risk of receiving fragmented, incomplete and ineffective care, which could result in higher costs and worse quality of care. We designed an individualized care program according to the conditions of Wagners' Chronic Care Model. This is led by a trained practice nurse and includes evidence-based optimal care for all conditions tailored to the individual patients' preferences (case management). We aim to investigate whether this case management program, additional to a diabetes management program, will improve the quality of chronic care for comorbid T2DM patients. The effectiveness of the program will be established 12 months after the start of the intervention. **Method :** Between February 2011 and July 2012, we included 199 Dutch comorbid diabetes type 2 patients in a

randomized controlled trial. The patients already participate in a diabetes management program. Patients in the control group continue their participation in the diabetes management program and receive care-as-usual from their general practitioner. Patients in the intervention group receive case management in addition. Results : The case management program includes 6 elements; assessing health care needs, design of a care plan, monthly monitoring, coordination of care, facilitating access to other health care resources and recording of information. Conclusion : During the session we will show our results on the effectiveness of the case management program. Keywords : case management, comorbidity, diabetes type 2, effectiveness

SS26 407-R-3

IMPLEMENTING THE CHRONIC CARE MODEL FOR FRAIL OLDER ADULTS IN THE NETHERLANDS: STUDY PROTOCOL OF ACT (FRAIL OLDER ADULTS: CARE IN TRANSITION)

Maaikje E. MUNTINGA¹, Emiel O. HOOGENDIJK¹, Karen M. VAN LEEUWEN¹, Hein Pj VAN HOUT¹, Jos Wr TWISK², Henriette E. VAN DER HORST¹, Giel NIJPELS¹, Aaltje Pd JANSEN¹ (1. *General practice and elderly care medicine, EMGO Institute for Health and Care Research, VU University medical center, Netherlands*; 2. *Epidemiology and biostatistics, EMGO Institute for Health and Care Research, VU University medical center, Netherlands*)

Introduction : Care for older adults is facing a number of challenges: health problems could be identified at a more timely stage, older adults report a lack of autonomy in their care process, and coordination of care between professionals needs improvement. ACT aims to address these challenges by introducing the geriatric care model (GCM), based on the chronic care model (Bodenheimer). Method : Design: 2-year stepped-wedge cluster randomised clinical trial, carried out among 35 primary care practices in the Netherlands. Participants: 1147 older adults aged 65+ and their primary informal caregivers. Frailty is assessed using a composite definition of frailty and a polypharmacy criterion. Final inclusion criterion: scoring 3 or more on a disability case-finding tool. Intervention: Every 6 months participants receive a geriatric in-home assessment by a practice nurse, followed by a tailored care plan. Participants with complex care needs are reviewed in interdisciplinary consultations. Evaluation: primary outcome is quality of life as measured with the Short Form-12 questionnaire. Process measurements include the level of implementation and barriers and facilitators to successful implementation. Results : We will present the results of the effects of GCM implementation on quality of life, as well as the main qualitative and quantitative process outcomes. Conclusion : With this study we hope to contribute to the existing knowledge about integrative care models for community-dwelling, frail older adults with complex care needs. Keywords : integrated care, elderly, effectiveness

SS26 408-C

ARE WE WALKING IN THE WRONG DIRECTION WITH FALLS PREVENTION IN HOSPITALS?

SS26 408-C-1

THE EFFECTS OF AN INTERVENTION TO INCREASE BED ALARM USE TO PREVENT FALLS IN HOSPITALIZED PATIENTS: A CLUSTER-RANDOMIZED TRIAL

Ronald I. SHORR¹, A. Michelle CHANDLER², Lorraine C. MION³, Teresa M. WATERS⁴, Minzhao LIU⁵, Michael J. DANIELS⁶, Lori A. KESSLER², Stephen T. MILLER⁷ (1. *GRECC (182), Malcom Randall VAMC, USA*; 2. *Physicians Research Network, Methodist Healthcare, USA*; 3. *School of Nursing, Vanderbilt University, USA*;

4. *Preventive Medicine, University of Tennessee Health Science Center, USA*; 5. *Statistics, University of Florida, USA*; 6. *Section of Integrative Biology, Division of Statistics and Scientific Computation, University of Texas, USA*; 7. *Medicine, University of Tennessee Health Science Center, USA*)

Introduction : Bed alarm systems intended to prevent hospital falls have not formally been evaluated. Method : We conducted a pair-matched cluster-randomized trial over an 18-month study period. The study took place in a urban community hospital. Sixteen nursing units were allocated based on fall rates during a baseline observation period; randomization sequence was computer generated. Patients were blinded to unit assignment; study personnel assessing outcomes were initially blinded but likely became unblinded. Intervention units received promotion of use of a standard bed alarm system (BedEx Occupancy Monitoring System) through education, training, and technical support. On control units, bed alarms were available for use on usual care nursing units but not formally promoted or supported. Results : Prevalence of alarm use was 64.41 days/1000 patient-days on intervention and 1.79 days/1000 patient-days on control units (P=0.004). Compared to control units, there was no difference in change in fall rates per 1000 patient-days (RR = 1.09, 95% Confidence Interval [CI]: 0.85 to 1.53; difference in differences [DID] = 0.41, 95% CI: -1.05 to 2.47), or in the number of patients who fell, injurious fall rates, or number of patients physically restrained on intervention units. Conclusion : An intervention designed to increase bed alarm use in an urban hospital increased use of the alarms but had no apparent statistically or clinically significant effect on fall-related events or physical restraint use. Keywords : Accidental Falls, Hospitals; Patient Safety

SS26 408-C-2

FALLS PREVENTION IN THE ACUTE HOSPITAL SETTING: AN OVERVIEW OF AND UPDATE ON THE 6-PACK PROJECT? LEARNINGS FOR DRIVING FALLS PREVENTION PRACTICE CHANGE

Anna BARKER¹, Renata MORELLO¹, Terry HAINES², Keith HILL³, Sandy BRAUER⁴, Cathie SHERRINGTON⁵, Mari BOTTI⁶, Patricia LIVINGSTON⁷, Jeannette KAMAR⁸, Fiona LANDGREN⁹, Caroline BRAND¹ (1. *Department of Epidemiology and Preventive Medicine, Monash University, Australia*; 2. *Monash University and Allied Health Research Unit, Monash University, Australia*; 3. *School of Physiotherapy, Faculty of Health Sciences, Curtin University, Australia*; 4. *Division of Physiotherapy, School of Health and Rehabilitation Sciences, The University of Queensland, Australia*; 5. *The George Institute for Global Health, The University of Sydney, Australia*; 6. *Epworth/Deakin Centre for Clinical Nursing Research, Deakin University, Australia*; 7. *Faculty of Health, Deakin University, Australia*; 8. *Injury Prevention, The Northern Health, Australia*; 9. *Project Health, Project Health, Australia*)

Introduction : Despite an increase in falls prevention activity over the last decade, rates of reported fractures from in-hospital falls remain stagnant. There is evidence from a longitudinal study that implementation of a targeted nurse delivered program, the 6-PACK, can decrease fall injuries. Method : The project incorporates a three-stage research plan: 1. A prospective mapping of current falls prevention practices; 2. A cluster RCT testing 6-PACK efficacy including economic and program evaluations; and 3. A longitudinal assessment of sustainability of practice change and outcomes. This project involves >40,000 patients from 24 acute wards in seven hospitals across Australia and is the largest falls prevention project to be conducted in the acute setting. The 6-PACK includes a nine-item

falls risk assessment and six nursing interventions. Results : Stage 1 data analysis includes 12,280 patients 775 falls, 305 fall injuries and 500 hospital staff. Key findings include: falls remain a prevalent problem in Australian hospitals, 1 in 15 patients fall during their acute admission and more than 1 in 4 falls result in injury. A review of the sensitivity of data sources identified that only 61% of falls are recorded on incident reporting databases. Identified enablers to effective falls prevention included: access to constant observers; leadership; regular on-ward face-to-face training; and use of audit and feedback. Barriers included: the physical ward environment; difficulty in accessing resources; inaccurate and lengthy risk assessments; health status of patients; and competing priorities. Conclusion : Learnings from the 6-PACK trial will be presented to assist clinicians to design and implement effective falls prevention programs. Keywords : Falls prevention, Implementation, Hospital care

SS26 408-C-3 ECONOMIC EFFICIENCY OF FALLS PREVENTION INTERVENTIONS IN HOSPITAL

Terry HAINES¹, Anne-Marie HILL², Keith HILL³, Sandra BRAUER⁴, Tammy HOFFMANN⁵, Christopher ETHELTON-BEER⁶, Steven MCPHAIL⁷ (1. Allied Health Research Unit, Monash University and Southern Health, Australia; 2. Physiotherapy Department, University of Notre Dame, Australia; 3. Physiotherapy Department, Curtin University, Australia; 4. Physiotherapy Department, University of Queensland, Australia; 5. Centre for Research in Evidence Based Practice, Bond University, Australia; 6. Medicine, University of Western Australia, Australia; 7. Centre for Functioning and Health Research, Queensland University of Technology and Queensland Health, Australia)

Introduction : Interventions designed to prevent in-hospital falls and have been tested in randomised trials have not yet been subjected to economic evaluation. Patient education has recently been shown to reduce falls amongst cognitively intact inpatients, but the cost effectiveness of this approach is likely to vary depending on the setting in which this intervention is provided. Method : Design: Cost-effectiveness study conducted alongside a randomised trial. Data sources: Patient records and reviews of incident reports and medical progress note entries related to falls. Target population: Older hospital inpatients (acute and subacute) who are cognitively intact. Time horizon: Period of inpatient care. Perspective: Health service provider. Intervention: Multimedia patient education with trained health professional follow-up. Outcome measures: Patient falls, acute and rehabilitation care costs, costs directly attributable to falls. Results : Results of base case analysis: The cost of one cognitively intact patient being a faller was up to \$14591 AUD (2008). The education program cost \$526 AUD (2008) to prevent one cognitively intact patient becoming a faller and \$294 AUD (2008) to prevent one fall. There was 52% probability that the education program condition dominated (both more effective and less costly) over usual care. Subsequent modelling indicated the program is more cost effective on wards with a higher proportion of patients who become fallers and would be cost saving where the proportion of these patients who fall is at least 4.0%. Conclusion : Patient education appears to be worthwhile on subacute / rehabilitation wards with longer lengths of stay and higher proportions of patients who fall. Keywords : hospital falls cost-effectiveness

SS26 409-R IS THERE A COMMUNICATIVE FRAILTY? OR: HEARING IMPAIRMENT AS AN ADDITIONAL RISK FACTOR FOR FRAILTY

SS26 409-R-1 COMMUNICATIVE FRAILTY AN UNDERESTIMATED DIMENSION OF FRAILTY IN THE ELDERLY

Michael LERCH (Geriatric Department, Ev. Krankenhaus Bethanien Iserlohn, Germany)

Introduction : According to Habermas (1) the normative base of a society is speech, which, as an interpersonal communication tool, enables social interaction. Tesch-Romer (2) postulates, that every person, esp. the elderly, requires the functionality of its “transmitter and receiver” organs to guarantee an every-day interaction and the prevention of a possible (social) frailty (depression, isolation, deprivation) (Strawbridge (3)) that arises from it. Method : In 2 geriatric departments the communicative abilities (aphasia (global, sensory, amnesic), hearing impairment) of all patients admitted were correlated with their amount of (social) frailty (Barthel index, MNA, IADL, GDS, MMSE etc.). Results : In our survey of > 1500 geriatric patients, we found approx. 18% with aphasia and approx. 69% with a relevant hearing impairment. In the majority of the communicative impaired patients we found a significant correlation between the degree of their reduced ability of interaction and the geriatric key figures like nutrition, self-sufficiency, mood, but not in cognition or the handgrip strength. Conclusion : An impaired communicative ability (“communicative” frailty) can be seen as “multiplier” for all risk factors for overall frailty, where its manner and manifestation determines the impairment of the amount of self-assertion in the geriatric clientele. Therefore the communicative decline constitutes an important, but frequently underestimated dimension of frailty in the elderly. Keywords : communication, frailty, geriatric assessment

SS26 409-R-2 COMMUNICATIVE FRAILTY AS A RISK FACTOR FOR IN THE GERIATRIC NURSING PROCESS

Mechthild DECKER-MARUSKA (Geriatric Department, Krankenhaus St. Barbara Attendorn GmbH, Germany)

Introduction : The professional, holistic orientated, nursing care process focuses on problems in activities of daily living. “To communicate” is one of the ADL’s and a precondition for the successful geriatric nursing care, based on an unimpaired hearing, speech and comprehension. Supported by the common understanding that increasing hearing loss is part of the “normal” ageing process, hearing impairment stays often unrecognized even in professional nursing, leading to inadequate care. Method : Within 1 month 50 geriatric patients were evaluated with a standardized nursing management and assessment questionnaire on admission either by nursing staff or a case manager specially trained in a hearing handicap-adjusted communication. Results : The nursing staff suspected a hearing impairment in 22 of the patients interviewed, but initiated an ENT examination in only 4 cases. After the examination and extraction of excessive cerumen 2 out of the 4 were tested with a pure tone/speech audiometry, both showed a relevant hearing impairment. As opposed to this, the case manager identified 41 of the patients as possibly hearing impaired, all of them were referred to an ENT physician and after examination and extraction of ceruminous obstruction 36 patients had an audiometry, which showed a relevant hearing impairment in 32 cases. Conclusion : The communicative frailty due to hearing impairment is correctly identified significantly more often by personal, trained in handicap-adjusted communication, during admission interviews as opposed to normal geriatric staff. Leading to a near-term evaluation of the auditive capabilities and the consideration of the resulting communicative limitations in the care process. Keywords : hearing impairment, communicative frailty,

nursing care process

SS26 409-R-3

IS THERE A COMMUNICATIVE FRAILTY?

Jane Maria OPIE (CEO Team, MED-EL GmbH, Austria)

Introduction : The World Health Organization estimates that 278 million people worldwide have moderate to profound hearing loss in both ears. The leading cause of adult-onset sensorineural deafness is age-related hearing loss, which affects approximately 80% of adults older than 65 years. Age-related hearing loss is attributed primarily to the accumulated effects of noise exposure and age-related changes in the auditory system, as well as to disease-related changes that affect the metabolic and cardiovascular systems. **Method :** Current technology to meet the hearing needs of older adults has improved considerably over the past twenty to thirty years. These new treatments address not only the psychoacoustic listening demands of older individuals but also the physical and social needs of elderly listeners. Hearing aids, semi-implantable hearing aids, and implantable electrical stimulation devices were applied to groups of elderly individuals and were compared on hearing benefit, usability, and subjective benefit. **Results :** When appropriately applied, the results showed improved hearing benefit in easy and difficult communication situations, improved subjective benefit, and usability. **Conclusion :** Communicative frailty can be reduced when an appropriate hearing treatment is applied. **Keywords :** hearing, hearing treatment, hearing aids, hearing implants, communicative frailty

SS26 409-R-4

COCHLEAR IMPLANTATION IN ELDERLY PATIENTS: INDICATIONS AND SURGICAL PROCEDURES

Thorsten ZEHLICKE (ENT, Hearing Center, Armed Forces Hospital Hamburg, Germany)

Introduction : The Cochlear Implantation (CI) has become a worldwide spread therapy method for patients with severe hearing loss through to patients who suffer from deafness. Furthermore, this method is beneficial for the recipient when it is placed in the hands of an experienced skilled surgeon who will perform the operation in a relatively short time. The increasing life expectancy leads to an increase in age-related hearing disorders. Especially the elderly patients are in need of their hearing to maintain their social contacts. It might be the case that uncared severe hearing loss can enhance geriatric diseases, e.g. dementia. **Method :** Presentation of our own results and giving an overview of the literature. **Results :** The results of postoperative hearing of elderly patients are comparable to those of younger patients, so it can be concluded that age is mostly no contraindication for Cochlear Implantation. **Conclusion :** In this talk we present the indications and surgical procedures suited for elderly patients. In our own experience and in the literature most authors could prove that the results regarding the speech perception are comparable in young and elderly patients. **Keywords :** cochlear implantation, speech perception

SS26 410-R

ADDRESSING THE NEED FOR INTERDISCIPLINARY TEAM TRAINING

SS26 410-R-1

ADDRESSING THE NEED FOR INTERDISCIPLINARY TEAM TRAINING

Marcos MONTAGNINI¹, Robert KAISER², Katherine SUPIANO³, Mark A. SUPIANO⁴ (1. Geriatrics and Palliative Medicine, University

of Michigan, USA; 2. Geriatrics, George Washington University, USA; 3. College of Nursing, University of Utah, USA; 4. Division of Geriatrics, Department of Internal Medicine, University of Utah School of Medicine/ Salt Lake City VA Geriatric Research Education and Clinical Center, USA)

Introduction : The Partnership for Health in Aging established a work group to address the need for enhanced education in interdisciplinary teamwork (IDT) in geriatrics. **Method :** The work group conducted a comprehensive literature search on existing resources for IDT training, and developed a position statement and annotated bibliography. **Results :** After reviewing the evidence, the workgroup agreed on the following positions: (1) IDT training programs enhance the clinical skills and effectiveness of healthcare professionals caring for older adults; (2) the core curriculum components of a geriatric IDT training program should include the following domains: team development, role definition, communication strategies, consultation, conflict resolution, collaborative decision-making, and leadership; and (3) institutional and financial support is vital for the development, professional training, and ongoing maintenance of IDTs. **Conclusion :** The position statement and the annotated bibliography should be used as an advocacy tool and resource for professionals interested in developing and expanding IDT training programs. **Keywords :** Interdisciplinary Teams;

SS26 410-R-2

SUCCESSFUL MODELS OF INTERDISCIPLINARY TEAM TRAINING

Robert KAISER¹, Mark A. SUPIANO² (1. Geriatrics and Palliative Care, Washington DC VA Medical Center/ George Washington University, USA; 2. Division of Geriatrics, Department of Internal Medicine, University of Utah School of Medicine/ Salt Lake City VA Geriatric Research Education and Clinical Center, USA)

Introduction : The complex health problems of older adults often require the combined expertise of multiple health professionals as well as the coordination of care among the entire team of health professionals, direct-care workers, and family and other caregivers. **Method :** A systematic review was conducted by members of the Partnership on Health in Aging work group. **Results :** Interdisciplinary team training has been developed and implemented in a number of settings in the United States. A large team initiative sponsored by the John A. Hartford Foundation resulted in the development of innovative programs to educate and train health personnel and students to work in geriatrics interdisciplinary teams in 13 universities. A formal curriculum for team training, the Geriatric Interdisciplinary Team Training Program (GITT) has been developed, which included didactic materials and specific exercises to foster team development. To date, this initiative has been the largest commitment to team training and development outside of government-sponsored programs and has offered a very practical approach to team development in a variety of settings. Additional IDT training materials and websites have been sponsored by U.S. academic institutions and organizations, including the Bureau of Health Professions-sponsored Geriatric Education Centers. Further dissemination of these models and materials has been proposed. **Conclusion :** IDT training programs can improve learners' knowledge and attitudes about aging, geriatric care, team skills, interprofessional communication, and the benefits of IDT collaboration. **Keywords :** interprofessional, communication, aging

SS26 410-R-3

OVERCOMING BARRIERS TO IDT TRAINING IN HIGHER EDUCATION: KEYS TO EFFECTIVE IMPLEMENTATION

Katherine P. SUPIANO (College of Nursing, University of Utah, USA)

Introduction : Higher education institutions present unique challenges for the development, implementation, and continuation of interdisciplinary geriatrics team training programs. In spite of recent calls for the expansion of such programs, significant barriers remain to their long-term success. This paper develops a typology of such factors and integrates them into a conceptual framework suggesting some potential solutions. **Method :** The following are included in this framework: (1) factors related to each profession, such its unique cultural and historical background, power base, and willingness to embrace change, (2) factors related to interrelationships among the professions, including their status, ability and willingness to collaborate to achieve improved health care quality and outcomes, and (3) factors related to the context for IDT education, including acute, long term, and community care settings. **Results :** The Partnership for Health in Aging established a position statement to be used as an advocacy tool and resource for professionals interested in developing and expanding IDT training programs. **Conclusion :** Geriatrics offers a unique opportunity to develop successful strategies to overcome these traditional barriers, and this presentation summarizes recommendations for implementing them in higher education settings. **Keywords :** Higher education, Interdisciplinary training

SS26 411-R
WORKING LONGER IN A PERIOD OF ECONOMIC VOLATILITY: THE FLEXI-SECURITY OR FLEXI-INSECURITY OF GRADUAL RETIREMENT

SS26 411-R-1
GRADUAL RETIREMENT FOR WHOM? THE CASE OF THE AUSTRALIAN WORKPLACE

Philip TAYLOR¹, Elizabeth BROOKE² (1. Office of the PVC and President, Gippsland Campus, Monash University, Australia; 2. Faculty of Business and Enterprise, Swinburne University of Technology, Australia)

Introduction : At a time when public policy increasingly emphasizes the importance of longer work lives it is important to consider the role of the firm as either a promoter or inhibitor of older workers' employment. This paper, drawing on a recent survey of Australian employers, focuses on their use of flexible employment and phased retirement, much promoted as mechanisms whereby organizations can retain much valued human capital and workers can transition well to retirement. **Method :** This project included a computer assisted telephone interviewing (CATI) survey of 2,000 Queensland employers with more than 50 employees (29 per cent response rate i.e. 590), carried out in 2010. The sample included private and public employers of more than 50 people. The survey collected data on employer attitudes and practices towards older workers. **Results :** Evidence is reported on the degree to which employers are adopting measures aimed at the promotion of a flexible transition to retirement. We report significant differences between public and private sector organizations and a strong residual attachment to early retirement schemes in order to reduce head-count. Despite evidence of employers promoting flexible working in general, this is less likely to apply to older workers. **Conclusion :** Despite a strong public policy push towards allowing a gradual transition to retirement, the take up of such approaches by employers remains low, particularly those in the private sector with the implication that many older workers will continue to face an abrupt end to their working lives or be forced into job seeking at the end of their careers. **Keywords :** Employers, older workers

SS26 411-R-2
NEGOTIATING GRADUAL RETIREMENT: SELF MANAGEMENT AND ORGANIZATIONAL SUPPORT

Harvey Leonard STERNS¹, Philip TAYLOR² (1. Institute for Life-Span Development and Gerontology, Psychology, The University of Akron, USA; 2. Office of the PVC and President, Gippsland Campus, Monash University, Australia)

Introduction : It was apparent at a much earlier time that self-management of career and personal responsibility would be necessary to negotiate the world of full time and part time work in the future. However, the emphasis was on individuals being able to plan for the opportunities that would be available to shape one's later life work; and be creative in reshaping the later life period to fit continued work, retirement, and work in retirement. The design and redesign of one's later life has been a major theme in that context (Rothwell, Sterns, et.al. , 2008; Sterns & Sterns, 2013). We now recognize multiple exit patterns as opposed to single transitions in capturing the retirement process (Mutchler, Burr, Pienta, & Massagli, 1997). The continuously changing nature of retirement is also evidenced in retirement ages. The idea of a normal retirement age is an evolving concept. **Conclusion :** Self-management and personal responsibility are key concepts for the present and future. Personal decision making is complex and involves many different dimensions. A major issue is how middle-aged and older workers will negotiate the current challenging environment and how they will succeed and when assistance and support is needed. As Hall (2004) suggested in his protean career definition, both adaptability and self-awareness are important factors to successfully manage one's career. These factors make it possible for people to learn from their experience and develop new abilities on their own. In sum, workers, regardless of age, need to be more resilient and adaptable to new environments. **Keywords :** self- management retirement work

SS26 411-R-3
CAN WORKING LIVES BE EXTENDED? PROBLEMS AND PROSPECTS FOR WESTERN ECONOMIES

Chris PHILLIPSON (School of Sociology and Criminology, University of Keele, United Kingdom)

Introduction : Findings solutions to the economic pressures arising from ageing populations dominates policy agendas in the 21st century with extending working life emerging as an attractive option. 'Living longer' meant, according to the OECD (2006) that we should also 'work longer' ? a theme which had already been pursued in labour markets strategies in the 1990s but which became even more popular in the 2000s. **Method :** This paper examines historical studies of retirement and empirical investigations of labour force trends to assess potential obstacles to the policy goal of extending working life. The paper links studies of 'early exit' in the 1980s with more recent research on the impact of measures seeking to promote later life employment. **Results :** Results focus upon: (a) evidence that positive attitudes to retirement will continue to limit willingness to delay retirement; (b) evidence that employers will be selective in who they wish to retain in employment; (c) evidence that health conditions will continue to play a major role influencing the success or otherwise of policies for extending working life. **Conclusion :** The issues identified will indicate the basis for a research agenda around the theme of work/retirement transitions. Questions to be explored include: How will the work environment need to change to support individuals with responsibilities beyond paid employment, or those with long-term health conditions, or those interested in moving to new types of work? How will the training and education system respond to the needs of an ageing workforce? **Keywords :** Older workers, retirement

SS26 411-R-4

AGE-MANAGEMENT MEASURES AND THE IMPACT ON WORKABILITY, MOTIVATION AND PICTURES OF AGEING - FINDINGS FROM A GERMAN SURVEY

Gerhard NAEGELE (*Institut für Gerontologie, University of Dortmund, Germany*)

Introduction : In the course of demographic trends, older workers will continue to gain importance for economy and society. Findings show, that German staff executives primarily ascribe practical knowledge, work ethic, quality awareness, loyalty, theoretical knowledge and mental capacity to older employees. Teamwork, creativity, flexibility, willingness or ability to learn on the other hand is more likely seen among younger employees (Bellmann 2008, IW Köln 2009). Method : The paper will present key results from an own recent and representative German survey which was realized in a project financed by the Federal Ministry of Family, Senior Citizens, Women and Youth in 2010. Results : The paper will focus on: - age-management measures from the perspective of older workers - pictures of ageing in German companies from the perspective of older workers and of managers - the impact of age-management measures of workability, motivation and satisfaction. Conclusion : As well as conclusions for Germany, lessons for the Korean situation will be drawn. Keywords : Older workers, Germany

SS26 413-S

PREDICTORS AND MEDIATORS OF LONG TERM TRAJECTORIES OF COGNITIVE AGEING

SS26 413-S-1

DOES LONELINESS MEDIATE THE RELATION BETWEEN SOCIAL SUPPORT AND COGNITIVE FUNCTIONING IN LATER LIFE?

Lea ELLWARDT¹, Marja AARTSEN², Dorly DEEG², Nardi STEVERINK¹ (*1. Sociology, University of Groningen, Netherlands; 2. Sociology, VU University Amsterdam, Netherlands*)

Introduction : Research in gerontology has demonstrated mixed effects of social support on cognitive decline and dementia: Social support has been shown to be protective in some studies, but harmful in others. Little is known about the underlying mechanism between social support and cognitive functioning. We expect that subjective appraisals rather than received amounts of social support affect cognitive functioning. Loneliness is seen as an unpleasant experience that occurs when a person's network of relationships is felt to be deficient in some important way. As such, loneliness describes the extent to which someone's needs are being met and thus provides a subjective assessment of support quality. We expect that receiving instrumental and emotional support reduces social and emotional loneliness, which in turn preserves cognitive functioning. Method : Data are from the Longitudinal Aging Study Amsterdam (LASA) and include 2,255 Dutch participants aged 55 to 85 over a period of six years. Respondents were measured every three years. Cognitive functioning was assessed with the Mini-Mental State Examination (MMSE), the Coding Task, and the Raven's Coloured Progressive Matrices. The analytical approach comprised latent growth mediation models. Results : Greater levels of emotional support were associated with lower feelings of loneliness and higher levels of cognitive functioning. However, increase in instrumental support was related to more rapid cognitive decline. Conclusion : After ruling out the possibility of reversed causality in the analyses, we conclude that instrumental support relationships may be perceived as stressful in some individuals, and thereby potentially operate as a risk factor rather

than a protector of cognitive decline. Keywords : cognitive functioning, social support, loneliness

SS26 413-S-2

DEPRESSION AND COGNITION; HOW DO THEY INTERRELATE IN OLD AGE?

Tessa N. VAN DEN KOMMER¹, Hannie C. COMIJS², Marja J. AARTSEN³, Martijn HUISMAN¹, Dorly J. DEEG², Aartjan T. BEEKMAN² (*1. Department of Epidemiology and Biostatistics, EMGO Institute for Health and Care Research, VU University Medical Center, Netherlands; 2. Department of Psychiatry, EMGO Institute for Health and Care Research, VU University Medical Center, Netherlands; 3. Department of Sociology, VU University, Netherlands*)

Introduction : It is generally acknowledged that depression and cognitive impairment are closely associated in old age. The present study aimed to further disentangle the reciprocal effects between depressive symptoms and cognitive functioning over time and to study the association between changes in their trajectories using 13 years of follow-up. Method : Data were used from five waves of the population-based Longitudinal Aging Study Amsterdam (LASA). Subjects were included if data was present on depressive symptoms and cognitive performance on at least two occasions, which resulted in a study sample of N=2,299. Depressive symptoms were assessed with the Center for Epidemiologic Studies Depression Scale. Cognitive functioning was assessed using the Mini-Mental State Examination (general cognitive functioning) and timed coding task (speed of information processing). Cross-domain latent change analyses were performed. Results : We showed that depression at baseline predicted both decline of general cognitive functioning and information processing speed, independent of relevant covariates. Conversely, information processing speed at baseline, but not general cognitive functioning was related to the course of depressive symptoms. The course of cognitive functioning was not significantly associated with the course of depressive symptoms. Conclusion : Depressive symptoms in older patients flag an increased likelihood of cognitive decline. This effect is considerable and may be due to several underlying mechanisms. The likelihood of the relationship reflecting either a causal effect of depression on cognitive decline, or a common cause, or both, should be estimated. Likewise, older persons with more limitations in information processing speed specifically are more vulnerable to increases in depression. Keywords : cognitive decline, depression, bi-directional relationship

SS26 413-S-3

LATENT CLASS TRAJECTORIES OF COGNITIVE AGING

Marja AARTSEN¹, Graciela MUNIZ², Tessa VAN DE KOMMER³, Hannie COMIJS⁴ (*1. Faculty of Social Sciences, dept Sociology, VU University Amsterdam, Netherlands; 2. MRC Unit for Lifelong Health and Ageing, Medical Research Council, United Kingdom; 3. EMGO Institute for Health and Care Research, VU University Medical Center, Netherlands; 4. GGZIngeest / EMGO Institute for Health and Care Research, VU University Medical Centre, Netherlands*)

Introduction : There is substantial heterogeneity in cognitive decline with ageing. Predictors of decline that have been identified are among others physical and mental health, age, gender, and the social network. There is some evidence that predictors of cognitive decline may have differential impact across different subgroups. The central question in this presentation is whether there is a differential effect of age, gender, loneliness, functional limitations and depression on different trajectories of cognitive decline? Method : Data (N=3107) are from the Longitudinal Aging Study Amsterdam and comprises older adults aged

55-85 at baseline (1992), with follow-up measures every three year until 2005. Results : Four trajectories of cognitive decline can be distinguished: no decline (69%), normal cognitive decline (25%), pathological decline(5%) and severe pathological decline, with starting levels below 24 of the MMSE (1%). Class membership, that is the type of trajectory, can be predicted by age, gender, education and depressive symptoms but not by loneliness and functional limitations. The magnitude of the effects on developments in cognition greatly differ across the four trajectories. (Severe) pathological decline can not be predicted by factors often found to be correlated with normal cognitive ageing (except for age and depression). Conclusion : Our results suggest that the aetiology is different for pathological and normal cognitive decline. In studies on cognitive ageing we should make a distinction between normal and pathological cognitive decline. Keywords : trajectories cognitive decline

SS26 414-S

IMPROVING CARE FOR ELDERLY IN SOUTH - EAST AUSTRIA

SS26 414-S-1

THE RELOCATION PROBLEM OF NURSING HOME RESIDENTS - A MIXED METHODS STUDY ON HOSPITAL TRANSFERS FROM NURSING HOMES

Herbert JANIG¹, Georg PINTER², Karl CERNIC³, Olivia KADA¹, Rudolf LIKAR³ (1. Institute of Psychology, University of Klagenfurt, Austria; 2. Department of Geriatrics, Klinikum Klagenfurt am WS, Austria; 3. Department of Anesthesie and Intensive Care, Klinikum Klagenfurt am WS, Austria)

Introduction : Due to demographic changes, a drastic rise in the need for institutional care is to be expected. Nursing homes are not always capable of providing the necessary medical care for residents, which often consequently leads to hospitalisation. Avoidable transportation should be reduced, due to the inherent health risks to the elderly discussed under the term 'relocation stress syndrome' and also from an economic view. Method : The present study investigated the current situation in Carinthia (Austria). Retrospectively the documentations of a regional hospital (N = 4149), a rescue service (N = 10754), and a social insurance agency (N = 7051) were analyzed; qualitative interviews with physicians (N = 25) and nursing administrators (N = 16) were conducted. Results : A considerable proportion of transportation was proven to be avoidable: for example, almost one third of inpatient stays lasted no longer than two days. The application of bladder catheters, which according to the Austrian Health Care and Nursing Act is deemed to be a jointly responsible task of nursing personnel, is not often carried out on male patients in nursing homes. About 40% of the ambulant treatments in the emergency department of the investigated hospital were inappropriate. Conclusion : The majority of those doctors and care service providers questioned considered hospital transportation to be a burden to the people concerned. On the basis of these findings, a wide spectrum of measures for the optimisation of care in homes is being discussed. Options for improving the current situation are discussed and an intervention project is presented. Keywords : hospital transfer, relocation

SS26 414-S-2

THE RELOCATION PROBLEM OF NURSING HOME RESIDENTS - AN INTERVENTION STUDY

Georg PINTER¹, Rudolf LIKAR², Karl CERNIC¹, Olivia KADA³, Herbert JANIG³ (1. Department of Geriatrics and Remobilisation, Klinikum Klagenfurt am WS, Austria; 2. Department of Anesthesia and Intensive Care, Klinikum Klagenfurt am WS 9020 Klagenfurt,

Austria; 3. Institute of Psychology, University of Klagenfurt, Austria)

Introduction : Nursing home residents are frequently hospitalized, many of these hospital transfers are potentially avoidable In Carinthia, Austria, a project was initiated, aimed at reducing hospital transfers by training physicians and nursing staff and by improving interdisciplinary cooperation. The measures were implemented in two nursing homes (intervention group; IG). Two comparable nursing homes without interventions were used as control groups (CG). Method : The summative project evaluation was realized in terms of a quasi-experimental pre-test-post-test control group design. In addition to transfer rates and perceived interdisciplinary cooperation, residents' quality of life was defined. At baseline 269 residents lived in the two intervention homes and the two control homes of the study. For a panel of 185 residents complete data could be obtained. At baseline (T1) and after the intervention period of 6 months (T2) the nursing staff rated the residents' quality of life. Results : Regarding communication, negative affect and aggression no significant differences could be revealed. Mobility decreased slightly in the intervention group and increased in the control group (significant interaction). In the IG there were significant less transportation to the hospital compared to the CG. Conclusion : Despite nursing home residents' multi-morbidity, quality of life remained stable over the intervention period of approximately six months. The communication between nurses and family doctors had been improved significantly during intervention. The diagnoses of patients transferred to the hospital were more accurate in the IG. Keywords : hospital transfer relocation

SS26 414-S-3

OUTREACH GERIATRIC REMOBILISATION_ THE HOSPITAL COMES TO YOUR HOME

Walter MUELLER, Rosemarie MOERTL, Heide LECHNER (Department of Geriatrics, EKH Klagenfurt, Austria)

Introduction : The "Hospital comes to your Home_Outreach Geriatric Remobilisation" project has been designed to remobilise patients with multimorbidities in their own homes and to reintegrate them into society, in order to increase their self-sufficiency and reduce their need for care, thus avoiding the cycle of hospital readmissions ('revolving door medicine'). Method : Patients are mobilised in a place where they spend their everyday lives and therefore learn how to cope with the different obstacles they may encounter in their daily routine. This service takes place in everyday surroundings; their living space is redesign; and they are encouraged to take the initiative to self-help and network. Treatment becomes part of their normal daily routine. Problems are solved where they occur. Results : The Outreach Geriatric Remobilisation project can contribute to reducing time spent as an inpatient, accelerate and encourage the re-integration of the patient in their familiar environment and help maintain the patient's social network. Conclusion : Comprehensive outreach therapy can be offered at a significantly lower price than institutional therapy. This means considerable cost reduction for the public health sector. Geriatric remobilisation in the home setting is able to greatly reduce or avoid the need for re-hospitalisation. However, proper cooperation between all the parties of outreach and institutional health care is fundamental. Keywords : outreach geriatric remobilisation

SS26 414-S-4

THE GECO PROJECT: EFFECTS OF A GERIATRIC CONSULTANT SERVICE ON ACUTE HOSPITAL ADMISSIONS OF NURSING HOME RESIDENTS

Walter SCHIPPINGER¹, Horst PILGRAM¹, Andrea HIERZER¹,

Martina BOHNSTINGL², Ingrid OSPRIAN³ (1. Department of Internal Medicine, Albert Schweitzer Klinik, Austria; 2. Department of Internal Medicine, Albert Schweitzer Hospital, Austria; 3. Department of Internal Medicine, Medical University of Graz, Austria)

Introduction : Hospital admissions are frequent within residents of nursing homes and can result in detrimental complications affecting the patients' somatic and psychological status. In this prospective controlled study we investigated the effects of a mobile geriatric consultant service (GECO) provided by specialists in internal medicine on frequency of hospitalizations in nursing home residents. **Method :** During a 10 month observation period we examined frequency, causes, and circumstances of hospital admissions in 2 urban nursing homes with similar population characteristics. Residents in the control nursing home received medical attendance by general practitioners as common in Austrian nursing homes. Residents in the intervention nursing home received in addition the medical service of GECO. GECO performed visits in the intervention nursing home once a week regularly and on demand in order to attend acutely ill residents. **Results :** In the intervention nursing home a statistically significant lower frequency of acute hospital admissions was seen in comparison to the control nursing home (mean number of hospital admissions/100 residents/month: 6.0 versus 11.3; $p < 0.01$). The number of planned non-acute hospital admissions was also lower in the intervention nursing home (mean number of hospital admissions/100 residents/month: 14.3 versus 17.4); this difference did not reach statistical significance. **Conclusion :** This study shows that a mobile medical geriatric consultant service based on specialists in internal medicine can improve medical care in nursing homes resulting in a statistically significant reduction of acute hospital admissions. Mobile geriatric consultant services for nursing homes should be considered as components within comprehensive geriatric support systems. **Keywords :** geriatric consultant service

SS26 414-S-5

PROJECT 'HOME HEALTH CARE'

Dieter SCHMIDT¹, Georg PINTER² (1. District Doctor, District of Voelkermarkt, Austria; 2. Department of Geriatrics and Remobilisation, Klinikum Klagenfurt am WS, Australia)

Introduction : The need for more home health care is steadily increasing, at the same time, nursing homes will be packed to capacity. Home health care can be of high quality, if the devices and faculties needed are at disposal. Moreover, home health care should be carefully coordinated and also include a quality assurances system. On the long run, the supply of home health care is definitely worth investing since it will help saving costs. As a side effect, it can also be considered a new market for general practitioners. **Method :** Main Message: Every patient whose family wants to support home health care and whose diagnosis would allow such a setting should actually receive it. The cooperation between doctors and nurses is fundamental. **Results :** Important components are: clear, consistent, patient documentation, joint medical rounds, team meetings. **Conclusion :** Target Groups: Health and social services Geriatrics networks Coordination among all stakeholders and organisations. **Keywords :** home health care

SS26 415-S

DEPRESSED MOOD AS A RISK FOR PSYCHOLOGICAL ADAPTATION IN OLD AND VERY OLD AGE

SS26 415-S-1

ROLE OF FUNCTIONAL ABILITY AND DEPRESSED MOOD FOR 2-YEAR CHANGE IN PSYCHOLOGICAL CONTROL IN

VISUALLY IMPAIRED OLDER ADULTS

Hans-Werner WAHL¹, Oliver Kar¹ SCHILLING¹, Kathrin BOERNER², Joann P. REINHARDT², Mark BRENNAN-ING³, Amy HOROWITZ⁴ (1. Institute of Psychology, Department of Psychological Aging Research, Heidelberg University, Germany; 2. Research Institute on Aging, Jewish Home Lifecare, USA; 3. Center on HIV and Aging, Aids Community Reserach Initiative of America, USA; 4. Graduate School of Social Service, Fordham University, USA)

Introduction : The lifespan theory of control is applied to study change in vision-specific control strategies in visually impaired older individuals, depending on performance in instrumental activities of daily living (IADL) and depressed mood. **Method :** Longitudinal data from visually impaired individuals (at baseline: $N = 364$; mean age 82.8 years; visual acuity less than 20/60) measured at 3 occasions with 1-year intervals in-between were analyzed. A newly established vision-specific control scale to assess selective primary control (SPC), selective secondary control (SSC), compensatory primary control (CPC), and compensatory secondary control (CSC) was used. Linear and nonlinear (quadratic and piecewise) generalized mixed models with gamma response distribution to fit the skewed data were applied. **Results :** CPC progressively increased as IADL capacity decreased up to a turning point, at which CPC plateaued, whereas all other strategies declined linearly with IADL decrease. Controlling for depressed mood did not change these relationships for CPC, SPC, and SSC, but absorbed IADL-related decline of CSC. Higher depression was associated with less SPC, SSC, CSC, but only slightly with less CPC. To conclude, IADL plays an important role triggering a shift in adaptational strategies from selective control to CPC in visually impaired older adults and possibly other disabled populations. Depression seems to show a differential relationship with psychological control strategies. **Conclusion :** Findings at large also support the view that IADL and depression may be better regarded as drivers rather than outcomes of control strategy use. **Keywords :** Visual impairment, control strategy, depression, IADL

SS26 415-S-2

ASSOCIATIONS BETWEEN MEMORY COMPLAINTS AND WELL-BEING AND CHANGES IN COGNITIVE FUNCTIONING IN THE OLDEST-OLD - THE ROLE OF DEPRESSIVE SYMPTOMS AND EMOTIONAL INSTABILITY

Anne Ingeborg BERG, Linda Bjork HASSING, Boo JOHANSSON (Department of Psychology, University of Gothenburg, Sweden)

Introduction : The presence of memory complaints have been found to interact with personality traits and depressive symptoms in its association with cognitive changes in the young-old population. Findings suggest that memory complaints in the oldest-old could be a single and more reliable marker of ongoing cognitive deteriorations that are independent of depressive symptoms and emotional instability. **Method :** The present study investigates the association between memory complaints and well-being at baseline and changes in general cognitive functioning as well specific cognitive domains across four measurement occasions over a six-year period. The sample consisted of 453 relatively healthy individuals aged 80 and over. **Results :** An association between memory complaints and changes in cognitive functioning over a six-year period was found with non-significant interaction effects with depressive symptoms and emotional instability. Also, baseline levels of well-being were related to changes in cognitive functioning, whereas the main effects of depressive symptoms and emotional instability were relatively weak. **Conclusion :** Subjective perception of changes in cognition is a reliable marker of changes in cognitive functioning in advanced age. Also, well-being

could be a better predictor of change as compared to negative emotionality. Keywords : Cognitive functioning, depressive symptoms, emotional instability, well-being

SS26 415-S-3

THE ROLE OF DEPRESSIVE SYMPTOMS IN SEEKING HELP FROM HEALTH SERVICES AMONG OLDER ADULTS WITH PARKINSON'S DISEASE

Yii-rong LEU (*Division of Gerontology Research, Taiwan Gerontological Health Society, Taiwan*)

Introduction : Depressive symptoms are one of the most common non-motor symptoms in Parkinson's disease (PD) and may have major impacts on patients' help-seeking behavior. The aim of this study was to investigate factors contributing to help-seeking behavior among older adults with PD in an outpatient setting in Taiwan. Method : 200 older adults with PD aged 65 and over (mean age = 75.1 years, standard deviation = 7.5) at outpatient clinics were recruited in this cross-sectional study. A Questionnaire was developed to assess socio-demographic factors, social factors and physical health. In addition, depressive symptoms were quantified using the Geriatric Depression Scale (GDS) and the PD severity was assessed according to the Hoehn and Yahr Scale. Results : Path analysis showed that socio-demographic factors and physical health had direct and indirect effects on help-seeking behavior of older adults with PD. Depressive symptoms were found to have a statistically significant direct effect on the outcome variable as well. High levels of depressive symptoms were more likely to be associated with an increasing frequency of seeking help from healthcare systems. The modified path model showed good fit with the data. Conclusion : Depressive symptoms are viewed as a frequently observed neuropsychiatric phenomenon in PD and are one of the major clinical determinants of seeking help from diverse health services. Accordingly, screening, prevention and treatment for depressive symptoms in PD are strongly recommended for clinical practice. Keywords : depressive symptoms, Parkinson's disease, health services

SS26 415-S-4

PHYSICAL DEGRADATION AND FUNCTIONAL COMPETENCE IN VERY OLD AGE: THE ROLE OF DEPRESSED MOOD

Oliver Karl SCHILLING, Ortrun REIDICK, Hans-Werner WAHL (*Institute of Psychology, Department of Psychological Ageing Research, University of Heidelberg, Germany*)

Introduction : At the end of the human lifespan, degradation of physical functioning threatens the very olds' functional competences to conduct activities of daily living (ADL). Also, increase of depressive symptoms has been observed among the very old. Depressed mood may be triggered by loss of ADL, however, it may also promote ADL loss by de-motivating individual investments to maintain functional competence under constraints of basic physical functioning. Method : Longitudinal data from the LateLine study (N=124, born 1911-1921, measured at 6 occasions between 2009 and 2012) is used to analyze change in basic physical functioning (handgrip strength, visual acuity), ADL, and depressed mood (Geriatric Depression Scale). By means of mixed modeling and structural equation modeling we analyze the effects of depressed mood moderating the relationship between loss of physical function and of ADL. Results : Intra-individual loss of ADL is linked with increase of depressed mood, but there is only weak evidence of depressed mood promoting the 'reactivity' of ADL to loss of vision or physical strength. Overall, decline of functional competence is highly prevalent in this sample of very old, but only

partially predicted by the variables analyzed. Conclusion : The processes aggravating functional health (ADL) and affective health at the end of the lifespan seem to be mutually linked, calling for more in-depth research on the causalities underlying this linkage. These processes may be triggered less as expected by constraints of basic physical functioning, such as vision and physical strength, hence suggesting other factors (e.g., psychological, social) crucial for late life functional declines. Keywords : functional competence, depressive symptoms, very old age

SS26 416-R

ONLINE AND OFFLINE: SOCIAL NETWORKS AND SUCCESSFUL AGEING

SS26 416-R-1

THE SOCIAL NETWORKS AND AGEING PROJECT (SNAP): INTEGRATED ONLINE AND OFFLINE RESEARCH METHODS IN THE STUDY OF SOCIAL NETWORKS IN A MATURE-AGE POPULATION

Heather BOOTH¹, Robert ACKLAND¹, Tim WINDSOR², Pilar RIOSECO¹, Mahin RAISSI¹, Lin CHEN¹ (*1. ADSRI, Australian National University, Australia; 2. Social Psychology, Flinders University, Australia*)

Introduction : The Social Networks and Ageing Project (SNAP) conducts multidisciplinary research on the role of social networks in successful ageing. The project integrates survey research with the collection of online data on web-based social networking structures. Method : The SNAP survey on social activity and wellbeing collected detailed data from a national sample of 2123 Australians aged 50+ in 2010-11 and 2012. This longitudinal survey focuses on the nature of the respondents' social networks and activities, distinguishing between family members and friends and between face-to-face, web-based and other types of communication, and on measures of health, mental health and wellbeing. The survey includes questions on physical and emotional distance to relatives, and the use of the Internet and online social networking for social communication. For consenting respondents who use Facebook, a purpose-built application collects data on the structure of their Facebook social network in relation to social capital. Snowball sampling is used among members of these networks to create an online social network for analytical purposes. This provides a comprehensive dataset including online social network, offline social network of family and friends including types, frequency and duration of communication, and indicators of health and wellbeing. The paper describes the research methods. Results : The paper includes an overview of findings. Conclusion : This study, which is among the first in the world to integrate offline and online research methods in the study of social networks in a mature-age population, demonstrates the feasibility and benefits of the integrated approach. Keywords : offline social networks, online social networks, integrated methods

SS26 416-R-2

PROFILES OF SOCIAL NETWORK CHARACTERISTICS AMONG OLDER AUSTRALIAN ADULTS: FINDINGS FROM SNAP

Tim WINDSOR¹, Pilar RIOSECO², Heather BOOTH², Katherine FIORI³ (*1. School of Psychology, Flinders University, Australia; 2. ADSRI, Australian National University, Australia; 3. Psychology, Adelphi University, USA*)

Introduction : In recent years researchers have adopted profile-based approaches to the study of social networks in later life. Such

approaches identify subgroups characterised by different combinations of network characteristics. We added to existing research by constructing profiles based on the experience of negative social exchanges as well as supportive exchanges. We also examined future time perspective as a predictor of profile membership. Method : SNAP data were used to examine social network profiles in older Australians (N = 1816). Cluster analysis pointed to a seven profile solution. Results : Those with a Low negative-supported profile (19%) reported moderate support, and few negative social exchanges. Diverse-supported participants (9%) reported high levels of support. Those with a household focused profile (15%) predominantly lived with a partner and reported low levels of both external support and negative exchanges. Low support-negative individuals (11%) reported low support, and frequent negative exchanges with family. Ambivalent individuals (21%) reported moderate support coupled with more frequent negative exchanges with friends. Live alone-high negative individuals (11%) were unpartnered and reported more frequent negative exchanges, whereas those with a live alone-low negative profile (12%) lived alone and reported few negative exchanges. A more restricted future time perspective was associated with a greater likelihood of living alone. Individuals classified into profiles characterised by higher levels of support, and fewer experiences of negative social exchanges reported better mental health, and greater satisfaction with life. Conclusion : Profile-based approaches provide a valuable means of examining heterogeneity in the social networks and well-being of older adults. Keywords : social networks, mental health

SS26 416-R-3

RETIREMENT AND SOCIAL CONNECTEDNESS: AGE PATTERNS AND SEX DIFFERENCES

Pilar RIOSECO (Australian Demographic and Social Research Institute, The Australian National University, Australia)

Introduction : Retirement constitutes one of the most significant transitions in the lives of older adults. Although the retirement process has been extensively studied in terms of its socio-economic and health predictors and effects, little is known about the relationship between retirement status and older adults' social connectedness. Research on social connectedness acknowledges its multidimensionality including social networks, social support and social engagement. The various dimensions of social connectedness have been established as important influences on older adults' health and well-being, but most research addresses only one or two dimensions. Method : Using data from the first wave of the SNAP survey on the Social Activity and Wellbeing of Older Australians, this study examines the relationship between the multiple dimensions of social connectedness and retirement status in older adults, focusing on age patterns (n=1860) and sex differences (n=1881). These indicators include measures of social networks, social support and social engagement. Results : Several indicators are observed to vary by sex, age and retirement status, and they do so in different ways. The results show a complex pattern of social connectedness and social connectedness differences across these groups. For example, women have a larger network of friends than men, and both retired men and women report higher levels of positive exchanges with household members compared with those not completely retired. Likewise, retirees show increasing positive social exchanges with family members with increasing age, whereas this pattern is not observed among those not retired. Conclusion : The implications of these findings for research in retirement and social connectedness are discussed. Keywords : social connectedness retirement

SS26 416-R-4

WHO USES ONLINE SOCIAL NETWORKING? OFFLINE SOCIAL CONNECTIVITY DETERMINANTS OF ONLINE ACTIVITY

Heather BOOTH (Aust Demographic and Social Res Inst, Australian National University, Australia)

Introduction : There is inconclusive evidence on the trade-offs between offline and online social connectivity. Few studies collect detailed data on both modes of social interaction. Method : The Social Networks and Ageing Project (SNAP) survey on the social activity and wellbeing of senior Australians (n=2123) includes a broad range of questions on offline social connectivity as well as details of the use of online social networking. This paper uses data from the first wave (2010-11) of the survey to examine the relationship between offline social connectivity and whether or not the respondent uses online social networking. Offline connectivity variables include aspects of social engagement and social interaction and details of social network characteristics including friends vs family members, emotional distance, confidants, frequency and duration of contact, and whether or not the contact is face-to-face. Regression models are used to identify the significant variables among those measuring the dimensions of social engagement, social interaction and network characteristics. These are then combined in a single model. Demographic and socio-economic covariates are taken into account. Results : Important predictors include time spent with family members in face-to-face contact, frequency of restrictions on social activity due to own health or disability, number of friends confiding in respondent, and frequency that friends criticise the respondent or create tensions or arguments. Conclusion : The implications of these findings are discussed. Keywords : online social networking, offline-online associations

SS26 418-S

IMPROVING PAIN MANAGEMENT FOR THE ELDERLY

SS26 418-S-1

DO RECOMMENDATIONS FOR IMPROVING PAIN MANAGEMENT IMPACT ON FUNCTIONAL PERFORMANCE IN NURSING HOME RESIDENTS?

Sonja KALINOWSKI¹, Andrea BUDNICK¹, Franziska KOENNER², Ronny KUHNERT³, Bianca HANNEMANN¹, Laura - Maria JORDAN¹, Reinhold KREUTZ², Dagmar DRAEGER¹ (1. Institute of Medical Sociology, Charite-Universitätsmedizin Berlin, Germany; 2. Institute of Clinical Pharmacology and Toxicology, Charite-Universitätsmedizin Berlin, Germany; 3. Associate collaborator/freelancer of Institute of Medical Sociology, Charite-Universitätsmedizin Berlin, Germany)

Introduction : Previous international data have shown that the majority of nursing home residents (NHR) suffer from pain. Studies in Germany identified that every second resident is affected. Pain is a modifiable factor that might play an important role on functional performance in NHR. Former investigations demonstrated statistically significant associations between pain and lower functional performance. The purpose of this study is to examine, if recommendations aiming to improve pain management impact on functional performance as well. Method : Design: Cluster randomized controlled trial. Setting: German Nursing homes. Study Population: NHR with a Mini-Mental-State-Examination Score ≥ 18 . Intervention: Recommendations for pain management for nurses in nursing homes (workshops) and for general practitioners of NHR (online). Two test intervals after baseline. Outcome measures in functional performance: Functional mobility using the Timed 'Up & Go'-test and performing activities of daily living (ADL) by the Barthel-Index. Results : Twelve

nursing homes participated in the trial (equal distribution in intervention and control group), while 815 NHR met the inclusion criterion. The presentation will address outcomes of the intervention on the individual level on functional mobility and ADL performance along with the test intervals. Potential cause-and-effect relationships will be discussed to determine the impact of the intervention on functional performance. Conclusion : Our results will extend previous findings using a longitudinal design to verify the direction of associations explored between pain and functional performance in NHR. Possible influencing factors (e.g. institutional) will be discussed. Keywords : pain, functional performance, nursing home residents

SS26 418-S-2

REFERRAL PATTERNS OF OLDER PRIMARY CARE PATIENTS TO SPECIALTY PAIN MANAGEMENT CENTERS: DISPARITIES BETWEEN MIDDLE-AGED AND OLDER ADULTS

Casey R. SHILLAM (*Acute and Chronic Care, Johns Hopkins University School of Nursing, USA*)

Introduction : Persistent pain is common in older adults with implications of depression, anxiety, fatigue, declines in physical function, increased disability, and declines in both quality of health and quality of life. While the prevalence of pain in older adults is estimated to be 70% of older adults, only 15% to 20% of the pain-management population is over 65 years. Method : This study explored differences in patterns of referral to pain management programs between middle-aged and older patients with chronic pain. A random sample of 995 patients over 50 years of age who had chronic pain in the past two years and used opioid for at least one year (65 years and older n=371) were identified from the electronic health record (EHR) system of an academic health system medical center. Results : Among the sample, 62.7% were < 65 years (total range = 50 to 98 years), and 62.1% were female. Older patients had significantly greater numbers of comorbid diagnoses in the past two years than the middle-aged group (18.0 ± 12.5 (mean \pm SD) vs. 14.6 ± 11.2 , $p < .01$). A negative binomial regression analysis indicated that younger age was significantly associated with higher rates of referral to pain management specialists ($p = 0.003$), as was higher numbers of comorbid diagnoses ($p < 0.0001$), and larger daily morphine doses ($p=0.0115$). Conclusion : These findings reveal the discrepancy in referring older adults with chronic pain to pain clinics and support the development of an interdisciplinary model of pain management in primary care. Keywords : Pain Management, Chronic Disease Management

SS26 418-S-3

EFFECTIVE SENSORY BASED PALLIATIVE INTERVENTIONS FOR REDUCING PAIN, AGITATION AND PHYSIOLOGIC STRESS IN PERSONS WITH ADVANCED DEMENTIA

Nancy A. HODGSON (*Acute and Chronic Care, Johns Hopkins University School of Nursing, USA*)

Introduction : Pain is a common cause of stress and neuropsychiatric symptoms in individuals with advancing dementia, yet it frequently goes unrecognized and undertreated. The severity of the response to pain in individuals with dementia patients increases with neurodegenerative changes in the hypothalamus, resulting in the dysregulation of the stress regulatory systems [e.g., hypothalamic-pituitary-adrenal (HPA)/sympathetic nervous systems (SNS)]. As dementia progresses or pain increases, neuroendocrine disruption increases resulting in lower stress toleration thresholds and negative

neuro-behavioral and functional symptoms. A growing body of empiric literature has provided evidence for the efficacy of sensory based palliative approaches to managing pain for reducing neuro-behavioral and functional symptoms. Method : This presentation provides an. Introduction and overview of sensory based palliative interventions in individuals with dementia. The state of research in their area is presented, including studies underway using tactile treatments and sensory-environmental modifications to further delineate the neurobiological mechanisms underlying the efficacy of these interventions. Results : Preliminary evaluations of sensory based modalities indicate a reduction in observed pain and neuro-behavioral symptoms and demonstrate a significant reduction in neuroendocrine measures of HPA and SNS activity, indicating a potential mechanism by which to treat painful stimuli. These modalities demonstrate promise for improving pain in AD patients by down-regulating HPA/SNS activity through the stimulation of C-fiber polymodal nociceptors. Conclusion : The current state of evidence supports the use of sensory based palliative interventions and suggests that consensual knowledge and further empirical research are needed to further elucidate the mechanism of action of these modalities. Keywords : Pain, Dementia, Palliative

SS26 418-S-4

SUCCESSFUL STRATEGIES TO INTEGRATE ALL HEALTH CARE DISCIPLINES TO IMPROVE PAIN MANAGEMENT IN NURSING HOME RESIDENTS

Andrea BUDNICK¹, Franziska KOENNER², Bianca HANNEMANN¹, Laura - Maria JORDAN¹, Sonja KALINOWSKI¹, Reinhold KREUTZ², Dagmar DRAEGER¹ (*1. Institute of Medical Sociology, Charite - Universitätsmedizin Berlin, Germany; 2. Institute of Clinical Pharmacology and Toxicology, Charite - Universitätsmedizin Berlin, Germany*)

Introduction : International studies have shown that up to 80% of nursing home residents (NHR) are affected by pain, while our recent study in Germany identified that every second NHR suffers from pain. Furthermore, we identified that pain medication for NHR is inadequate. Thus, 20% of NHR receive at least one potentially inappropriate medication. Non-pharmacological treatment of pain is also insufficient. Based on these results, interdisciplinary recommendations for pain management in nursing homes were developed in an interdisciplinary team. Method : In order to successfully include all health care disciplines as well as NHR in a trial to improve pain management in nursing homes, we chose a top-down-strategy and a cluster-randomised controlled trial. The intervention was conducted via two pathways: i) nurses had the option to participate in a full-time workshop; ii) and general practitioners could use a web based educational program online. Results : Twelve nursing homes participated in our trial and 815 NHR met the inclusion criterion (MMSE \geq 18). The presentation will focus on successful recruitment strategies to include all health care disciplines, legal representatives, and NHR in the trial. A special focus will be the recruitment process of general practitioners. Moreover, results on the implementation process and the effectiveness of the intervention to reduce pain in NHR will be presented. Conclusion : Despite the low human resources available in German nursing homes, it appeared possible to successfully conduct an interventional trial in that setting. Whether or not and to which extent this may lead to improve pain management will be discussed. Keywords : Pain Management, Nursing Home, Intervention Study, General Practitioner

SS26 422-C

URINARY CONTINENCE PROMOTION IN THE OLDER

ADULTS: GLOBAL RESEARCH PERSPECTIVES

SS26 422-C-1

URINARY INCONTINENCE AMONG OLDER WOMEN IN US RESIDENTIAL CARE FACILITIES

Jennie Chang DE GAGNE¹, Aeyoung SO², Jina OH³, Mary H. PALMER⁴ (1. School of Nursing, Georgia State University, USA; 2. School of Nursing, Gangneung-Wonju National University, Korea; 3. Department of Nursing, Institute of Health Science, Inje University, Korea; 4. School of Nursing, University of North Carolina, USA)

Introduction : By 2050, approximately 27 million older people are expected to live in residential care facilities (RCFs) in the U.S. Despite the growing demand and interest in this type of RCF setting, little information is available on urinary incontinence (UI) and its correlates in older women living in RCFs. Therefore, the purpose of this study was to describe the relationship among socio-demographic characteristics, health status, and UI in older women (> 65 years) living in RCFs. **Method :** A cross-sectional, retrospective survey of a population-based sample of 8,094 from the 2010 National Survey of RCFs was analyzed. **Results :** Data from 4,930 women were available for analysis, and 44.6 % of them had UI. Statistically significant differences were found between the samples of continent women and incontinent women by marital status ($p < .05$), educational level ($p < .05$), and length of stay ($p < .05$). Significant differences were also found between continent and incontinent women in activities of daily living (ADLs) scores ($p < .001$), overall health status ($p < .001$), and comorbidities ($p < .001$). The strongest association was severe impairment in ADLs with an adjusted odds ratio (OR) of 21.6 (95% CI 16.07-29.01), followed by moderate impairment in ADLs (OR = 3.41, 95% CI 2.61-4.44). **Conclusion :** UI is highly prevalent in older women residing in RCFs and is associated with severe impairment in ADLs. The comprehensive assessment including physical function status or early detection in physically functional impairment in RCFs is suggested to prevent or delay onset of or improve existing UI. **Keywords :** urinary incontinence, older women, residential facilities, survey

SS26 422-C-2

KNOWLEDGE, ATTITUDES, BELIEFS, AND PRACTICES IN KOREAN NURSES AND CARE-HELPERS ABOUT URINARY INCONTINENCE IN NURSING HOMES

Sunah PARK¹, Aeyoung SO², Jennie DE GAGNE³, Mary H. PALMER¹ (1. School of Nursing, University of North Carolina, Chapel Hill, USA; 2. Department of Nursing, Gangneung-Wonju National University, Wonju, Korea; 3. Byrdine F. Lewis School of Nursing and Health Professions, Georgia State University, USA)

Introduction : Urinary incontinence (UI) is a prevalent condition in older adults in long-term care settings, but evidence-based practices often fail to prevent, treat, or manage it. This study primarily aimed to describe levels of UI knowledge, attitudes, beliefs, and practices among Korean registered nurses (RNs) and care-helpers (CHs) and to identify correlates of continence care practices. **Method :** Data collected from 338 (135RNs and 203CHs) used an existing instrument (Henderson, 1996; Saxer et al., 2008) adapted for Korean nursing homes staff. The instrument consisted of knowledge (18-item) about UI, attitude (18-item) toward continence care, beliefs (17-item) about undesirable consequences to older adults with UI, and care practices (28-item). This study was approved by the University of North Carolina at Chapel Hill (USA) and Gangneung-Wonju National University (Korea) IRBs. **Results :** Mean and standard deviation

(M±SD) and range of scores were as follows: Knowledge (range 0-18) was 10.8±2.51 in RNs and 7.5±2.76 in CHs. In attitudes and beliefs (range 1-6), RNs' scores were 4.6±0.53 and 2.6±0.80 respectively; CHs' scores were 4.1±0.56 and 3.0±0.80. RNs and CHs had the same overall practice (range 1-4) mean score: 2.7±0.57 and 2.7±0.59 respectively. Attitude, bed capacity, and continuing education about UI significantly correlated with RN continence care practice ($R^2=.285$). CH practice significantly correlated with knowledge and attitude ($R^2=.163$). **Conclusion :** This study identified different correlates to continence care practices with RNs and CHs. Tailored UI education for each group is recommended as is further research on impact of improving knowledge and changing attitudes and beliefs on continence practices and patient outcomes in nursing homes. **Keywords :** urinary incontinence, nursing homes, nursing staff

SS26 422-C-3

INCONTINENCE-BRIEF USE IN ACUTE HOSPITALIZED PATIENTS WITH NO PRIOR INCONTINENCE

Anna ZISBERG¹, Efrat SHADMI¹, Gary SINOFF², Nurit GUR-YAISH¹ (1. The Cheryl Spencer Department of Nursing, Faculty of Social Welfare and Health Science Haifa University, Israel; 2. Department of Gerontology, Faculty of Social Welfare and Health Sciences, University of Haifa, Israel)

Introduction : The study aim was to evaluate the incidence and identify factors of in-hospital incontinence-brief use among older patients who did not use diapers prior to admission. **Method :** The current study is part of a larger prospective cohort study conducted in 2009 in 5 acute-care medical units of a 900-bed teaching hospital in Israel. A total of 465 patients (age≥70 years) who did not use incontinence briefs prior to Admission were interviewed on admission regarding their functional status, mobility, continence status, and type of voiding patterns prior to hospital stay. Interviews regarding in-hospital voiding and mobility patterns were conducted each day after the first 48 hours of hospitalization. Electronic medical records were extracted to calculate the severity of illness, comorbidity score, and length of hospital stay. **Results :** The incidence of in-hospital adult incontinence-brief use was 14% (65/465), whereas the rate of in-hospital commodes/urinals was 8.2% (38/465). The relative risk (RR) of incontinence-brief use versus self-toileting was 18.76 (95% CI: 4.36-43.72) and 10.12 (95% CI: 2.23-13.48) higher for patients with low or moderate in-hospital mobility, respectively, versus those who were highly mobile. Patients who used incontinence-briefs were more likely to be female (RR=1.65; 95%CI: 1.20-2.23) and were more likely to have low mobility (RR=1.59; 95% CI: 1.10-2.35) than patients who used commodes/urinals. **Conclusion :** Adult incontinence-briefs are frequently used in continent patients, especially women, with low mobility. The current literature identifies incontinence-briefs use as leading to multiple adverse outcomes. Therefore, the use of adult incontinence-briefs among hospitalized older adults requires more scrutiny. **Keywords :** Incontinence, Incontinence Brief Use, Hospitalized older adults

SS26 423-C

AGING AND ANTI-AGING: PERSPECTIVES OF THE DEVELOPMENT OF ANTI-AGING TECHNOLOGIES

SS26 423-C-1

APPLICATION OF BIO-GERONTOLOGICAL ACHIEVEMENTS IN PREVENTIVE ANTI-AGING MEDICINE

Roman PINAEV, David GORGILADZE, Valeriy ALEXANDROV (Scientific and Production Center of Revitalization and Health, Russian Society of Anti-aging medicine, Russia)

Introduction : Nowadays anti-aging medicine is first of all a complex of measures aimed at synchronous “fine-tuning” of functions of all organs and systems, contributing to a pronounced and stable revitalization effect. On the other hand, it also includes complex programs for correction of disorders in the organism, including new schemes of application of peptide preparations in treatment of different age-related pathology, such as cerebral atherosclerosis and diabetes mellitus type 2. **Method :** We have conducted a study of the effectiveness of a complex of peptides of the pineal gland, brain, liver, pancreas and vessels in treatment of 1249 patients suffering from cerebral atherosclerosis and 918 patients suffering from diabetes mellitus type 2 aged 52-65 y.o. **Results :** The obtained results show that new approaches are needed to existing traditional schemes of treatment of cerebral atherosclerosis and diabetes mellitus. It is necessary to introduce into existing schemes new complexes of highly effective organ or tissue specific peptide preparations, capable of expansion of reserve capacities of the organs and tissues involved into pathologic process. **Conclusion :** Taking into consideration that development of pathologic processes in cardio-vascular and endocrine systems depends on certain group of factors, it would be very important to affect them solely in a systemic way with help of a group of peptides, regulating vascular, metabolic, immune and neuroendocrine processes. This will help to achieve more pronounced and long-term therapeutic effect. **Keywords :** revitalization effect, peptides, pathologic process.

SS26 423-C-2

ANTI-AGING MEDICINE IN THE REPUBLIC OF KAZAKHSTAN: PATIENT-BASED CARE AIMED TO PROLONG HEALTHY LIFESPAN AND OPTIMIZE AGING PROCESS

Oleg IVKO¹, Elisaveta KACHAN², Valery BENBERIN¹, Kseniya IVKO¹ (1. Gerontological Society of the Republic of Kazakhstan, Kazakhstan; 2. Russian Society of Anti-Aging Medicine, Russia)

Introduction : Though recently anti-aging medicine has received criticism for advocating unproven and expensive methods to combat aging symptoms only, new approaches to the anti-aging medicine make it a new medical discipline which aspires to connect the advanced scientific and medical technologies for early detection, prevention, treatment and reversal of age-related dysfunction and diseases to clinical practice. That is why recent achievements in the field of gerontology and geriatrics, clinical medicine, physics and biology, social and other sciences should be united under the umbrella of anti-aging medicine, to contribute to the promoting and prolonging healthy life span, extending productive age and preventing age-related disorders. **Method :** Gerontologists and anti-aging specialists in the Republic of Kazakhstan develop a new patient-based strategy to be a part of global national strategy which aims to prevent diseases, including lifestyle-related diseases, to control factors that promote the occurrence of disease and to optimize aging process. **Results :** Taking into consideration that clinical practice of anti-aging medicine can be approved only by scientific evidences, we diligently work to accumulate and analyze aging- and anti-aging-related scientific data, as well as to conduct relevant scientific studies. **Conclusion :** Focusing on aging, anti-aging medicine should play a central role in health care policy focused not only on treatment of different diseases but mostly on prevention and early detection of age-related states. **Keywords :** anti-aging medicine, new medical discipline, patient-based care

SS26 423-C-3

ANTIOXIDANT ANTI-AGING STRATEGY AGAINST

OXIDATIVE CELL DAMAGE SLOWS AGING AND PREVENTS DISEASES

Cimen KARASU (Cellular Stress Response and Signal Transduction Research Laboratory, Department of Medical Pharmacology, Faculty of Medicine, Gazi University, Turkey)

Introduction : Reactive carbonyl compounds (RCCs) formed during lipid peroxidation and sugar glycooxidation accumulate by ageing or related diseases including metabolic (i.e. diabetes, obesity), cardiovascular or neurodegenerative diseases. RCCs induce “carbonyl stress” characterized by the formation of adducts and cross-links on proteins, which progressively leads to impaired protein function and damages in tissues, and pathological consequences including cell dysfunction, inflammatory response and apoptosis. Our research focused on discovering the phytochemicals and synthetic therapeutics that are capable of affecting multiple cellular redox mechanisms or etiological factors responsible for the development of diseases. **Method :** We measured lipo-glyco-oxidative and nitrosative stress, modified protein biomarkers and effects of treatment with pyridoindole antioxidants, herbal phenolic compounds and extract mixtures on cell/tissue functions and signaling proteins, apoptosis and protein adduct formations in vivo and in vitro. **Results :** Olive leaf, fruit extracts, oleuropein, hydroxytyrosol and quercetin reduced 4-HNE-toxicity, improved viability, attenuated ROS generation and protected $\Delta\Psi(m)$, inhibited stress activated transcription factors and DNA damage in cardiomyocytes. Olive polyphenols also prevented cytokine- or hydrogen peroxide-induced pancreatic β -cell toxicity and dysfunction. Pomegranate seed or hull extracts showed inhibitory action on aldose reductase and oxidative stress markers. Pomegranate seed oil, n-5 PUFAs, improved proteins against oxidatively modification in BV-2 microglia. Pyridoindolic stobadin and SMe1EC2 ameliorated diabetic complications and protected functions and viability in cellular or animal models of oxidative stress. **Conclusion :** The inhibition of carbonyl stress by free radical scavengers, natural or synthetic antioxidants, redox regulators or other carbonyl inhibitors may have a therapeutic strategy to delay ageing and the development of age-related diseases. **Keywords :** Antioxidants, Aging, Oxidative Damage.

SS26 423-C-4

APPLICATION OF PEPTIDE BIOREGULATORS IN VIETNAMESE VETERANS SUBJECTED TO DIOXINE INJURIES

Trinh Quoc KHANH¹, Pham Xuan NINH¹, Hoang Van HUAN¹, Pham Khac LINH¹, Galina RYZHAK², Anastasia RYZHAK², Vladimir KHAVINSON², Genrih SOFRONOV³ (1. Russian-Vietnam Tropical Centre, Viet Nam; 2. Saint Petersburg Institute of Bioregulation and Gerontology, Russia; 3. Institute of Experimental Medicine of the North-Western Branch of the RAMS, Russia)

Introduction : The study was conducted in 300 Vietnamese veterans who suffered dioxine injuries at the age of 55-75 years. The first group consisted of 150 men with benign prostatic hyperplasia. 150 patients with immunodeficiencies formed the second group. **Method :** Peptide bioregulators Vesilut (urinary bladder dipeptide), Vesugen (vessels tripeptide), Crystagen (thymus tripeptide) in the dose of 0,2 mg each and Ventfort (animal vessels extract) in the dose of 0,2 g were used for treatment of the first group. The second group was treated with Vesugen and Crystagen in the daily dose 0,2 mg of each and Vladonix (animal thymus extract) in the dose of 0,2 g orally for 20 days. In the first group we analysed the level of urination abnormalities according to IPSS scale and life quality QOL, urination speed, residual urine volume, prostate volume before and after treatment. In the second

group - humoral (IgA, IgG, IgM) and cellular immunity (CD3, CD4, CD8, CD19). Results : 80% of patients with BPH revealed good response to peptide therapy. Manifestation of bladder pain, frequent urination during the night time, difficult urination, low urine stream speed, residual urine significantly decreased. 70% of veterans with immunodeficiency showed positive response to peptide bioregulation therapy. The IgG level significantly increased. CD3, CD4 and CD8 levels increased alongside with resistance and immunity. Conclusion : High efficacy of peptide bioregulators wasn't accompanied with side effects. They may be recommended for treatment of immune system disorders and prostatic disorders in people subjected to extreme factors especially in Vietnamese veterans who suffered from dioxine injures. Keywords : dioxine, peptide bioregulators

SS26 423-C-5

DEVELOPMENT OF HEALTH-ORIENTED ANTI-AGING CENTERS

Alexander SINIGIBSKY, Alexander BURTIN (*International Anti-aging Center, Tez Tour, Turkey*)

Introduction : Inevitable aging of the world population makes maintenance of health and prevention of age-related diseases be the utmost goals of the anti-aging medicine. Searching for the new ways to introduce the latest achievements of anti-aging medicine into every day practice, we've launched a pilot project as part of the opening of the chain of international anti-aging medical centers in the resort centers of the Tez Tour company. Method : Due to the alliance of the Saint Petersburg Institute of bioregulation and gerontology and the Tez Tour company, the first specialized International Anti-aging Center on the Turkish coast is intended to be one of the centers for promotion of anti-aging technologies aimed to slow down aging and activate human biological reserves, developed by scientists of the St. Petersburg Institute of bioregulation and gerontology. The center is fully equipped with all necessary equipment, uses the latest achievements in gerontology and anti-aging medicine. Its employees have been trained under the guidance of the Russian Society of anti-aging medicine. Results : The center allows its guests to go through all necessary research to make a genetic passport, as well as undergo other diagnostic procedures for identifying biological age and aging pace, and get the appropriate bioregulating treatment to prevent age-related pathology. Conclusion : Developing a net of such centers at the most popular resorts will contribute to the popularization of health maintenance principles as well as make available to the general public the latest achievements of the anti-aging medicine. Keywords : health-oriented anti-aging centers, anti-aging technologies

SS26 423-C-6

THE ROLE OF GENETIC TESTS IN ANTI-AGING MEDICINE

Julia TITEL, Olga YAKOB (*Clinic of The Aesthetic and Anti-Aging Medicine 'The Fifth Element', Russia*)

Introduction : Aging at the systemic level is represented by hormonal and immune shifts associated with age-related pathologies, such as cardiovascular diseases, diabetes mellitus type 2. In 30% of the cases these diseases are genetically predetermined. Our study was aimed at finding tactics of treatment of patients depending on genetically predetermined states and metabolism intensity. Method : We examined 12 patients aged 36-72 y.o. (average age 48 ± 3.26 y.o.). The genetic analysis comprised tests for inherited diseases, genetically predetermined diseases, reaction on medical preparations, as well as metabolism assessment. Results : The results of our study showed that all the patients had risk of cardio-vascular and autoimmune diseases, all of them were predisposed to diabetes mellitus Type 2. After

conduction of clinical laboratory tests we divided patients in three groups depending on the severity of the risk of cardiovascular diseases development associated with atherosclerosis: group of high risk, group of moderate risk, group of low risk. The choice of preparations for correction of blood pressure was made basing on the genetic tests results: patients got sartans, beta-adrenergic blocking agents or ACE inhibitors. None of the patients suffered from any side effect of the treatment requiring its cessation. After treatment all patients reached target blood pressure indices. Conclusion : Thus, detection of the genetically predetermined states allows to start preventive treatment at the pre-clinical stage, to find proper therapeutic scheme of treatment taking into account the genetically predetermined sensitivity to medical preparations, as well as to adjust a dose of preparations according to the intensity of the metabolism. Keywords : genetic tests, genetically predetermined diseases, cardiovascular diseases

SS26 423-C-7

THE EFFECT OF PINEAL GLAND PEPTIDES ON AGING PACE

Sergey KONOVALOV (*Saint Petersburg Institute of Bioregulation and Gerontology, Russia*)

Introduction : Institute of Bioregulation and Gerontology The pineal gland and its hormone melatonin play a leading role in the aging of the organism. About 90% of melatonin are secreted with urine in the form of 6-oxysulfatamelatonin (6-COM), while 6-COM level correlates with level of melatonin in the blood at the time of urine samples collection. That is why 6-COM is often used for assessment of melatonin level. Melatonin is considered to be one of the most reliable marker of accelerated aging. Method : We studied the effect of peptides of the pineal gland on the level of melatonin in 254 patients aged 50+ suffering from neurodegenerative diseases. All patients were subjected to the administration of the peptide of pineal gland Endoluten (1 tablet twice a day for 20 days). Results : The primary assessment of the 6-COM level revealed that in 84% of the patients level of melatonin was lower than age norm, and only in 16% of the cases the level of 6-COM was within age norm. Application of Endoluten contributed to the increase of melatonin level in all patients with low initial indices. Moreover in 45% of the cases 6-COM level reached age norm. In patients with normal initial level of melatonin we didn't reveal any reliable changes of this index. Conclusion : The results of our studies revealed strong neuroprotective and antioxidant effect of Endoluten in all patients. Keywords : pineal gland peptides, melatonin.

SS26 423-C-8

A NEW METHOD OF PEPTIDE GEROPROTECTORS ADMINISTRATION - NEW APPROACH IN ANTI-AGING MEDICINE

Trofimova SVETLANA¹, Andrey SOROKIN², Alexandr TROFIMOV³ (*1. Russian Society of Anti-aging Medicine, Russia; 2. Academy of Scientific Beauty, Russia; 3. Saint Petersburg Institute of Bioregulation and Gerontology, Russia*)

Introduction : The skin is a complex organ that performs many functions - it protects the body from external factors, it is involved in the processes of respiration, excretion, thermoregulation, it plays a vital role in regulating metabolism of the body. Unlike cosmetic surgery or esthetic medicine, which take care only of external effects, geroprotectors have a rejuvenating effect not only on the skin but on the entire body, slowing down the process of aging. Method : Peptide geroprotectors influencing the expression of genes stimulate protein synthesis in cells and regulate the functional activity of human organs,

slowing down the aging process. Basing on this we've developed a special treatment program comprising application of the cream Vivax Biologic with a cocktail of peptides. Using the TDES electroporation device we administered peptide bioregulators noninvasively through derma. Such method of application has not only local but also an overall effect that contributes to the normalization of the anti-radical activity of the blood and the immune status of the patients. Results : Transdermal application of peptides triggered an activation of the immune cells of the skin, improving micro circulation and thermoregulation as well as antioxidant system of the epidermis. The recovery of neuro-immuno-endocrine system of the skin leads to the restoration of its functions, activation of lipolysis and synthesis of collagen and elastin within the molecular skeleton of the skin cells. Conclusion : Thus, the distinctive feature of the bioregulating therapy is its physiological effect on metabolic processes, not only of the skin, but of the body as a whole. Keywords : transdermal electroporation, peptide geroprotectors

SS26 423-C-9
ANTI-AGING TECHNOLOGIES FOR PROFESSIONAL ATHLETES

Vladimir KUDRYAVTSEV, Vladimir OSTROUKOV (*Centre of the New Medical Technologies, Russia*)

Introduction : Our research project was aimed at developing a method for bioregulation of the organism functions in professional athletes specializing in track and field athletics. Method : We've conducted clinical studies in 25 professional sportsmen specializing in athletics. Depending on the results of the complex medical examination all the sportsmen were divided into 2 groups. The first group was administered with physiologically active substances ? peptides in the form of biologically active food supplements (Crystagen, Vesugen) for immune system restoration, the second one - peptides in the form of biologically active food supplements (Pinealon, Vesugen) for antioxidant system restoration. After the treatment course all the athletes were examined using standard methods of examination. Results : The conducted studies revealed high clinical effectiveness of the studied peptide bioregulators (Vesugen, Pinealon, Crystagen). Administration of the complex of peptide bioregulators following individual schemes for each patient taking into account the general state of their health and psychological resistance allowed to lower the ARD and flu morbidity during the seasonal epidemic, to enhance physiologic reserve capacity, during the training period it contributed to the enhancement of physical activity and psychological resistance, during the competitions it contributed to the general stamina and physical working capacity, during the recovery period it contributed to faster recovery of physical and psychological reserves of the athletes. Conclusion : The results of the study show the effectiveness of the complex of peptide bioregulators when used to enhance biologic reserves of the organism in professional athletes. Keywords : anti-aging technologies, professional athletes, peptide bioregulators

SS26 423-C-10
THE EFFECTS OF PEPTIDE ANTI-OXIDANT COMPLEX ON THE BIOLOGICAL AGING OF THE SKIN

Irina BORZOVA (*Medical Centre of Therapeutic Cosmetology, Russia*)

Introduction : It is almost impossible to stop biologic aging of the skin, nevertheless it is possible to slow down this process. Method : We studied geroprotective activity of the peptide-antioxidant complex containing tripeptide Lys-Glu-Asp and ginseng extract. Our previous experimental studies on the model of mechanical and thermic damages

of the skin of experimental animals showed that geroprotective activity of this complex is based on its ability to normalize indices of the antioxidant defence. It was revealed that peptide-antioxidant complex contributes to the 1,5-fold acceleration of the epithelialization of the damaged surface of the animal skin if compared to the control. Results: Moreover we've registered a significant regenerative and antioxidant effect of peptide-antioxidant complex. Application of this complex in the area near the eyes in women contributed to a decrease in the number of wrinkles up to 60% already in 4 hours after application. Moreover we've registered normalization of the antioxidant status of the organism in patients aged 50+ after application of the peptide-antioxidant complex. Conclusion : Thus, the latest generation of the skin care products should not be considered as cosmetic products only, as they contain bioactive substances, exerting medicinal and preventive effect. Keywords : biologic aging of the skin, peptide-antioxidant complex

SS26 424-R
MEASURING AND TRANSLATING THE MECHANISMS OF FALLS IN OLDER ADULTS IN LONG-TERM CARE THROUGH VIDEO CAPTURE

SS26 424-R-1
VIDEO-BASED CASE STUDIES OF BEHAVIOURS LEADING TO FALLS IN OLDER ADULTS IN LONG-TERM CARE
Ryan WOOLRYCH, Andrew SIXSMITH (*Gerontology, Simon Fraser University, Canada*)

Introduction : Falls in long-term care represent a significant burden, both in terms of the cost of hospitalisation/post-fall care and the compromised independence and well-being of the individual. Despite this, our understanding of falls in long-term care is undermined by the absence of effective reporting procedures and the lack of real-time data of fall incidents. Method : This paper provides feedback on completed case studies of fall incidents occurring in long-term care care facilities in Metro Vancouver. This involves the collection of primary and secondary data, including video observations, fall incident videos, review of fall incident reports, interviews and focus groups with care aides and nurses (using a stimulated recall method), interviews with family members and the analysis of resident casenotes. The data is analysed within an ecological framework to examine the contributory factors of the fall incident. Results : Falls are the result of a complex interplay of social, behavioural and environmental factors across the personal, interpersonal and organisational level. Video data provides a powerful tool for helping to identify those factors, addressing some of the limitations with existing reporting mechanisms. Conclusion : The strength of developing case studies within an ecological framework eliminates the perception that any one factor alone is a risk factor in falls. This provides a key element in designing effective interventions for falls prevention across all levels of the ecological context. Video has a central role to play in the development of this understanding, yet also raises a number of ethical and practical issues that need to be considered further. Keywords : Falls, long-term care, video capture

SS26 424-R-2
A SYSTEMS APPROACH TO FALL SCENE INVESTIGATIONS IN LONG TERM CARE AND BENEFITS OF VIDEO FOOTAGE

Aleksandra ZECEVIC¹, Ryan WOOLRYCH², Andrew SIXSMITH², Stephen ROBINOVITCH³, Fabio FELDMAN⁴ (*1. Faculty of Health Sciences, Western University, Canada; 2. SFU Gerontology Research Centre, Simon Fraser University, Canada; 3. Biomedical Physiology and Kinesiology, Simon Fraser University, Canada; 4. Seniors Fall*)

and Injury Prevention Older Adult Program, Fraser Health Authority, Canada)

Introduction : Falls and injury due to falls in long term care (LTC) facilities are frequent and costly. Although intrinsic and extrinsic risk factors for falls in LTC are well known, the causes and circumstances of these adverse events are unexplored. Technology for Injury Prevention in Seniors (TIPS) project utilizes surveillance video as a part of dataset on circumstances of real-life falls in older adults in LTC. The purpose of this pilot project was to examine utility of video footage for in-depth system-wide investigations of causes and contributing factors to falls in LTC. **Method :** Following a case study design, an adverse event investigative and analysis tool called Systemic Falls investigative Method (SFIM) was used in conjunction with video footage to conduct comprehensive investigations of two falls in a LTC. **Results :** Real-life videos of falls are a useful data source to determine actions of people at the time of the event, to re-create accident scenario, to corroborate and triangulate with other data sources, to improve recall of the adverse event participants, and to establish potential divergence from standard protocols and procedures. **Conclusion :** Where available and ethically usable, video footage of real-life falls should be used in conjunction with system-based fall investigation tools such as SFIM, to identify both active and latent contributing factors to occurrence of falls. Video footage can also be combined with other data sources to create 3D animations of falls for simulation and education purposes. **Keywords :** falls investigations, long term care, video

SS26 424-R-3

KINEMATIC ANALYSIS OF FALL SEVERITY IN VIDEO-CAPTURED FALLS IN OLDER ADULTS IN LONG-TERM CARE

Woochol Joseph CHOI¹, Stephen ROBINOVITCH² (1. *Biomedical Physiology and Kinesiology, Simon Fraser University, Canada;* 2. *Biomedical Physiology and Kinesiology, School of Engineering Science, Simon Fraser University, Canada*)

Introduction : Falls are the number one cause of injuries in older adults, including 90% of hip fractures and 60% of head injuries. Risk for such injuries depends largely on the forces applied to the body during impact, which depend, in turn, on the impact velocity of body segments at landing. We analyzed video footage of real-life falls in older adults to determine impact velocities of the hip and head. **Method :** From a library of falls captured with surveillance cameras in long-term care (Robinovitch et al, 2012), we selected 12 falls. We digitized hip and head landmarks from fall initiation to impact, and reconstructed these landmarks using a 2-dimensional direct linear transformation algorithm, using calibration data specific to the fall orientation. We differentiated these data to estimate impact velocities. In lab-based falling experiments, our technique provided less than 10% error over a 30 to 150° range of falling directions. **Results :** The hip and head impact velocities averaged 2.9 ± 0.9 and 3.0 ± 1.0 m/s, respectively. **Conclusion :** Given the increased falling distance of the head, the impact velocity of the head was surprisingly similar to that of the hip. This likely reflects the protective effect of initial impacts to the pelvis, trunk, and/or outstretched arms, and possibly activation of neck muscles. Also, the hip impact velocities are remarkably similar to those observed in lab-based falling experiments with young adults (3.0 ± 1.0 m/s; Feldman et al., 2007). This reinforces confidence in use of these estimates in the design of helmets, hip protectors and compliant flooring. **Keywords :** Falls, Injury prevention, Hip fracture, Older adults, Head injury, Biomechanics.

SS26 424-R-4

SUPPORTING KNOWLEDGE FOR INJURY PREVENTION IN LONG-TERM CARE

Joanie SIMS-GOULD¹, Laura DILLEY², Alexandra ZECEVIC³, Vicky SCOTT⁴, Fabio FELDMAN⁵, Heather MCKAY¹, Stephen ROBINOVITCH⁶ (1. *Faculty of Medicine, University of British Columbia, Canada;* 2. *Education, Simon Fraser University, Canada;* 3. *Health Sciences, University of Western Ontario, Canada;* 4. *Injury Prevention, British Columbia Ministry of Health, Canada;* 5. *Falls and Injury Prevention, Fraser Health Authority, Canada;* 6. *Biomedical Physiology and Kinesiology, Simon Fraser University, Canada*)

Introduction : Falls are the number-one cause of injury in older adults, and are especially common in the long-term care (LTC) environment. In this presentation we highlight an end-of-grant knowledge translation project that involves the development and dissemination of a video-based training tool addressing the cause and prevention of falls in seniors. **Method :** Guided by principles of knowledge translation and adult learning theory we engaged stakeholders in the research process and in the development of a video-based training tool. We included a range of stakeholders including nurses, care aides, and physical therapists who work with older adults in LTC. A unique and powerful aspect of the tool is the inclusion of video footage of real-life falls (collected under our operating grant funded by the Canadian Institutes of Health Research) in a set of 'case studies'. **Results :** The 15 minute video-based training tool uses case studies to focus on current knowledge and best practices related to issue such as fall risk screening, mobility and balance assessment, exercise, fall-related injuries (especially hip fracture and head trauma), environmental hazards, and hip protectors. **Conclusion :** In conclusion, we describe the steps we undertook to engage stakeholders in the development and design of this unique KTE tool. We also highlight our dissemination and evaluation plan. **Keywords :** Long term care, knowledge translation, staff education

SS26 425-C

FRAILTY AS DEFICIT ACCUMULATION: SCALING FROM CELL TO SOCIETY

SS26 425-C-1

INTRODUCTION

Kenneth ROCKWOOD (*Department of Medicine, Dalhousie University, Canada*)

Introduction : The purpose of this symposium is to review how subcellular deficit accumulation corresponds to macroscopically observable health deficits, and how these vary across countries. **Method :** Three well-published speakers will address subcellular (Howlett), clinical (Hubbard) and country-level (Theou) deficit accumulation. A fourth presentation (Mitnitski) will show how each can be understood using readily comprehensible mathematical principles to account for environmental-organism interactions. The organizer (Rockwood) will provide a very brief concluding synthesis, emphasizing implications for science and practice. Each participant is a leader in the aspect of deficit accumulation on which they will present. **Results :** The symposium will present data from more than dozen countries, illustrating how widely generalizable the approach is, and how it can be readily applied in most existing health datasets. **Conclusion :** New results in relation to the determinants of deficit accumulation will be shown, and recent advances in understanding how deficit originate will be of wide interest. **Keywords :** frailty, deficit accumulation, aging, cellular, population health, clinical

SS26 425-C-2

A FRAILTY INDEX BASED ON CLINICAL MEASURES PREDICTS BEHAVIOURAL COGNITIVE AND DETERIORATION IN AGING MICE

Jocelyne C. WHITEHEAD¹, Barbara A. HILDEBRAND², Robert A. ROSE³, Kenneth ROCKWOOD⁴, Susan E. HOWLETT¹ (1. Pharmacology, Dalhousie University, Canada; 2. Carleton Animal Care Facility, Dalhousie University, Canada; 3. Physiology and Biophysics, Dalhousie University, Canada; 4. Medicine, Dalhousie University, Canada)

Introduction : We have shown that frailty can be quantified in aging mice with a frailty index (FI), in which an individual animal's deficits in health are counted and divided by the total number of items measured. Our objectives were: 1) to evaluate frailty in mice with an FI based on clinical assessment; and 2) to determine whether a high FI predicted deterioration in cognitive and behavioural function. **Method :** Frailty was quantified in C57BL/6J mice (6-28 mos) with a clinical FI based on 31 physical signs, diseases etc. Behaviour was assessed in an open field (EthoVision) and cognitive function was evaluated with a Barnes maze. **Results :** Results showed that the FI increased with age from 0.014 ± 0.006 to 0.382 ± 0.047 in 6 and 28 month-old mice, respectively ($p=0.008$; $n=14$). A high FI was correlated with a decrease in maximal distance travelled (within 5 mins; $r^2=0.71$) and an increase grooming duration ($r^2=0.40$). A high FI also was linked to a decrease in number of times animals crossed the centre of the field ($r^2=0.45$), an indication of anxiety. Barnes maze studies showed that a high FI was correlated with a reduction in time spent in the correct quadrant ($r^2=0.78$) and an increase in the number of times animals entered an incorrect hole ($r^2=0.54$). **Conclusion :** These results demonstrate that a FI based on a simple clinical assessment tool can be used to evaluate frailty in aging mice and suggest that deterioration in behavioural and cognitive function is more prominent in animals with a high FI. **Keywords :** frailty, aging, deficit

SS26 425-C-3

CLINICAL MEASUREMENT OF FRAILTY

Ruth Eleanor HUBBARD (Centre for Research in Geriatric Medicine, The University of Queensland, Australia)

Introduction : Physicians involved in the care of medical in-patients, irrespective of their sub-specialty area, will be responsible for the management of a significant number of older adults with complex care needs and multiple co-morbidities. These patients are vulnerable to poor outcomes, including falls, institutionalisation and death: they are frail. **Method :** In this presentation, the development of frailty as a concept is reviewed. Different approaches to the measurement of frailty are described, with particular emphasis on their potential clinical utility. **Results :** There are 3 main approaches to the measurement of frailty: as a clinical syndrome or phenotype, subjective opinion and the multidimensional risk state or deficit accumulation model. The most well-known and widely used phenotype is coherent and reproducible but relies on performance based tests which are not feasible for the most vulnerable older inpatients. Subjective opinion measures have strong face validity but their reliance on judgement limits their generalizability. On the other hand, the accumulation of deficits can be captured through information collected as part of comprehensive geriatric assessment - an FI-CGA. This measure is feasible for all inpatients, can predict rehabilitation potential and stratifies patients into groups with different risk states. **Conclusion :** The precise quantification of health status afforded by the FI-CGA may help us understand why our interventions work and for whom they are most successful. This may augment clinical judgement

in the risk stratification of vulnerable older people, improving the effectiveness of care in the acute sector. **Keywords :** frailty; inpatients; clinical

SS26 425-C-4

TRANS-NATIONAL VARIABILITY IN FRAILTY

Olga THEOU, Thomas D. BROTHERS, Michael R. ROCKWOOD, Arnold MITNITSKI, Kenneth ROCKWOOD (Geriatric Medicine, Dalhousie University, Canada)

Introduction : On an individual level, frailty is generally influenced by socioeconomic factors. On a population level, frailty may be related to per capita wealth. The purpose of this study was to examine the association of frailty with national economic indicators. **Method :** 37,546 individuals, aged 50+ years, residing in 15 countries (Austria, Belgium, Czech Republic, Denmark, France, Germany, Greece, Ireland, Israel, Italy, Netherlands, Poland, Spain, Sweden, Switzerland) participated in baseline interviews of the Survey of Health, Ageing and Retirement in Europe. A frailty index (FI) was constructed based on the accumulation of deficits approach from 70 health measures which were age-related and associated with adverse outcomes. Frail individuals were defined as those with an FI score of 0.25 or greater, and the fittest individuals as those with an FI score of 0.03 or less. **Results :** Across countries the FI score increased with age and was higher in women. Mean FI score ranged from 0.11 (Switzerland) to 0.24 (Poland). GDP ($r=-0.79$, $p<0.001$) and health care expenditure ($r=-0.63$, $p<0.05$) were negatively correlated with mean FI score. Higher income countries had a lower prevalence of frailty (16.1% vs 27.6%) and a higher proportion of adults classified as the fittest (7.2% vs 4%) compared to the lower income countries. **Conclusion :** There is a strong relationship between national economic indicators and a country's level of frailty in adults aged 50+ years. The least wealthy countries had the lowest health care spending and demonstrated the highest levels of frailty and lowest levels of fitness among middle-aged and older adults. **Keywords :** frailty, deficit accumulation, population health, aging

SS26 425-C-5

THE ORIGIN OF DEFICIT ACCUMULATION

Arnold MITNITSKI (Medicine, Dalhousie University, Canada)

Introduction : The frailty index (FI) based on the accumulation of health deficits (broadly defined) is known to be a valid characteristic of health in individuals and populations. In the number of studies, it showed strong association with adverse outcomes independently on chronological age. Despite its great utility in outcomes prediction little is known about the origin of the FI. Here we present a mathematical model to demonstrate that the properties of the FI are originated in the interaction of the organism with environment. **Method :** To represent how deficits accumulate over time we considered a stochastic dynamics model based on the organism-environment interaction. The environmental challenges are represented by a stochastic process with intensity λ ; the ability of the organism to recover after the damage is characterized by the average recovery time $1/\mu$. A similar model is widely used in the queuing processes (operation research). The model behavior is compared with the observational patterns of deficit accumulation (age-specific trajectories and their statistical distributions). **Results :** The average number of deficits is the product of the intensity of the environmental stresses to the average recovery time (λ/μ). This ratio increases when recovery time increases. The distribution of the number of deficits changes from extremely asymmetrical at younger ages (i.e., most people have little problems) to a skewed bell-shaped distributions in the advanced ages. Both mean

trajectories of the FI and its distributions closely resemble observational patterns. Conclusion : The FI based on deficit accumulation approach can be understood in terms of measurable organism and environmental characteristics. Keywords : aging, frailty, environment

SS26 426-C

ASSESSMENT AND TREATMENT OF SLEEP DISORDERS IN THE OLDER ADULT

SS26 426-C-1

HYPERSOMNIA(EXCESSIVE DAYTIME SLEEPINESS) IN THE OLDER ADULT: ASSESSMENT AND TREATMENT

Seung Chul HONG (*Department of Psychiatry, The Catholic University of Korea, Korea*)

Introduction : The high frequency of sleep complaints, especially excessive daytime sleepiness (EDS), in aged individuals may be related to the physiologic sleep changes of normal aging as well as to concomitant medical, psychiatric, neurologic, and other disorders that are prevalent in this group. Method : The prevalence of many sleep disease related with EDS are known to increase with age. EDS is often associated with fragmentation of nocturnal sleep which may have been due to sleep-disordered breathing and periodic leg movements in sleep (PLMS). Other factors are changes in the circadian rhythms of temperature, alertness and sleepiness and social time cues. Snoring is a common sleep-related respiratory disorder and OSA, its more severe feature, is increasingly seen among elderly people, too. Results : OSA is significantly associated with cardio- and cerebro-vascular disease, metabolic syndrome and cognitive impairment. An epidemiologic study ages 65 years observed 33% of men and 19% of women with snoring and 13% of men and 4% of women with observed apnea. In the study by Kripke and coworkers, 20-30% of subjects 65 years and older had PLMS. Narcolepsy, a disease of EDS, is usually beginning at the early age. However its onset could be any age and a lifelong condition. Conclusion : Clinical assessment and treatment of EDS of elderly patients is needed to improve their sleep and general medical condition. Keywords : EDS, Elderly, OSA, PLMS, Narcolepsy

SS26 426-C-2

CHRONOBIOLOGY AND INSOMNIA IN LATE LIFE: IMPLICATIONS FOR TREATMENT

Jung Hie LEE (*Psychiatry, Kangwon National University Hospital, Korea*)

Introduction : Aging is often associated with sleep complaints, including earlier awakening and decreased sleep consolidation at the end of the night. A change in the circadian timing system may contribute to age-related changes in sleep. It has been reported that the melatonin rhythm occurs later with respect to sleep in healthy older subjects compared to young subjects. We aimed to compare the sleep timing and melatonin rhythm between the older adults with insomnia and those without insomnia. Method : Thirty subjects with sleep complaints and 21 subjects without sleep complaints (Age: 56-79 years) were included. The circadian phase was assessed by dim light melatonin onset (DLMO), relative dim light melatonin onset (DLMO_{n25%}) and offset, and the fitted peak of melatonin. The phase angle between the habitual bedtime and circadian phase was also calculated. Results : There was no significant difference in the above melatonin phases and phase angles between the two groups. The amplitudes of 24 hour rhythms of core body temperature (CBT) and melatonin were lower in older subjects with sleep complaints

compared to those without sleep complaints ($p < 0.05$). Among 51 subjects, all measures of melatonin phase significantly predicted habitual bedtime and waketime ($p < 0.0001$). Conclusion : There was no change in the phase angle between the melatonin rhythm and habitual sleep timing in older subjects with sleep complaints. The alterations in self-selected sleep timing with respect to the timing of underlying circadian system may not contribute to sleep disruption. However, melatonin agents are recommended since lower melatonin secretion could impair sleep maintenance in older adults. Keywords : Insomnia, Melatonin, Phase angle

SS26 426-C-3

DIFFERENTIAL DIAGNOSIS AND TAILORING COGNITIVE-BEHAVIORAL THERAPY FOR INSOMNIA FOR THE OLDER ADULT

Sooyeon SUH (*Institute for Human Genomic Study, Korea*)

Introduction : Despite the impact that sleep disturbance has on older adults, they are often inadequately addressed in clinical settings. Identifying treatment components that are most helpful to older adults for insomnia treatment will be helpful for more effective treatment. Method : One hundred older adults 65 and older (mean 72.2 ± 6.2 , 47% male) received group cognitive-behavioral therapy for insomnia (CBTI) in a sleep medicine clinic. Pre- and post-treatment measures included the following: Insomnia Severity Index (ISI), Beck Depression Inventory (BDI), and Dysfunctional Beliefs and Attitudes about Sleep Scale-10 item version (DBAS-10). All patients completed a questionnaire post-treatment listing 24 therapeutic elements asking patients to rank how helpful each component was using a scale of 0 - 3. The components were organized by four conceptual therapeutic elements: sleep hygiene (5 items; reducing caffeine), behavioral (8 items; sleep restriction, anchoring wake-up time), cognitive components (5 items; accepting that I may not get as much sleep as I want), and non-specific therapeutic elements (6 items; receiving support from other group members, trusting treatment provider). Results : Paired t-test analyses revealed a significant reduction from pre- to post-CBTI in insomnia severity ($t = 4.06$, $p = 0.004$) and depression ($t = 8.33$, $p < 0.001$). Older adults identified the behavioral components as the most helpful ($X = 2.67$), followed by non-specific therapeutic elements ($X = 2.41$), cognitive components ($X = 2.07$), and sleep hygiene ($X = 1.87$). Conclusion : This suggests that older adults can benefit from group CBTI and can expect reduction in insomnia symptoms and depression. Future CBTI individualized for older adults should focus on capitalizing implementation of behavioral components. Keywords : insomnia, cognitive-behavioral therapy for insomnia, sleep disorder

SS26 427-C

HEALTHY AGEING AND LONGEVITY IN HUNGARY

SS26 427-C-1

WHY RESEARCH INTO HEALTHY AGEING AND LONGEVITY HAS A GREAT IMPORTANCE IN THE 21ST CENTURY (PRELIMINARY STUDIES IN THE 20TH CENTURY IN HUNGARY)

Karolina KOSA¹, Roza PROF. ADANY¹, Sandor Gyula IMRE² (*1. Department of Preventive Medicine, FPH, MHSC, University of Debrecen, Hungary; 2. 1st Department of Internal Medicine, (MHSC), University of Debrecen, Hungary*)

Introduction : One third of the population of the EU is projected to be aged 65 or over by 2060. Longer lives should be considered a major achievement of modern societies which allow the unfolding of human

capabilities and extend self-actualization, but at present the ageing of the population receives attention primarily because of the challenges it presents for the economy and welfare systems as it is reflected in the 2012 Ageing Report of the EU. Method : The joint actions of the European Innovation Partnership on Active and Healthy Ageing reflect the same concern addressing medication adherence, the prevention of falls, integrated care models, ICT independent living solutions - areas of fear and grief. The authors hereby propose an alternative, salutogenic approach with an emphasis on the vast possibilities of healthy ageing even after less than optimal health in younger years. Results : In order to build a comprehensive and coordinated policy for ageing, Whitehead's action spectrum of inequities of health could be used as a framework. The measurement and recognition of ageing have taken place, however, awareness raising has so far put a greater emphasis on fear and grief than on the positive aspects of getting to ripe age. Conclusion : To help salutogenic policy development, much wider and more positive awareness raising should be carried out by social marketing to introduce the growing number of old people as role models who demonstrated remarkable mental and physical performances such as Ernestine Shepherd or Oscar Niemeyer. Keywords : healthy ageing strategy

SS26 427-C-2

THE HAEMORHEOLOGICAL AND GENERAL LABORATORY STATUS IN OLDEST OLD RESIDENTS

Agnes KOVACS¹, Zita SZIKSZAI², Gyorgy PROF. PARAGH¹, Sandor Gyula IMRE¹ (1. 1st Department of Internal Medicine MHSC, University of Debrecen, Hungary; 2. Department of Ion Deam Physics, Institute of Nuclear Research of the Hungarian Academy of Sciences, Hungary)

Introduction : Among the elderly population the number and proportion of the oldest-old (years or older) will increase most significantly in the near future. Since there was no similar study on this target group in Hungary, we decided to make a systemic analysis of the social, clinical and biological conditions of them under this title: Debrecen Longevity Study. Debrecen is the second largest city in the country, and the oldest old residents represent 0.4 % of the total population (834 residents). Method : The probands were examined in their homes with an interview, based on a questionnaire. After the interview medical and laboratory investigation were performed in order to evaluate the general health status of the subjects. We examined 52 routine laboratory parameters. Since age-specific reference values are not available for the oldest-old persons our results could be compared only to the general, adult reference values. Results: Blood samples were obtained from 304 persons. Most of the investigated parameters were in the normal range. The alterations were not extreme, but they were statistically significant. We compared these results with our earlier laboratory screening test of Debrecen residents between 60-74 and 75-89 years respectively. Thus we had the opportunity to compare three age groups. We have experienced significant decreasing trends at cholesterol and triglyceride levels, while there is an increasing trend at HDL-cholesterol level. Conclusion: During aging the population becomes increasingly selected, namely over 90 years only the 'survivors' are alive. As the proportion of 'survivors' increases, some parameters stop worsening or even show some improvement. Keywords : hematology, longevity

SS26 427-C-3

THE ASSOCIATION OF HEALTH STATUS WITH DIETARY PATTERN AND PHYSICAL ACTIVITY IN THE OLDEST OLD GROUPS LIVING IN DEBRECEN, THE EASTERN PART OF HUNGARY

Hyun-Sang SHIN¹, Gyorgy PROF. PARAGH¹, Agnes KOVACS², Zita SZIKSZAI³, Sandor Gyula IMRE² (1. 1st Department of Internal Medicine, University of Debrecen, Hungary; 2. 1st Department of Internal Medicine MHSC, University of Debrecen, Hungary; 3. Department of Ion Deam Physics, Institute of Nuclear Research of the Hungarian Academy of Sciences, Hungary)

Introduction : The association between health conditions and physical activity and dietary pattern in the oldest old groups (aged 90 and over) living in Debrecen, the second largest town of Hungary. Method : 228 subjects (169 women and 59 men) were randomly selected from the total oldest-old population and given a questionnaire which contained 159 questions about their health status, physical activity and dietary pattern. The mini-mental state examination (MMSE) was used to examine their cognitive functions. Medical and laboratory investigations were performed to evaluate the general health status of the subjects. Results : Based on a self-evaluation, 67% of them had a good, very good or excellent health condition. 52.6% and 46.2% of the subjects consumed fruit and butter/margarine daily, respectively. 50% consumed vegetables and 65.4% consumed fowls several times a week. 36% do gymnastics regularly with 69.5% undertaking this daily. 50.5% are fully mobile. 40.5% are mobile, but have limited mobility are confined to their residence, while 9% are bedridden. Conclusion : Significant correlations were found between the laboratory parameters (RBC, Hgb, Hct, We, HDL-cholesterol, CCL), the cognitive functions (MMSE) and the physical activity of oldest old residents. Our findings suggest that physical activity has significant impact on preservation of health, leading to increased life expectancy. Keywords: longevity, physical activity

SS26 427-C-4

ANTIOXIDANT DEFENCE AND FREE RADICAL REACTIONS OVER 90 YEARS OF AGE

Sandor Gyula IMRE¹, Agnes KOVACS¹, Zsuzsanna VARGA¹, Zita SZIKSZAI², Gyorgy PROF. PARAGH³ (1. 1st Department of Internal Medicine MHSC, University of Debrecen, Hungary; 2. Department of Ion Deam Physics, Institute of Nuclear Research of the Hungarian Academy of Sciences, Hungary; 3. 1st Department of Internal Medicine, University of Debrecen, Hungary)

Introduction : It is well known that the toxic effects of oxygen free radicals contribute not only to the incidence of age-associated diseases, but also to the aging as a biological phenomenon. To study the damaging effect of oxygen free radicals and the efficiency of antioxidant defence in oldest old (defined as age 90 years or older) residents, three parameters were examined: plasma vitamin E and lipidperoxid contents as well as the carbonil contents of plasma proteins. Method : The laboratory results of 185 persons above 90 years old have been presented. For healthy controls in the evaluation of vitamin E contents 100 persons with an average age of 37.5 +/- 9.9 years have been used. For healthy controls in the evaluation of lipidperoxid and carbonil contents three age groups, 20 - 39 years of age (60 persons), 40 - 59 years of age (40 persons) and 60 - 80 years of age (40 persons) have been used. Results : Significantly higher levels of alfa- and gamma-tocopherol were observed in oldest old residents. The trend of significant increase was observed in the contents of lipidperoxid and carbonil as a function of age in healthy controls, but the increase was not significant over 80 years of age. Conclusion : It could be concluded that the oldest old residents had a native resistance to the damaging effect of oxygen free radicals. Keywords : longevity, antioxidant defence

Thursday June 27th

SS27 124-R

THE AGING KOREAN TIGER: ANALYZING RETIREMENT POLICY CHALLENGES

SS27 124-R-1

RETIREMENT AND OLD AGE POVERTY IN KOREA

Jiyeun CHANG (*Korea Labor Institute, Korea*)

Introduction : Early retirement from main job is prevalent although the public pension scheme has not matured to support older people in Korea. Retired elderly people pass through miscellaneous jobs and the risks of poverty is quite high, although the level of labor force participation is high among older people. Method : Multinomial Logit Analyses using 'Korea Welfare Panel Study' Results : In this paper, we reveal that income instability and poverty of older people come from the precariousness of their mid-age employment statuses. The analyses suggest that the current Korean pattern of slower and later retirement is primarily a cohort phenomenon, with this pattern most prevalent among the oldest cohorts, and least prevalent among the youngest cohorts, of Korean men. The young olds tend to experience employment instability with higher rates than the old olds. Conclusion: Employment instability and informality in their prime age results in low pension income, and eventually increase the risk of old age poverty. Keywords : Retirement, Poverty

SS27 124-R-2

PROSPECTS OF REFORMING CONTRACTUAL MANDATORY RETIREMENT IN KOREA

Thomas KLASSEN (*Department of Political Science, York University, Toronto, CANADA, Canada*)

Introduction : The distinguishing feature for many workers in Korea is contractual?and often involuntary, retirement from one's main job at a young age, followed by a second career in self-employment or contract work. Workers in some white sector occupations and the sectors have coined the word "sa-o-jeong," which means age 45 is the de facto retirement age for them. Method : An analysis of current demographic, labour market, political and broader societal developments shows that pressure is mounting for policy reform. Results : A significant increase in the retirement age, and its ultimate abolition, is unlikely to occur naturally because business, labour and government are unable to find a compromise. Private interests, especially employers, will always prefer contractual mandatory retirement, because its benefits are retained by the firm, whereas its substantial costs are borne by the state and by individuals. Conclusion : The circumstances that have historically supported early contractual mandatory retirement in Korea, and some of its neighbours especially Japan, by maximizing its benefits and mitigating its problems, have changed in the past decade. Nevertheless, the policy reforms required to adapt to the new conditions remain elusive, creating increasingly dysfunctional conditions for individuals, employers and the government. Keywords : retirement, policy, Korea

SS27 124-R-3

CAN WOMEN EVER RETIRE? WORK AND RETIREMENT DYNAMICS IN A FAMILY CENTRED CULTURE

Yunjeong YANG¹, Soondool CHUNG² (*1. International Development Studies, Hankuk University of Foreign Studies, Korea; 2. Graduate School of Social Welfare, Ewha Womans University, Korea*)

Introduction : Where caring remains predominantly a woman's job, older women are often requested to provide unpaid care labour,

rendering their retirement, if ever from paid work, meaningless in its literal meaning of 'rest from work'. Method : From qualitative interviews with retired and healthy (relatively younger old) women in Korea, this study shows that women, regardless of their paid work experience, can 'retire in peace', i.e. even from family caring work, only when they judge themselves as having fulfilled their 'parental duty'. Results : Thus, retirement for women is intimately linked to family dynamics, which confirms the key point relating to women and retirement from earlier studies. A distinctive finding from the current study is that, in Korea, it is related more to 'parental duty' accomplishment for children, rather than to couple relationships as often emphasised from Western cases. Conclusion : The study concludes, though not newly, that only a new paradigm of 'universal caregiver model', can emancipate women, both young and old, from duties from work, both paid and unpaid. Keywords : Women, retirement, Korea

SS27 302-S

DIGITAL COMMUNICATION AMONG SENIOR GENERATION THE SENIORS' LIFESTYLE ADAPTATION TO DIGITALIZED CULTURES

SS27 302-S-1

DIGITAL TECHNOLOGY FOR HEALTH PROMOTION AMONG SENIORS IN KOREA

So-Young CHO (*Graduate School of Social Welfare, Kangnam University, Korea*)

Introduction : This study was to find if digital communication skills could be useful for seniors to solve health promotion needs. Entering 2000, numerous ITC training programs were provided for seniors in Korea, and shown the ITC trainees were motivated to find information collection and to share communication. The author analyzed if the ITC training networks and the digital communication skills could be applicable for health promotion programs(HPP), in reflection to Health Promotion Policy in Korea. Method : The ITC training programs at Senior-Welfare Centers and at Senior-Community Centers, which were called 'Life-Up' and sponsored by the Micro-Soft during 2004~2009 were analyzed with basis of survey with the program trainees and managers. 124 Centers in 10 regions were provided the Life-Up programs. 498 seniors of the trainees were selected and 20 managers in Metropolitan area were interviewed. Major health problems and behaviors of Senior-Welfare Center admittants were reflected for the analysis of health promotion needs and the ITC application. Results : Participants were composed females (62.2%) and males(37.8%), and shown 56.5% of trainees had multiple experiences of the ITC learnings. The ITC training programs were 'very satisfied' with 4.29 scores out of 5.0. key factors for success were shortening accessibility to the Centers, distance(42.4%); positive attitude using on-line communication(71%); and accustomed(70%) to use the digital communication more than once a day. Conclusion : As seniors felt pleasant and useful with the ITC, digitalized health promotion and security programs of health centers,such as Kangnam-Ku, are recommended for shortening accessibility and active participation of seniors, with adjusted to regional needs. Keywords : digital communication & technology for health promotion

SS27 302-S-2

THE DIGITAL LIFE PATTERNS OF KOREAN AGED PEOPLE AND SOME SUGGESTIONS FOR DIGITAL INCLUSION

Doojin Choi CHOI (*Digital Inclusion Policy Division, National Information Society Agency, Korea*)

Introduction : The access and usage of ICT become more and more important in our daily lives. With the advent of information society, we can not live a day without computer and internet. The capabilities of people to use ICT will decide their quality of the economic and social life. In this context, bridging the digital divide among people is a very important policy issues. This paper reviews current status of digital divide between generations in Korea and give a some suggestions for achieving digital inclusion. **Method :** This study examines some statistical data and find some useful patterns of digital divide between generations in Korea. We also review some policy literatures and give a some useful policy agenda for digital inclusion. **Results :** First of all, this paper shows some shapes of digital divide patterns between generations, especially focus on digital divide between the elderly and the young people. This study review four dimensions of digital divide which is consist of comprehensive digital divide index. The patterns and characteristics of access divide, Literacy divide and productivity divide were examined. This paper also presents the phenomena of mobile divide. **Conclusion :** this paper finds that the digital divide between generations is still lasting and new digital divide appears in mobile areas. Solving the digital divide problems is very close related to the social inclusion in information society. So It's time to make a new national policies for digital inclusion. **Keywords :** digital divide digital inclusion

SS27 302-S-3
THE ICT APPLICATION FOR SENIOR JOB ASSIGNMENT IN KOREA

Seok Kyong KIM (CEO, The Happy ICT Foundation, Korea)

Introduction : Entering the age of ageing in South Korea, the rapid increase of healthy elderly actively requires their advances in various fields in society. However, as the popularization of Smartphone the accessibility of IT infrastructure for elderly is getting vulnerable than ever, it's catch-up is more than ever an important social problem.. **Method :** This study is to verify how ICT can be utilized in development of senior jobs and their participation in society, From April 2011 to Feb. 2012, we have supported to the work assignments in the process of cleaning job with the elderly workers in the region of Gyeonggi-do and Seoul Korea. **Results :** The study found that more than 100 elderly workers could have utilized ICT technology to take care their jobs for three months and confirmed that the old people among 700,000 workers of the cleaning business, which is corresponding to 23% of simple labor workers 3 million (EST.), improving the quality of recognition and value for the labor effort through ICT service. In the near future, the ICT services will be utilized for the rural elderly, which is accounted for 75% the rural population, in the process of production and distribution to improve their net income and performance of working. **Conclusion :** The ICT is usefully applicable for seniors as they could use how to make digital communication for job application, duty order check, and achievement report, etc. Social supports should be provided for the digital job creating and management networks. **Keywords :** digital communication for job seekers.

SS27 302-S-4
THE 'LIFE-PROTECTIVE POLICY' ANALYSIS FOR SENILE SUICIDE PREVENTION AT GYEONGGI PROVINCE, KOREA
Hyeon Seog SHIN¹, Joon Woo LEE² (1. Planning and Finance Committee, Gyeonggi Provincial Assembly, Vice Chairman of Saenuri Party, Korea; 2. Social Welfare Graduate School, Gangnam University, Korea)

Introduction : According to the survey of National Statistical

Office(2011), 28.7 people in Korea committed suicide in 2010, marking the highest suicidal rate among the OECD countries. Particularly in Gyeonggi Province, 899 people older than 65 committed suicides reached its fourth number in country. The fact above requires to make practical and institutional strategy to prevent suicide of the Elderly. **Method :** - Analysis on Suicide Rate of Elderly People in Gyeonggi Province - Analysis on the Current status of Suicidal Prevention Programme for Elderly People in Gyeonggi Province. **Results :** By the benefit of Education and Counseling for the Suicide Prevention- Gyeonggi Province Senile Suicide Prevention-carried out for last 3years as one of the programs of " Life-Protective Policy", the number of suicide of 65 years old had increased to 96.9 in 2005 from 44.5 in 2000. But it decreased to 91.1. **Conclusion :** Through this results, this study based on survey on punditariat attempts to propose policies as follow: 1)The enactment of practical ordinance for 'Life-Protective Policy". 2) Expansion of support to Municipal Center for the Senile Suicide Prevention 3)Establishment Specialized Center for Senile Suicide Prevention and the regular education program 4). Introduction of the Refresh Home for Senile - specialized Counsellors 5)Provide the Living Home for suicidal people in range of temporary care, probation and high -risk of suicide. **Keywords :** Senile Suicide Prevention

ABSTRACTS BASED ORAL COMMUNICATIONS

Sunday June 23th

OP23 313-C
QUALITY OF LIFE

OP23 313-C-1
RELATIONSHIPS BETWEEN REPRODUCTIVE HORMONE LEVELS AND SELF-RATED HEALTH AND HEALTH-RELATED QUALITY OF LIFE IN COMMUNITY-DWELLING OLDER MEN

Benjamin HSU¹, Robert G. CUMMING¹, Fiona M. BLYTH², Vasi NAGANATHAN², David J. HANDELSMAN³ (1. School of Public Health, Sydney Medical School, University of Sydney, Australia; 2. Centre for Education and Research on Ageing, University of Sydney and Concord Hospital, Australia; 3. Anzac Research Institute, University of Sydney, Australia)

Introduction : To examine relationships between reproductive hormones and changes over two-year follow-up in self-rated health and health-related quality of life in older men. **Method :** 1705 men aged 70 years and older from Concord Health and Ageing in Men Project were assessed at baseline (2005-2007) and 2-year follow-up (2007-2009). At baseline, testosterone (TT), dihydrotestosterone, estradiol (E2), and estrone (E1) were measured by liquid chromatography-tandem mass spectrometry, and SHBG, LH, and FSH by immunoassay. Self-rated health and health-related quality of life measures (SF-12) were obtained at baseline and follow-up. **Results :** In cross-sectional baseline data, univariate analyses revealed significant associations between many of the reproductive hormones and both quality of life scores and self-rated health. However, in multivariable analysis, only associations between TT, E1, and calculated free Testosterone (cFT) and self-rated health remained statistically significant. Compared to men in the highest TT quartile, men in the lowest TT quartile were 1.47-fold (95%CI: 1.04-2.06) more likely to

report fair, poor, or very poor health versus excellent or good health. The findings for E1 and cFT were similar. In the longitudinal data, compared to the highest E1 quartile, the lowest quartile of E1 was significantly associated with deterioration in self rated health: adjusted odds ratio 1.84 (95%CI: 1.10-3.06). There were no consistent associations between reproductive hormones and changes in quality of life scores. Conclusion : Lower levels of serum testosterone and estrone in older men are associated with deterioration in self-rated health and well-being over time. Further studies are warranted to clarify whether the hormonal findings are cause or effect. Keywords : testosterone estrogen self rated health quality of life

OP23 313-C-2

THE IMPACT OF SYMPTOM CLUSTERS ON OLDER ADULTS WITH CHRONIC VENOUS LEG ULCERS

Helen EDWARDS¹, Kathleen FINLAYSON², Helen SKERMAN², Kimberly ALEXANDER², Michelle GIBB² (1. School of Nursing, Queensland University of Technology, Australia; 2. Institute of Health and Biomedical Innovation, Queensland University of Technology, Australia)

Introduction : The incidence of chronic leg ulcers increases with age, up to 5 to 10% of those aged over 80 years. The ulcers are difficult to heal and many suffer from the condition for 15 or more years. Adults with leg ulcers suffer with many disabling symptoms and these symptoms, and potentially symptom clusters, may impact on health and quality of life. The aim of this study was to determine the impact of symptoms and symptom clusters on quality of life and wound healing in older adults with venous leg ulcers. Method : A sample of 318 patients with venous leg ulcers were recruited from hospital outpatient and community nursing leg ulcer clinics. Data were collected on socio-demographic variables, medical history, venous history, ulcer characteristics, symptoms and health-related quality of life. Exploratory factor analysis was used to identify symptom clusters. Generalized linear mixed models were utilised to determine their impact on healing and quality of life. Results : Nearly two-thirds (64%) of participants suffered with 4 or more symptoms, most frequently sleep disturbance (80%), pain (74%) and lower limb swelling (67%). Two symptom clusters were identified, a pain cluster and an inflammation cluster. Both clusters were significantly associated with decreased quality of life ($p < 0.01$), however, only the pain cluster was associated with delayed healing ($p = 0.003$). Conclusion : This study has explored the impact of symptom clusters on clinical and quality of life outcomes for patients with venous leg ulcers. This information may lead to more effective early interventions for patients with chronic leg ulcers. Keywords : symptom clusters, quality of life, leg ulcers

OP23 313-C-3

THE MEASUREMENT PROPERTIES OF THE DUTCH VERSION OF THE KEELE ASSESSMENT OF PARTICIPATION QUESTIONNAIRE IN OLDER ADULTS WITH JOINT PAIN AND COMORBIDITY

Lotte A.H. HERMSEN¹, Caroline B. TERWEE², Stephanie S. LEONE¹, Babette VAN DER ZWAARD¹, Joost DEKKER³, Martin SMALBRUGGE¹, Henriette E VAN DER HORST¹, Ross WILKIE⁴ (1. General Practice and Elderly Care Medicine and the EMGO Institute for Health and Care Research, VU University Medical Center, Netherlands; 2. Epidemiology and Biostatistics and the EMGO Institute for Health and Care Research, VU University Medical Center, Netherlands; 3. Rehabilitation Medicine and the EMGO Institute for Health and Care Research, VU University Medical Center, Netherlands; 4. Primary Care Sciences, Arthritis Research UK

Primary Care Centre, United Kingdom)

Introduction : The Keele Assessment of Participation (KAP) questionnaire measures person-perceived participation (restriction) in 11 aspects of life. Participation allows fulfilment of valued life activities and social roles, which are important to older adults. Since we aimed to use the KAP questionnaire in a larger Dutch cohort, we examined its measurement properties in a Dutch sample of older adults with joint pain and comorbidity. Method : The KAP was translated into Dutch and 3 items were modified. A cohort of Dutch older adults (≥ 65), with joint pain and comorbidity provided baseline data ($n=407$), follow-up data at 6 months ($n=364$) and test-retest data 2 weeks after 6 months ($n=122$) to measure: structural validity, internal consistency, reliability, construct validity and responsiveness. For the cross-cultural validity, comparable UK data were used ($n=404$). Results : Factor analysis revealed two domains: KAPd1 'participation in basic activities' (6 items; mobility inside home, mobility outside home, self-care, looking after belongings, looking after home, interpersonal interaction) and KAPd2 'participation in complex activities' (3 items; work, education and social activities), with Cronbach's alphas of 0.74 and 0.57 and Intraclass Correlation Coefficients of 0.63 and 0.57, respectively. Further analyses of KAPd1 showed poor construct validity and responsiveness. Despite the uniform DIF in item 'interpersonal relations', the total KAPd1 score seemed comparable between the Dutch and UK sample. Conclusion : Only KAPd1 'participation in basic activities' showed good internal consistency and sufficient reliability. Further work is required to understand the natural history of participation and how best to operationalize the concept 'participation' for measurement in (longitudinal) studies. Keywords : participation, elderly, quality of life

OP23 313-C-4

DEMENTIA-SPECIFIC CARE UNITS IN GERMAN NURSING HOMES: DO RESIDENTS HAVE A BETTER QUALITY OF LIFE THAN THOSE LIVING IN TRADITIONAL LIVING-UNITS?

Rebecca PALM, Kerstin KOHLER, Olga DORTMANN, Christian G. SCHWAB, Sabine BARTHOLOMEYCZIK, Bernhard HOLLE (Site Witten, German center for neurodegenerative diseases, Germany)

Introduction : Nursing homes have established dementia-specific care units (DSCU) to accommodate the special needs of residents with dementia, to encounter for challenging behaviors (CB) and to enhance their quality of life (QoL). Outcome evaluations of DSCUs are conflicting and results concerning the impact of the living concept on the QoL are sparse. The aim of this analysis is to investigate the influence of DSCUs on QoL in residents with dementia compared to traditional units. Method : The study had a cross-sectional design using a sample of 1671 residents from 47 German nursing homes. Nurses were trained to assess data for residents willing to participate. QoL was measured using the QUALIDEM, cognitive impairment was examined with the Dementia Screening Scale, and CB was assessed using the NPI-Q. Living concept was assessed using a dichotomous variable. Unbiased conditional inference trees were used to evaluate the relationship between single QUALIDEM-subcales and the independent variables. Differences between identified subgroups were analyzed with Mann-Whitney U Test. Results : Residents with severe dementia and severe CB were rated lower concerning the QUALIDEM subscale 'caregiver relationship' on DSCUs than on traditional living units. Residents with severe dementia and mild CB as well as with severe CB were rated better concerning the QUALIDEM subscale 'negative affects' on DSCUs. There were no significant differences

found for the group of residents with mild to moderate dementia. Conclusion : Taking the limitations into account, the results do not prove an evidence of a benefit for DSCUs. Keywords : quality of life dementia nursing home

OP23 313-C-5

HEART RATE VARIABILITY AND QUALITY OF HEALTH IN ELDERLY

Raden Irawati ISMAIL¹, Tendry SEPTA², Isa Multazam NOOR², Tri Budi W RAHARDJO³, Eva HOGERVORST⁴ (1. *Psychiatry, Center of Ageing Study, Universitas Indonesia, Indonesia*; 2. *Psychiatry, Faculty of Medicine, Universitas Indonesia, Indonesia*; 3. *Dentist, Center of Ageing Study, Indonesia*; 4. *Physiology, Loughborough University, United Kingdom*)

Introduction : Stress is a body reaction to physical and psychological condition that interfere with individual's equilibrium including the elderly. The equilibrium is affected by the quality of health and environment response. These conditions can cause distress. The aim of this research is to prove that Heart Rate Variability (HRV) can objectively assess inequilibrium or stress in conjunction to the quality of health dan environmental response in the elderly. Method : This research used cross-sectional design in integrated health care center (Posyandu) Jagakarsa, South Jakarta, September 2012. Sampling method being used is consecutive sampling. The subjects of research are elderlies who accepted invitation and came for a health examination. Stress was rated with Heart Rate Variability (HRV) within 5 minutes, health history, address and other demographic datas were collected using questionnaire. Results : Total respondents were 55 elderlies. HRV showed an inequilibrium in 12 respondents with 5 health problems, 8 respondents with 3 health problems, 5 respondents with 2 health problems. We found 15 respondents with 2 environmental problem and 8 respondents with 1 environmental problem. Conclusion : Heart Rate Variability in the elderly demonstrated inequilibrium associated with history of health and environmental problems in Posyandu for elderly with management of Puskesmas Jagakarsa, South Jakarta. Keywords : HRV, elderly, quality of health

OP23 314-S

PSYCHOLOGICAL ASPECTS OF AGEING (CREATIVITY, COGNITION)

OP23 314-S-1

ASSOCIATION BETWEEN BODY MASS INDEX AND SELF-RATED MENTAL HEALTH AMONG US OLDER ADULTS: DOES RACE/ETHNICITY MATTER?

Giyeon KIM¹, Patricia PARMELEE¹, Jamie DECOSTER², Ami BRYANT³, David CHIRIBOGA⁴ (1. *Center for Mental Health & Aging/Dept. of Psychology, University of Alabama, USA*; 2. *Center for Advanced Study of Teaching and Learning, University of Virginia, USA*; 3. *Psychology, University of Alabama, USA*; 4. *Child and Family Studies, University of South Florida, USA*)

Introduction : The present study examined racial/ethnic differences in the relation between body mass index (BMI) and self-rated mental health (SRMH) among community-dwelling older adults. Method : Drawn from the Collaborative Psychiatric Epidemiology Surveys, adults aged 60 or older from diverse racial/ethnic backgrounds were analyzed. Data were analyzed using chi-square tests, ANOVA, two-way ANOVA, and linear contrasts. Results : After controlling for covariates, there was a significant main effect of race/ethnicity ($p < .001$) on SRMH, but the main effect of BMI was not significant

($p = .362$). A significant interaction between BMI and race/ethnicity on SRMH was found ($p < .05$). The linear contrasts showed that Whites had a significant trend ($p = .02$) showing poorer SRMH with increases in BMI, whereas Blacks had a significant trend ($p = .04$) showing better SRMH with increases in BMI. The linear trends for Hispanics ($p = .10$) and Asians ($p = .76$) were not significant. Conclusion : Significant racial/ethnic differences existed in the relation between BMI and SRMH. Understanding the role of race/ethnicity as a moderator of the relation between BMI and mental health may help improve the treatment for older adults with unhealthy weights. Clinical implications are also discussed. Keywords : Body Mass Index; Self-Rated Mental Health; Race/Ethnicity, Self-Rated Mental Health, Race/Ethnicity.

OP23 314-S-2

ATTRIBUTIVE STYLES AND COGNITIVE FUNCTIONING IN AGING

Olga Y. STRIZHITSKAYA, Elena P. DAVEDYUK, Marina D. PETRASH (*Developmental and Differential Psychology, Saint Petersburg State University, Faculty of psychology, Russia*)

Introduction : Healthy, active and positive aging for the past few decades became a huge challenge for modern societies. There can be named quite a few factors, influencing these processes and subjective factors play here a significant role. Theoretical analysis showed that people, having different styles of information attribution could differ in terms of personal characteristics, that directed us to the idea that it could also effect cognitive functioning. In current study we approached this issue, trying to merge memory and attention, attributive styles and particular personality characteristics. Method : The sample used in this study were 42 participants, 25 women and 17 men aged 60-70, with no major health problems. Participants were divided into two groups according to their attribute styles: (1) positive; (2) negative. Attention was measured by 'Mixed Lines' test, Bourdon test. For a wider personality context we also used 'Subjectiveness test', Life Satisfaction Index, Lazarus coping-test. Results : Analysis showed that participants with positive attributive style differ in terms of attention characteristics. With due respect to limitations, related to a small size of a sample, significantly higher scores in several characteristics were revealed. Particular differences in personality characteristics among 'positive' and 'negative' participants were also discovered. Conclusion : Study revealed that subjective characteristics, such as the way we percept and process the information can effect not only social skills and personality, but also cognitive functions. With relevant future investigations, discovered results could be used to develop a new intervention program that could reduce cognitive impairment risks by dealing with attributive styles. Keywords : attributive styles, cognition, aging

OP23 314-S-3

A TIME-SAMPLING STUDY OF DAILY AFFECT IN THE OLDEST OLD: INTRAINDIVIDUAL VARIABILITY AND CORTISOL

Mary LUSZCZ¹, Helena CHUI¹, Christiane HOPPMANN², Denis GERSTORF³, Ruth WALKER⁴ (1. *Psychology, Flinders University, Australia*; 2. *Psychology, University of British Columbia, Canada*; 3. *Psychology, Humbolt University, Germany*; 4. *Public Health, Flinders University, Australia*)

Introduction : Intraindividual variability (IVV) is recognized as an increasingly important individual differences variable in adult development and ageing. Little is known about IIV in the oldest-old. Method : In a micro-longitudinal study, we examined IIV in everyday

positive (PA), negative (NA) affect and cortisol in a sample of the oldest-old (M age = 88.94, SD = 2.57), six times per day for seven days. Questions were: First, is IIV in affect a relatively stable individual difference? Second, does personality predict IIV in affect in the oldest-old? Third, do older men and women differ in IIV in affect? IIV in affect was assessed each day using the intraindividual standard deviation (ISD), yielding seven observations per participant for PA, NA and cortisol. Results : Results indicated substantial between- and within-person variability. The intraclass correlations were .46 and .36, respectively, for PA and NA and .63 for cortisol. Within-day IIV did not change across days for either positive or negative affect. This suggests that affective IIV is a relatively stable construct. Findings also show evidence of within-person coupling of IIV in PA and NA. For IIV in PA, IIV in NA was the only significant predictor. For NA, gender, daily NA level, and IIV in PA were significant predictors. In particular, women showed more daily variability in NA compared to men. Daily positive affect was negatively associated with daily cortisol AUC, but not daily negative affect. Conclusion : Considerable within person variability in emotion persists among the oldest-old, although fluctuations are independent of personality and mood. Keywords : oldest old, affect, intraindividual variability

OP23 314-S-4

A LONGITUDINAL COMPARISON OF DEPRESSION IN THE US AND ENGLAND

Stephen JIVRAJ, Bram VANHOUTTE, James NAZROO (*Centre for Census and Survey Research, University of Manchester, United Kingdom*)

Introduction : Depressive episodes are quite common in later life, and interrelated with stressful events in later life and conditions, such as cognitive impairment or chronic illness, that trigger similar symptoms. Since a lot of transitions occur when ageing, a longitudinal perspective, taking this dynamic into account, can inform us on the impact of these changes on the occurrence of depressive symptoms. Examining depressive symptoms in later life in the US and England, allows to investigate the relation between depressive symptoms and social factors, and how this relation is affected by the societal context. Method : A latent growth model, using 5 waves (2002, 2004, 2006, 2008, 2010) of the Health and Retirement Study (HRS) and the English Longitudinal Study on Ageing (ELSA) allows disentangling the effects of age and ageing, and examining the country context, on depressive symptoms using the 8 item Centre for Epidemiological Studies Depression scale (CES-D). Results : The largest country differences are reflected in the somatic aspects of depression, and less in mood symptoms. While mood symptoms seem to be more closely related to partnership status, somatic aspects of depression are more related to educational status and limits in daily activities. Country differences in the association between education, ethnicity, marital status and limits in daily activities with depression surfaced. Conclusion : Our study illustrates that it makes sense to distinguish somatic and mood aspects of depression in later life. Secondly, the country context matters both on the individual level and for social correlates of depression in later life. Keywords : depression comparative longitudinal

OP23 314-S-5

BRAZILIAN-PORTUGUESE VALIDATION OF THE AGING PERCEPTIONS QUESTIONNAIRE (APQ)

Laura Brenner MARIANO DA ROCHA¹, Marcelo Pio De Almeida FLECK², Newton Luiz TERRA¹ (*1. Institute of Geriatrics and Gerontology, IGG PUCRS, Brazil; 2. Psychiatry Department, UFRGS, Brazil*)

Introduction : Studies have shown that a more positive attitude or perception about aging is associated with both physical health benefits as emotional wellbeing. The APQ evaluates the self-perception of aging from eight different domains, seven of them involve opinions about their own aging while the eighth examines the experience of individuals with diseases and their relation to aging. Method : The validation was based on a crosssectional study of a random sample of 408 patients of both sexes over 60 years of age. Statistical analysis involved the Kolmogorov-Smirnov and Exploratory Factor Analysis (EFA) and the evaluation of basic assumptions by the Kaiser-Meyer-Olkin index and Bartlett's test of sphericity. The analysis of reliability and internal consistency was checked by Cronbach's alpha coefficient. Results : The Bartlett test of sphericity ($p < 0.0001$) and Kaiser-Meyer-Olkin (0.889) indicated the suitability of the data for the implementation of ERA, which detected the presence of 7 factors with eigenvalues above 1 explaining 57.3% of the variance. For the 29 items of the instrument commonalities proved superior to 0.500 achieving maximum 0.675. The analysis of reliability and internal consistency by Cronbach's alpha coefficient was equal to 0.884. The mean for the Identity score, was estimated at 43.6% (± 34.1), ie only 43.6% of the investigated believed that diseases present at the time of the study were due to aging. Conclusion : The APQ is a multidimensional instrument whose validation showed that the self-perception of aging is associated independently with psychological health and physical health and will help improve patients wellbeing and health outcome. Keywords : self perception aging health.

OP23 318-C

COGNITION AND AGING I

OP23 318-C-1

THE JOINT EFFECT OF PHYSICAL ACTIVITY AND BODY MASS INDEX AT MID-LIFE ON COGNITIVE FUNCTION IN LATE LIFE: AGE GENE/ENVIRONMENT SUSCEPTIBILITY - REYKJAVIK STUDY

Milan CHANG¹, Jane SACZYNSKI², Jon SNAEDAL³, Bjorn EIRNARSSON³, Sigurbjorn BJORNSSON³, Thor ASPELUND⁴, Maria K. JONSDOTTIR⁵, Vilundur GUDNASON⁴, Tamara B. HARRIS⁶, Lenore J. LAUNER⁶, Palmi V. JONSSON⁵ (*1. Geriatric Research Center, Landspítali University Hospital, University of Iceland, Dep. Sport Science, University of Reykjavik, Iceland; 2. Division of Geriatric Medicine and Meyers Primary Care Institute, University of Massachusetts Medical School, Worcester, USA; 3. Geriatric Research Center, Landspítali University Hospital, University of Iceland, Iceland; 4. Faculty of Medicine, University of Iceland, Icelandic Heart Association, Iceland; 5. Geriatric Department, Landspítali University Hospital, University of Iceland, Iceland; 6. Laboratory of Epidemiology, Demography and Biometry, National Institute on Aging, National Institute of Health, USA*)

Introduction : Physical activity (PA) and body mass index (BMI) are associated with cognitive function, however the long-term joint effect of mid-life PA and BMI on cognition has not been extensively examined among older population. We examined the joint effect of midlife PA and BMI on late-life cognition. Method : A population based cohort (born in 1907-1935) of men and women who participated in the Age, Gene/Environment Susceptibility - Reykjavik Study with an average of 26 years interval between midlife and late-life examinations. The four PA/BMI joint groups were defined as 1) No PA/overweight or obese (BMI ≥ 25), (NPAO, 34%), 2) No PA/normal BMI (18.5 < BMI < 24.9), (NPAN, 34%), 3) PA/ overweight/obese BMI (PAO, 15%), and 4) PA/normal BMI (PAN, 16%). Composite z-scores of speed of processing (SP), memory (MEM) and executive

function (EF) were created from a neuropsychological test battery. Results : Analyses were based on 4777 participants (women = 58%) after excluding dementia cases. Compared with NPAO group (reference), PAO and PAN groups had significantly faster SP (PAO, $\beta = 0.19$; PAN, $\beta = 0.25$, $p < 0.001$), higher MEM (PAO, $\beta = 0.14$; PAN, $\beta = 0.20$, $p < 0.001$) and EF (PAO, $\beta = 0.11$; PAN, $\beta = 0.12$, $p < 0.001$), after controlling for demographic, behavioral, cardiovascular factors and apolipoprotein E genotype. However, no significant difference was found with NPAN group. Conclusion : Being physically active at mid-life even in persons who were overweight or obese BMI contributed to better cognitive function 26 years later. Keywords : physical activity, BMI, cognitive function

OP23 318-C-2

GAIT VARIABILITY AT FAST-PACE WALKING SPEED: A BIOMARKER OF MILD COGNITIVE IMPAIRMENT?

Olivier BEAUCHET¹, Gilles ALLALI², Cyrille LAUNAY³, Francois R HERRMANN⁴, Cedric ANNWEILER¹ (1. *Neuroscience and Geriatrics, Angers University Hospital, France*; 2. *Neurology, Geneva University Hospitals, Switzerland*; 3. *Geriatrics, Angers University Hospitals, France*; 4. *Geriatrics, Geneva University Hospitals, Switzerland*)

Introduction : The interpretation of the increase in stride-to-stride variability of stride time (STV) regarding the evolution of cognitive deficits across the dementia spectrum is matter of debate. The aim of this study was to compare STV at usual and fast-pace walking speeds of MCI patients with that of cognitively healthy individuals (CHI) and Alzheimer's disease (AD) patients with mild dementia, while considering the effects of potential confounders. Method : STV while walking at usual and fast-pace walking speeds was recorded with the GAITRite® system from 116 older adults (mean age 75.6±6.5 years; 55.2% female) divided into 3 groups according to their cognitive status (44 CHI, 39 MCI patients and 33 AD patients with mild dementia). Results : The full adjusted multiple linear regression models showed that high STV was associated with slow gait speed at usual-pace walking speed ($P=0.002$) and with the MCI status at fast-pace walking speed ($P=0.015$). Conclusion : High STV at fast-pace walking speed was a specific gait disturbance of MCI patients in the sample of studied participants, and thus could be used in the future as a specific biomarker of MCI patients. Keywords : gait; gait variability; cognition; mild cognitive impairment; Alzheimer's disease; older adults.

OP23 318-C-3

WHICH COMBINATION OF POSTURAL PARAMETERS IS ASSOCIATED WITH FALLING IN OLDER ADULTS WHILE TAKING INTO ACCOUNT THE COGNITIVE DECLINE?

Jean-Baptiste MIGNARDOT¹, Olivier BEAUCHET², Cedric ANNWEILER², Thibault DESCHAMPS¹, Christophe CORNU¹ (1. *Laboratory 'Motricite, Interactions, Performance' (UPRES EA 4334), University of Nantes, France*; 2. *Department of Neuroscience, Division of Geriatric Medicine, UPRES EA 4638, UNAM, Angers University Hospital, Angers, France*)

Introduction : While it has been reported that cognitive decline leads to balance impairment, the cognitive decline-related changes in postural parameters associated with the occurrence of falls has been few studied in elderly. This study aimed to identify the combinations of postural parameters that were associated with falls in older adults while taking into account their cognitive status (i.e., Cognitive healthy individual [CHI]), with cognitive decline (i.e., Mild cognitive decline [MCI], mild and moderated dementia [MMD]). Method : Postural

variables using force platform were recorded in 620 older adults (mean age 77 ± 8 years; 51.8% women; 38% of fallers) divided into 3 groups according to their cognitive status (228 CHI, 140 MCI patients and 252 MMD patients). Using a principal components analysis, the most significant postural variables included in main eigenvectors were first submitted to one way ANOVA (between group comparisons). Then a logistic regression was performed to specify the association between the occurrence of falls (dependent variable) and baseline characteristics [age, depression, gender, drugs number, posture (n=6) including cognitive status (with CHI using as reference level)]. Results: The logistic model showed that falling risk was mainly associated with age ($p=0.0001$), depression ($p=0.007$) and Eyes Closed-Length in Function of Surface of postural oscillations ($p=0.015$). No significant impact of the cognitive status was observed. Conclusion : These findings confirmed the interest of postural parameters for assessing the falls risk in elderly. No effect of cognitive decline was reported in this sample of older adults, suggesting their low effect in term of falls risk compared to postural parameters. Keywords : Postural control, Mild cognitive decline, Risk of falling

OP23 318-C-4

VASCULAR LESIONS IN BRAIN AGING: TIME TO THINK LITTLE

Gabriel GOLD¹, Eniko KOVARI², Francois R. HERRMANN¹, Panteleimon GIANNAKOPOULOS², Constantin BOURAS² (1. *Internal Medicine, Geriatrics and Rehabilitation, Geneva Medical School and Geneva University Hospitals, Switzerland*; 2. *Psychiatry, Geneva Medical School and Geneva University Hospitals, Switzerland*)

Introduction : Cognitive consequences of large brain infarcts are well known. More recently, community-based autopsy studies in older people have demonstrated a high frequency of small and microscopic ischemic lesions in individuals with or without dementia. These include focal and diffuse gliosis, lacunes, cortical microinfarcts and demyelination. In order to determine the clinical impact of such small lesions on cognition, we performed several large clinicopathological studies in old and very old populations. Method : Cognitive status was assessed prospectively using the Clinical Dementia Rating (CDR) scale; neuropathological evaluation included Braak neurofibrillary tangle (NFT) and A β -protein deposition staging and bilateral semiquantitative assessment of microvascular ischemic pathology and lacunes; statistics included univariate and multiple regression models controlling for age. Results : In two studies totalling 127 cases with no or only minimal Alzheimer's disease (AD)-related NFT pathology, cortical microinfarcts were the strongest correlate of cognitive status, explaining more than one third of the clinical cognitive variability, followed by basal ganglia and thalamic lacunes. Another analysis of 156 mixed AD and vascular cases confirmed that microinfarcts were the most powerful correlate of dementia. Finally, in a study in the oldest-old (93 cases aged 90 to 103 years) with mixed AD and small vascular pathology, cortical microinfarcts proved to be the only vascular correlate of the presence of dementia. Conclusion : Small vascular lesions, particularly cortical microinfarcts are a major determinant of cognitive function in aging populations and represent an important new target for preventive and therapeutic interventions in vascular and mixed dementia. Keywords : microinfarcts, dementia, aging

OP23 318-C-5

BODY MASS INDEX OF 12,017 PATIENTS IN THE TIME OF DIFFERENT DEMENTIA DIAGNOSIS

Dorota RELIGA¹, Gerd FAXEN-IRVING², Helen GORANZON³,

Kristine WALLMAN³, Maria ERIKSDOTTER¹
(1. NVS/Geriatrics Clinic, Karolinska University Hospital/Karolinska Institutet, Sweden; 2. NVS, Karolinska Institutet, Sweden; 3. Department of Food, Nutrition and Dietetics, Uppsala University, Sweden)

Introduction : The study aimed to describe body mass index in the moment of diagnosis of dementia disorder based on data from SveDem, the Dementia Quality Registry in Sweden for the years 2007-2011. **Method :** Total 12,017 patients were included in analysis. SveDem is incidence-based dementia quality registry that aims to increase the quality of diagnosis, care and treatment of dementia patients in Sweden. **Results :** The mean BMI for all new diagnosed dementia patients was 24.6. Most patients was in the middle stage of dementia with MMSE of 21,2 and the mean age of 78.4. BMI did not differ significantly between dementia diagnoses, but was depended on age, gender and in smaller effect on cognition, measured by MMSE. **Conclusion :** In the time of diagnosis most of dementia patients had normal BMI of 24.6. However there is a large group with lower and higher BMI as normal. It will be important to follow BMI individually and try to prevent unwanted weight loss during dementia course. **Keywords :** body mass index, dementia, elderly

OP23 319-S **AGEING AND DISABILITY I**

OP23 319-S-1 **THE COMPRESSION OF MORBIDITY AMONG MEXICAN-ORIGIN ELDERLY IN THE UNITED STATES: SOCIAL AND POLITICAL IMPLICATIONS**

Angel JACQUELINE¹, Jacqueline ANGEL², Ronald ANGEL³, Terrence HILL⁴ (1. *Sociology and LBJ School of Public Affairs, University of Texas at Austin, USA*; 2. *LBJ School of Public Affairs, The University of Texas at Austin, USA*; 3. *Sociology, The University of Texas at Austin, USA*; 4. *Sociology, Florida State University, USA*)

Introduction : This study examines trajectory classes of physical mobility among 3,050 older Mexican-origin individuals employing a unique and important longitudinal data set, the Hispanic Established Epidemiologic Studies of the Elderly (H-EPESE). Our objective is both to characterize the morbidity trajectory and mortality experience of the original cohort over a 17 year period, and to identify those factors accounting for differences in performance-oriented mobility assessments trajectories, such as sex, immigration status, education, income, living arrangements, social support network, and other established risk factors in the modeling process. **Method :** The H-EPESE is a benchmark study includes the original cohort of 3,050, aged 65 and older who were re-interviewed in their home in 1995-96, 1997-98, 2000-2001, 2004-2005, and 2006-08, and 2010 for a total of seven observation waves. Re-contacting our respondents gave us the opportunity to study the needs and characteristics of a large number of oldest old Mexican Americans. Moreover, on approximately half of our subjects we have information from multiple contacts going back to 1993-1994. On the other half we now have information from 2004-2010 when they were added to the study. **Results :** Growth mixture models are used to estimate the POMA trajectory classes. We then use these trajectories to predict subsequently mortality. Implications of the compression of morbidity for the health and economic well-being of older Mexican Americans are discussed. Preliminary analyses reveal that older Mexican Americans exhibit unique classes of POMA trajectories. **Conclusion :** Implications of the compression of morbidity theory for the health and economic well-being of older Mexican Americans are discussed. **Keywords :** compression of morbidity,

minority aging, physical performance, demography of aging, aging and diversity, performance-oriented mobility

OP23 319-S-2 **FOLLOWING IN YOUR FOOTSTEPS: DEVELOPING A NOVEL METHODOLOGY TO EXAMINE MOBILITY AND THE BUILT ENVIRONMENT WITH COMMUNITY-DWELLING OLDER ADULTS**

Catherine TONG, Joanie SIMS-GOULD, Suman AULUCK, Callista HAGGIS, Anna CHUDYK, Meghan WINTERS, Maureen ASHE, Heather MCKAY (Centre for Hip Health and Mobility, University of British Columbia, Canada)

Introduction : Mobility impacts the health and wellbeing of an older person, and there are significant associations between mobility and the built environment. In qualitative studies of older adults' mobility, data have typically been gathered through interviews or focus groups. We sought to develop and test a "mobile methodology" that would allow us to more comprehensively understand how older adults experience their mobility in the local environment. Our mobile methodology coupled seated interviews with walks, in which participants led us through their neighbourhood. **Method :** We conducted in-depth, seated interviews with 27 community-dwelling older adults in an urban region of British Columbia, Canada. Twenty of these participants elected to undertake a walking interview. Walking interviews averaged 20 minutes (Range 10-60). Each walk included an interviewer and a note-taker, both of whom completed observational memos afterwards. **Results :** There was high concordance between what we heard in the seated interview, and what we observed on the walk. Extending what we heard in the seated interviews, walking interviews provided insight about: how features of the natural environment encourage mobility; the strategies that older adults employ to overcome challenges in the built environment; and the unique and unexpected routes and shortcuts that they use. **Conclusion :** Walking interviews elicited data that were sometimes not discussed or observed while sitting indoors. This is a strong observational tool, allowing researchers to see, not just hear, what participants do, where they go, and the challenges they face. Best practices for conducting walking interviews with older adults will also be discussed. **Keywords :** mobility; built environment; qualitative methods

OP23 319-S-3 **THE CHRONIC-DEGENERATIVE DISEASES AS A FACTOR OF ELDERLY SOCIAL EXCLUSION**

Zaida Aguiar Sa AZEREDO¹, Pornchai JULLAMAT²
(1. *UNIFAI, Portugal*; 2. *Nursing school of Burapha, University of Burapha, Thailand*)

Introduction : The world population becomes older and older. Although people can live with chronic diseases longer than before, we have an increase of co-morbidity and its complications. To think how society copes with this is important, special for health professionals and decision makers. **Method :** Based on a literature review and their own experiences the Authors make a reflexion, taking into account their own culture. They reflect about the impact of a high prevalence of chronic diseases in a society and how this society can improve the care of the patients trying to maintain their inclusion. **Results :** The chronic degenerative diseases can be an important factor for elderly social exclusion. The mental disorders are even more important. Most of the societies are not yet prepared to cope with a high prevalence of chronic-degenerative diseases and this is one of the reasons for excluding. Other reasons can be: economics, changes in the family structure and how the patient accept the disease. **Conclusion :**

The Authors after reflecting about this problem, they mention some strategies that society can use to maintain the patient and carer inclusion. The intergeneration communication is one of the strategies. Keywords : elderly, chronic diseases, social exclusion

OP23 319-S-4
ASSESSING THE HEALTH STATE/DISABILITY SCORE OF THE ELDERLY IN SUB-SAHARAN AFRICA: AN ANALYSIS USING THE FRONTIER METHOD

Ousmane FAYE (*Population, Consortium pour la Recherche Economique et Sociale (CRES), Senegal*)

Introduction : This paper uses a parametric stochastic frontier approach (coming from the economic literature) to explore the impact of the occupational activities and the living conditions in the slums on the health performance among the adult population aged 50 and up. Method : We measure the health performance using the disability scores from the WHO. In our estimation strategy, we first consider the WHODAS II - 12 items score and thereafter simultaneously analyze several dimensions of health state description (cognitive, mobility, pain and discomfort, sleep and affect, etc.). We use individual data from the WHO's Study on Global AGEing and Adult Health (SAGE) in partnership with the INDEPTH network. Results : The SAGE-INDEPTH survey provides longitudinal data on ageing in various Demographic surveillance sites (DSS) in South Africa, Kenya, Tanzania, and Ghana. This survey collects information on the older persons' health profiles, economic activities, cares and supports provided and received, and a broad range of self-reported assessments of health and well-being. Conclusion : This study explores the relationship between health score among older persons and occupational activities, defined in a broad sense (i.e., including professional, leisure, physical, and other activities), accounting the influence of age and educational attainment, as well as factors related to social and economic status. Keywords : Ageing , Disability, Africa

OP23 319-S-5
OPIOID USE AND HEALTH IN OLDER WOMEN FROM THE AUSTRALIAN LONGITUDINAL STUDY ON WOMEN'S HEALTH

Lynne PARKINSON¹, Samuel Louis BRILLEMANN², Julie Ellen BYLES² (*1. Health CRN, CQ University, Australia; 2. Research Centre for Gender, Health and Ageing, University of Newcastle, Australia*)

Introduction : Opioids have a well-recognised place in the treatment of persistent pain, however, they are associated with significant adverse events, including death. The broad aim of this project was to investigate the factors associated with opioid use over time for a cohort of women aged 76-81 in 2002. Method : Data for this project include Australian Longitudinal Study on Women's Health survey and linked Pharmaceutical Benefits Scheme (2002-2010) datasets. Results : An increasing percentage of older women were using opioids over time, from around 8% in 2002 to over 16% in 2010, predominantly due to increases in prescription of oxycodone and buprenorphine. Although the percentage of older women being prescribed codeine and tramadol did not markedly increase between 2002 and 2010, the quantities prescribed to women in this cohort using these medicines increased significantly. Opioid users tended to have high medicine burden from other potent medicines, and therefore an increased risk for adverse events, compared to those not using opioids. Opioid use was associated with poorer physical functioning and greater levels of bodily pain, poorer mental health and more falls when compared to women not using opioids. Conclusion : While the greater increase in

the quantities prescribed over this period may reflect the relatively greater impact ageing has on pain, it may also reflect increases in the accepted norm of prescribing quantity. The clinical challenge for providers is to consider broader pain management options, and exercise more caution in opioid prescription, particularly to individuals at increased risk for adverse effects. Keywords : opioids, women, community

OP23 320-R
NURSING HOME & LONG-TERM CARE

OP23 320-R-1
INVESTIGATING THE DECISION MAKING PROCESSES NURSES' USE IN THE MANAGEMENT OF PSYCHOTROPIC MEDICATIONS AS CHEMICAL RESTRAINTS IN NURSING HOMES

Lisa CLINNICK (*Nursing, Hepburn Health Service, Australia*)

Introduction : The prevalence of psychotropic medications use in aged care has been extensively researched over the past 20 years and controversial findings have consistently been reported (Snowdon, J., S. Day, et al. 2006; Westbury, Beld et al. 2010), however little research has been conducted on the nurses' role in administering psychotropic medications in aged care. The aim of this study is to gain an understanding of why nurses administer psychotropic medication as chemical restraints and what factors may be influencing their decisions. Method : Grounded Theory Method was used for analysing the data. From the analysis of the data a theory was developed that was grounded in the participants' experiences Research Setting Two nursing homes sites were chosen for the data collection process. One nursing home was regarded highly for the care provided to the residents and had passed all accreditation standards. The second nursing home had failed aged care accreditation. Procedures: in depth interviews; participant observation; field notes and documentation review. Data Analysis: data was analysed using the grounded theory method of coding, and constant comparative analysis. Results : Three major categories were identified that described what influenced the nurses' decision to administer a psychotropic medication; these included customs; knowledge and relationships. Conclusion : Nurses undertake a central role in the administration of medications and the decision making process regarding the use of psychotropic medications in aged care. This study has identified key areas that can be targeted which may result in better use of these medications and improve the care outcomes for aged care residents. Keywords : chemical restraint; residential care; psychotropic medication

OP23 320-R-2
AN EVALUATION FRAMEWORK FOR END OF LIFE CARE INTERVENTIONS FOR PEOPLE WITH DEMENTIA IN LONG TERM CARE

Claire GOODMAN, Sarah AMADOR, Elspeth MATHIE (*Centre for Research in Primary and Community Care, University of Hertfordshire, United Kingdom*)

Introduction : End-of-life trajectories of older people with dementia (OPWD) are often unclear. Despite the increasing uptake of dementia specific end of life care resources, more needs to be known about how the organisation of care influences outcomes . This paper reports on a longitudinal study that described the different trajectories to death and how different contexts and models of care influence residents' experience of end of life care. Method : Data were extracted from the 133 residents' care home notes at three time points over a year, and reviewed post-death. Analysis included resource use and, symptom

management, and place of death. Interviews with care home staff, visiting clinicians and where possible residents and relatives focused on how participants' role and involvement in end of life care for people with dementia. Results : 20% of the 133 residents died. End of life for OPWD was characterised by uncertainty in three key overlapping areas of care : Relational uncertainty between family members, residents, care home staff and visiting clinicians in how roles and relationships were negotiated and agreed, Pathway or prognostic uncertainty about whether the person was dying or not and service uncertainty that related to the ability of services and individuals to provide resources that could sustain care in the care home. Conclusion: Interventions designed to provide end of life for people with dementia of needs rightly focus on symptom management. There is however, a need to consider how the inherent uncertainty associated with dying from or with dementia is addressed. The study findings provide an evaluation framework to judge effectiveness of end of life care interventions for people with dementia in long term care settings. Keywords : dementia, end-of-life care, frailty

**OP23 320-R-3
NEW USERS OF ANTIPSYCHOTIC MEDICATIONS AMONG
RECENTLY ADMITTED LONG-TERM CARE RESIDENTS**

Andrea D FOEBEL¹, Nathalie WELLENS², Anna BALLOKOVA³, Daniela FIALOVA⁴, John P HIRDES¹ (1. School of Public Health and Health Systems, University of Waterloo, Canada; 2. Public Health, Centre for Health Services and Nursing Research, KU Leuven, Belgium; 3. Faculty of Pharmacy, Charles University, Czech; 4. Department of Geriatrics and Gerontology, Faculty of Pharmacy, Charles University, Czech)

Introduction : Many long-term care quality indicators recommend that the use of antipsychotic (AP) medications be avoided for individuals without documented psychiatric conditions. These medications continue to be used frequently in long-term care (LTC) settings, regardless of such warnings. Whether the transition into LTC settings is associated with new AP use is not well studied. Method : This study used interRAI Minimum Data Set data from the Canadian province of Ontario to study new users of AP among residents admitted to LTC in the past 3 months. Using this comprehensive data source, characteristics of new users were described and multivariate logistic regression analysis identified factors associated with new AP use. Results : In total, 69,139 individuals without a clear psychiatric indication for AP (mean age 82 years, 66% female) were newly admitted to LTC. Among them, 6% (n=3724) were new users of AP medications by their first follow-up assessment (85±15 days after admission). Factors found to be significantly associated with new use were: age less than 65 years (OR=1.47), female gender (OR=0.84), presence of behavioural issues (OR=1.96), delusions (OR=1.72), motor agitation (OR=1.25), dementia (OR=2.01), long-term memory problems (OR=1.26), functional independence (OR=1.11), conflicts with staff (OR=1.26) and roommates (OR=1.38), and reduced social engagement (OR=1.38). Conclusion : Both clinical and social factors were identified to be associated with new use of AP in a particularly vulnerable group of individuals, those who are newly admitted to institutional care. This work can help inform professional practice to reduce potentially inappropriate AP use at this time of transition. Keywords : Anti-psychoactive medications, long-term care

**OP23 320-R-4
THE INFLUENCE OF INSTITUTIONAL TEXTS ON THE
PROVISION OF PERSON-CENTRED CARE IN LONG-TERM
CARE SETTINGS**

Sienna CASPAR¹, Pamela RATNER², Alison PHINNEY² (1. ISGP,

University of British Columbia, Canada; 2. School of Nursing, University of British Columbia, Canada)

Introduction : The movement away from task-oriented care toward the consistent provision of person-centred care (i.e., care based on residents' needs and preferences) is widely recognized as the goal of long-term care (LTC) providers' culture change movement. The purpose of this study was to explore why the attainment of this goal has remained elusive for many LTC facilities, despite significant effort to alter practice. Method : We conducted an institutional ethnography to explore the textually-mediated work processes that influence the day-to-day work practices of front-line care staff in LTC settings. The social organization of LTC facilities was explored through the observation of care aides' practices and the interaction of those practices with institutional texts. Results : We found that, although they provided 80% of the care to residents, in all sites studied, care aides lacked practicable access to the institutional texts that contained important information relevant to the residents' care needs and preferences (e.g., assessments, care plans, social histories). The care aides primarily received and shared information orally, a process that was largely dependent upon the quality of their working relationships with one another and especially with management. Conclusion : Access to detailed knowledge of residents' needs and preferences is fundamental to the provision of person-centred care. The transfer of this knowledge to and between front-line care staff is dependent upon the quality of the relationships managers develop with and among care aides. Initiatives aimed at building positive and supportive work teams are essential to the attainment of the goal of person-centred care. Keywords : person-centred care; long-term care; institutional ethnography

**OP23 321-C
DEMENTIA I**

**OP23 321-C-1
TWO-TIER CLINICAL UTILITY OF THE CANTONESE
VERSION OF ADDENBROOKE'S COGNITIVE
EXAMINATION-REVISITED (C-ACER) IN DEMENTIA
ASSESSMENT**

Ray CHAN¹, Louise WONG², Jess LEUNG², Cho Yiu YUNG¹, Elaine CHENG¹ (1. Medicine & Geriatrics, United Christian Hospital, Hong Kong; 2. Psychiatry, United Christian Hospital, Hong Kong)

Introduction : Effective dementia management starts with timely recognition at the primary care and judicious confirmation at specialist level. However, this approach is compromised in our locality for lack of sensitive and handy screening tool and insufficient contact time at the clinics. Method : This is a two-phase study aiming at assessing the clinical utility of the C-ACER as a handy and useful tool for both screening and diagnostic purposes. The first (screening) phase 147 subjects (44 normal, 48 MCI, 55 dementia) were examined. C-ACER was validated against an expert diagnosis according to DSM-IV criteria for dementia and Petersen's criteria for MCI. Statistical analysis was performed using the receiver operating characteristic method and regression analyses. The second (diagnostic) phase is currently on-going to validate the five sub-domains of C-ACER against a semi-structured mental status examination. Results : The optimal cut-off score for the C-ACER to differentiate MCI from normal was 79/80 with sensitivity of 0.74, specificity of 0.84 and area under curve (AUC) of 0.84. At the optimal cut-off of 73/74, C-ACER had satisfactory sensitivity (0.93), specificity (0.95) and AUC (0.98) to identify dementia from normal. Performance of C-ACER was not affected by age and education level. Sub-domain analyses revealed

significant differences between the three groups on all except visuospatial ability subset ($p < 0.01$). Conclusion : C-ACER is a sensitive and specific bedside screening test to assess a broad spectrum of cognitive abilities, and to detect MCI and dementia of different severity. The promising empirical results of sub-domain analyses may indicate its further usefulness as a handy diagnostic tool. Keywords : C-ACER, Screening, Diagnosis

OP23 321-C-2

A NEW SIMPLE SCORE (ABS) FOR SCREENING BEHAVIORAL AND PSYCHOLOGICAL SYMPTOMS OF DEMENTIA

Koji ABE, Tomoko KURATA, Yumiko NAKANO, Kota SATO, Kosuke MATSUZONO, Yoshio IKEDA (*Neurology, Okayama University, Japan*)

Introduction : Dementia is an emerging problem not only in developed countries but also in many developing countries. In addition to cognitive impairment, behavioral and psychological symptoms of dementia (BPSD) are another important aspect of most dementia patients. Method : In the present study, a new BPSD score for dementia (ABS, Abe's BPSD score) is newly created based on the current status of BPSD in Japan, in which each BPSD item has a score already allotted with a different maximum score based on the frequency and severity of each of 10 BPSD items finalized with taking temporal occurrences into account. Results : This ABS is filled by main caregiver with full score of 44, takes only 46.5 ± 16.2 sec ($n=136$) to complete, but is still well correlated to a standard-detailed BPSD score neuropsychiatric inventory (NPI), tends to correlate with MMSE, and is sensitive to evaluate a change of BPSD after a drug therapy with ChEI for Alzheimer's disease (AD) in a baseline severity-dependent manner. Conclusion : Because ABS is good for mild to moderate AD and other types of dementia, ABS provides a simple and quick screening test for BPSD and thus be useful for evaluating BPSD in daily neurological dementia clinics or even in general medicine clinics. Keywords : dementia, BPSD, AD

OP23 321-C-3

LIVED EXPERIENCE OF MEDIA PRESENTATION FOR THE ALLEVIATION OF ANXIETY, AGITATION AND EMOTIONAL DISTRESS AMONG DEMENTIA PATIENTS IN NURSING HOME

Joohyun CHUNG¹, Seong-in CHOI², Jun KIM³ (*1. Department of Nursing, Utah Valley University, USA; 2. Psychology Department, Westminster College, USA; 3. Park Recreation Tourism Department, University of Utah, USA*)

Introduction : One's environment can offer support for cognitive impairment and emotional stability. Due to social environmental barriers such as policy, risk, health, safety, and staffing issues, it was not easy for dementia patients to connect with natural elements. The aim of this study was to explore dementia patients' experience of media presentation using natural scenes for the alleviation of anxiety, agitation and emotional distress. Method : Combining a phenomenological approach with quantitative data analysis were used to explore the meaning of experience with natural elements for dementia patients in nursing home. 28 Participants were exposed to fascinating natural scenes in a recreation room for 7-10 minutes once a day, three days a week, for two weeks. The patients' feelings and lived experiences with media presentation were investigated using semi-structured interviews with probing questions with 28 patients. Also daily chart review was used to count their weekly behavioral changes related to anxiety, agitation and emotional distress. Both Nvivo and

SPSS were used for data analysis. Results : The participants explained their experiences of media presentation using natural scenes as something make them happy, peaceful, calm, and the remind their youth/life. Quantitative data analysis supported that the number of hitting other residents ($p=.04$) and agitation ($p=.03$) were statistically significant different changes over the time. Conclusion : Understanding the phenomenon of "experience with watching natural for dementia patients" seems to influence a calming for them and to provide a feeling of relaxation and a sense of tranquility. It could provide valuable insight into the care of people with dementia. Keywords : dementia media presentation

OP23 321-C-4

PROFILE OF OLDER ADULTS IN MEMORY OUTPATIENT CLINIC SETTING AND APPLICATION OF NOVEL OCCUPATIONAL THERAPY TECHNIQUE IN PATIENTS WITH MILD TO MODERATE DEMENTIA

Prakash KUMAR¹, S.C. TIWARI², V. SREENIVAS³, Nand KUMAR¹, R.K. TRIPATHI², Prasun CHATTERJEE¹, A.B. DEY¹ (*1. Department of Geriatric Medicine, All India Institute of Medical Sciences, India; 2. Department of Geriatric Mental Health, King George's Medical University, India; 3. Department of Biostatistics, All India institute of Medical Sciences, India*)

Introduction : The prevalence of dementia in India is increasing rapidly with researchers and clinicians are working hard to prevent this disease and complications, but no definite remedy is available now. With drug therapy, occupational therapy (OT) may have some role at least in maintaining quality of life of patients having mild to moderate dementia. Method : 155 older subjects (new-95, old-60) in Memory clinic at AIIMS, New Delhi, India were included between June 2011-June 2012. After screened by a geriatrician, 99 were excluded [cognitive impairment with no dementia (CIND)], 56 patients were included (DSM IV criteria) and randomly assigned into experimental group received newly developed OT program along with the drug, control groups received only drug for a period of 5 weeks. Both groups were evaluated using a) Folstein MMSE, b) Geriatric Depression scale, c) Bristol ADL, d) Modified Physical Performance test, e) BEHAV-AD, f) WHO QOL for baseline and reassess after 5 weeks. Results : Mean age 68.16 having primary education (59.3%), up to class 12 (22.61 %), living with spouse (66.27%), living with spouse and family (24.40%), and married (72.09%), widowed (22.09%), unemployed (26.74%), retired (53.48 %). After application of novel OT experimental group show statistically improvement in domain of Depression ($p=0.044$), ADL ($p=0.031$), Physical performance ($p=0.042$), and quality of life ($p=0.043$), but within the Control group there is no significant difference in any of the six domains. Conclusion: The study reveals that the newly developed OT programme can improve behavioural status, ADL and quality of life domain in elderly dementia patients. Keywords : Dementia, Occupational Therapy

OP23 321-C-5

THE MEDICAL FOOD SOUVENAIID IMPROVES MEMORY PERFORMANCE AND PRESERVES FUNCTIONAL CONNECTIVITY IN MILD ALZHEIMER'S DISEASE

Philip SCHELTENS¹, Cees STAM², R. SHAH³, D. BENNETT³, Rico WIEGERS⁴, T. HARTMANN⁵, H. SOININEN⁶, Marcel OLDE RIKKERT⁷, Patrick KAMPHUIS⁴ (*1. Department of Neurology and Alzheimer Center, VU University Medical Center, Netherlands; 2. Department of Clinical Neurophysiology, VU University Medical Center, Netherlands; 3. Rush Alzheimer's Disease Center, Rush University Medical Center, USA; 4. Nutricia Advanced Medical*

Nutrition, Danone Research Centre for Specialised Nutrition, Netherlands; 5. Deutsches Institut für Demenz Prävention (DIDP), Neurodegeneration and Neurobiology, Experimental Neurology, Germany; 6. Department of Neurology, University of Eastern Finland and Kuopio University Hospital, Finland; 7. Radboud Alzheimer Centre, Dept Geriatric, Radboud University Hospital, Netherlands)

Introduction : In early Alzheimer's disease (AD), memory dysfunction is a key manifestation and thought to be associated with reduced synaptic contacts. Souvenaid® is a medical food, containing the nutrient combination Fortasyn™ Connect1, designed to improve synapse formation and function in AD. The nutrients in Fortasyn Connect are precursors and cofactors for the formation of neuronal membranes, and increasing their intake can promote the synthesis of new synapses. **Method :** The efficacy of Souvenaid is evaluated in the global clinical development program. **Results :** Two multi-country RCTs of 12- and 24-week duration demonstrated that Souvenaid improved memory performance in drug-naïve mild AD patients ('Souvenir I' and 'Souvenir II'). The 24-week open-label extension following Souvenir II showed a significant further improvement of the exploratory memory outcome and that Souvenaid was well-tolerated (compliance ≥95%) throughout 48 weeks. The S-Connect RCT did not show an effect on cognition in mild to moderate AD patients using AD medication. Electroencephalography (EEG) measures were included in Souvenir II2 to study neuronal activity and thus indirectly synaptic activity. Significant EEG differences suggest that Souvenaid preserves functional connectivity and brain network organization in mild AD, supporting the hypothesis of changed synaptic activity. **Conclusion :** These results suggest that Souvenaid might be most efficacious in early AD and warrant long-term trials in the very early AD process, like the currently ongoing 24-month LipiDiDiet study3 in prodromal AD. Main and recent findings will be presented. 1Souvenaid and Fortasyn are N.V. Nutricia trademarks. 2Partly funded by NL FND project N°10003. 3Funded by the EU FP7 project LipiDiDiet, Grant Agreement N°211696. **Keywords :** Alzheimer, clinical trial, nutrition

OP23 322-C **GERIATRIC ASSESSMENT I**

OP23 322-C-1 **INCIDENT ISCHAEMIC HEART DISEASE IN PERSONS WITH ALZHEIMER'S DISEASE IN A FINNISH NATIONWIDE EXPOSURE-MATCHED COHORT**

Anna-maija TOLPPANEN¹, Raimo KETTUNEN², Riitta AHONEN³, Hilikka SOININEN⁴, Sirpa HARTIKAINEN⁵ (1. Institute of Clinical Medicine/Neurology, University of Eastern Finland, Finland; 2. School of Medicine, University of Eastern Finland, Finland; 3. School of Pharmacy, Social Pharmacy, University of Eastern Finland, Finland; 4. Institute of Clinical Medicine/Neurology, University of Eastern Finland and Department of Neurology, Kuopio University Hospital, Finland; 5. Kuopio Research Centre of Geriatric Care and Pharmacology and Geriatric Pharmacotherapy Unit, University of Eastern Finland, Finland)

Introduction : Cardiovascular diseases are associated with Alzheimer's disease (AD), but the incidence of cardiovascular disease after AD has been studied less. We assessed whether persons with AD had more incident ischaemic heart disease (IHD). **Method :** We conducted an exposure-matched cohort study including all 28093 community-dwelling individuals with clinically verified diagnosis of AD, residing in Finland and alive on December 31, 2005. Participants were identified from the National Prescription and Special Reimbursement Registers. One matched comparison person was identified for each

participant with AD. We assessed the associations between AD and any IHD event (diagnosed IHD/revascularisation procedure), diagnosed IHD (myocardial infarctions and other IHD), and revascularisation procedure (angioplasty or bypass). Information on outcomes was extracted from the National Hospital Discharge Register. Analyses were restricted to incident events during 2006-2009 and 25325 AD-comparison person pairs were included in the analysis after excluding events occurring in 2002-2005. **Results :** People with AD were more likely to have incident IHD diagnosis than AD-free comparison persons (adjusted HR, 95% CI 1.16, 1.06-1.28) but less likely to undergo revascularisation procedures (0.12, 0.08-0.20). There were no differences in all incident IHD events (0.95, 0.87-1.04). **Conclusion :** Persons with AD had a higher risk of incident ischaemic heart disease when comorbidities and cardiovascular medication were taken into account, but they were less likely to undergo revascularisation procedures. This was not entirely explained by contraindications. We acknowledge the need for more detailed studies assessing whether this reflects undertreatment of cardiac problems among persons with AD. **Keywords :** Alzheimer's disease, cohort studies, cardiovascular

OP23 322-C-2 **EXPLORATION OF VARIATION IN VULNERABILITY ASSESSMENT OF OLDER PEOPLE BY INDIVIDUAL GENERAL PRACTITIONERS**

Yvonne M. DREWES¹, Jeanet W. BLOM¹, Willem J. ASSENDELFT¹, Theo STIJNEN², Wendy P. DEN ELZEN¹, Jacobijn GUSSEKLOO¹ (1. Public Health and Primary Care, Leiden University Medical Center, Netherlands; 2. Medical Statistics and Bioinformatics, Leiden University Medical Center, Netherlands)

Introduction : Although there are many definitions of vulnerability, GPs appeared to have an own internalized concept. The aim of our study is to investigate the variation in vulnerability concepts between GPs. **Method :** Seventy-seven GPs of the ISCOPE study, a prospective randomized controlled trial in general practices, categorized their 75-plus patients (n=11,392) in non-vulnerable, possible vulnerable and vulnerable patients. We collected personal and practice characteristics of the GPs and socio-demographic, medical, psychological, functional and social patient characteristics of 2828 patients. We tested the variance in GP's vulnerability assessments with mixed effects logistic regression. **Results :** GPs assessed vulnerability of 10,653 (93.5%) 75-plus patients. The median percentage 75-plus patients assessed as vulnerable was 32.0% (IQR 19.5-40.1%, range 2.4 - 81.0%). This variation is not only due to differences in patient population, of GPs but also depends on the weight GPs attribute to patient characteristics in the vulnerability assessment. GPs equally take into account medical patient characteristics (number of diseases, polypharmacy). We found heterogeneity in their weight on functional status (IADL median OR 2.8 (90% range 2.1-3.7), BADL median OR 2.4 (90% range 1.4-4.3) and residential status (median OR 2.7 (90% range 1.5-4.7)). **Conclusion:** The variation in vulnerability assessments by GPs is related to patient characteristics. GPs share a unique perspective on what defines vulnerability in the medical domain, but are heterogeneous in the weight on functional status. **Keywords :** vulnerability, general practice, assessment

OP23 322-C-3 **MOBILE GERIATRIC TEAM AND LENGTH OF HOSPITAL STAY AMONG OLDER INPATIENTS: A CASE-CONTROL PILOT STUDY**

Cyrille LAUNAY¹, Laure DE DECKER², Raphaelle HUREAUX-HUYNH¹, Cedric ANNWEILER³, Olivier BEAUCHET³

(1. Geriatrics, Angers University Hospital, France; 2. Geriatrics, Nantes University Hospital, France; 3. Neuroscience and Geriatrics, Angers University Hospital, France)

Introduction : The aim of this study was to determine whether the mobile geriatric team (MGT) intervention was associated with shorter length of hospital stay (LHS) amongst older adults admitted in Emergency Departments (ED) and discharged to acute care units. **Method :** Between March 15th and April 4th 2011, 43 inpatients (mean age 84.2±5.0 years, 62.5% women) who benefited from MGT intervention and 130 hospitalized controls without GMT intervention (mean age 84.9±5.5, 67.7% women) were prospectively included in this case-control study. The length of stay was calculated using the administrative registry of Angers University Hospital and corresponded to the delay in days between the first day of admission to ED and the last day of hospitalization in an acute care unit. **Results :** There were no significant differences between cases and controls participants regarding baseline characteristics. Inpatients who benefited from MGT intervention had a shorter LHS than controls (12.6±8.5 versus 18.8±10.7 days, P=0.001). Univariate and multiple linear regressions showed that MGT intervention was associated with shorter LHS (P=0.001 and P<0.001, respectively). MGT intervention was associated in our study with a reduction of LHS of about 6 days (i.e., approximately 33% of total LHS). **Conclusion :** MGT intervention was associated with shorter LHS amongst older adults admitted in Emergency Departments (ED) and discharged to acute care units. **Keywords :** geriatric assessment; mobile geriatric team; emergency; length of hospital stay; older adults

OP23 322-C-4

WHICH COMORBIDITY INDEX SHOULD BE USED WHEN ASSESSING MORTALITY?

Nicolas MARTINEZ-VELILLA¹, Berta IBANEZ-BEROIZ², Koldo CAMBRA-CONTIN², Javier ALONSO-RENEO³ (1. Geriatric Department, Complejo Hospitalario de Navarra, Spain; 2. Centro de Investigacion Biomedica, Fundacion Miguel Servet, Spain; 3. Servicio de Geriatria, Complejo Hospitalario de Navarra-A, Spain)

Introduction : There are several indices for the prediction of mortality of older hospitalized adults after discharge. Although these indices have been developed with high-risk patients, their use has not been incorporated into daily practice. The goal of this prospective study was to compare the performance of 7 comorbidity indices for the prediction of early and late mortality and to assess if the most used index (Charlson Index) is appropriate for older hospitalized patients. **Method:** We carried out a prospective study in a tertiary teaching hospital, in relation to 122 patients admitted to the Geriatric Department. After a comprehensive geriatric evaluation, 7 comorbidity indices were developed for every patient: Charlson Index (CI), Cumulative Illness Rating Scale-Geriatric (CIRS-G), Geriatric Index of Comorbidity (GIC), Number of Diagnosis (ND), Burden of Illness Score for Elderly Persons (BISEP), Index of Disease Severity (IDS) and Prognostic index for 1-year mortality (PI). The area under the receiver operator characteristic (ROC) curve was used to assess predictive power. **Results :** The prognostic ability of each index determines a pattern for early and late mortality. After one year, BISEP and GIC indices performed better (ROC 0.686 and 0.699), but at after 5 years BISEP and PI were the best (ROC 0.729 and 0.724). When age, cognitive impairment and Barthel index were considered as prognostic factors alone, the ROC was 0.80. **Conclusion :** The main prognostic factors for mortality are age, cognitive impairment and Barthel index. The best comorbidity index at one year are BISEP and GIC, and at five years BISEP and PI. **Keywords :** comorbidity scores,

mortality, multimorbidity

OP23 322-C-5

COMPARATIVE STUDY OF CO-MORBIDITY PROFILES AND PREDICTORS OF MORTALITY IN ELDERLY MALE AND FEMALE OF INDIAN URBAN POPULATION, ATTENDING TO EMERGENCY DEPARTMENT OF TERTIARY CARE SETUP

P.C. DAS, Amarendra Amar JHA, Prasun CHATTERJEE, Ramesh KANDEL, Prakash KUMAR, A.B. DEY (Department of Geriatric Medicine, All India Institute of Medical Sciences, India)

Introduction : Elderly people are prone to hospitalization and experience adverse outcomes after they are discharged from emergency department. Scientific data on mortality and morbidity profiles of elderly patients attending to Emergency Department(ED) is still lacking. This study was conducted at All India Institute of Medical Sciences (AIIMS) India to get an idea of gender variations in terms of the emergency attendance, associated demographic and health related factors and to find out the predictors of mortality after discharge. **Method :** A Prospective longitudinal study, conducted between July 2009 -December 2010. Patients aged 60 years or more, who attended Emergency department, were assessed for the above mentioned health related factors and followed up at one month after discharge. **Results :** Among the 999 elderly patients attending ED, 55% were males and 45% were females. Males presented with breathlessness (19%), altered sensorium (14.8%), chest pain (10.6%), diarrhea and vomiting (9%), fever (8.4%) and pain abdomen (5.1%). Females presented with breathlessness (20.4%), altered sensorium (12.2%), fever (11.7%), diarrhea and vomiting (11.7%), pain abdomen (8.8%) and chest pain (8.2%). One month after discharge from emergency visit, follow-up showed 26.2% of the patients had died. Cancer, falls, Hypertension and Chronic Obstructive Pulmonary Disease were statistically significant as a predictor of mortality whereas age, gender, polypharmacy, Diabetes, Cerebrovascular Disease and life style factors like smoking and obesity were not significantly associated with 1 month mortality in our study population. **Conclusion :** Health-care of the elderly require special attention irrespective of gender and age with an eye to prevent 30 days post-discharge mortality. **Keywords :** Co-morbidity, Geriatric Emergency, Post discharge mortality,

OP23 323-C

DEMENTIA II

OP23 323-C-1

FREQUENT PERIODIC LIMB MOVEMENTS ARE ASSOCIATED WITH DEMENTIA WITH LEWY BODIES AND A HIGHER RISK OF FALLS

Yasuhiro YAMAGUCHI, Shinichiro HIBI, Yumi UMEDA-KAMEYAMA, Hiroshi YAMAMOTO, Katsuya IJIMA, Masahiro AKISHITA, Yasuyoshi OUCHI (Department of Geriatric Medicine, CC0002, Japan)

Introduction : Although dementia with Lewy bodies (DLB) is a common form of neurodegenerative dementia, the clinical diagnosis is frequently difficult. This study evaluated the relationship of periodic limb movements (PLM) with DLB and its clinical phenotype because both REM sleep behavior disorders and Parkinson's disease have alpha-synucleinopathy similar to DLB, and show an increase in PLM. **Method :** Overnight polysomnographic recordings were performed for the inpatients who were suspected to have dementia. The PLM were compared among the patients clinically diagnosed with DLB,

Alzheimer's disease (AD) or as having no dementia. In addition, the study evaluated the association between the PLM and a past history of falling within 1 year. Results : Nine DLB patients, twelve AD patients and ten non-demented patients were enrolled in the study. The number of PLM during sleep per hour of total sleep time (PLMS index) was significantly higher in the DLB patients than the AD patients or the non-demented patients. In addition, the patients with a PLMS index > 15 showed a significantly higher incidence of falling than the patients with a PLMS index <15. Conclusion : The DLB patients exhibited a higher PLMS index than the AD patients. This index could be therefore clinically useful for the diagnostic differentiation of DLB from AD. In addition, a higher PLMS index was found to be associated with a higher incidence of falls, thereby possibly reflecting the existence of Parkinsonism. Keywords : periodic limb movements, dementia with Lewy bodies, fall

OP23 323-C-2

THE EFFECT OF CAROTID ARTERY STENTING ON COGNITIVE FUNCTION IN PATIENTS WITH CAROTID ARTERY STENOSIS: A PROSPECTIVE, 3 MONTHS FOLLOW-UP STUDY

Kyung Won PARK¹, Byel A. YOON¹, Myung-jin KANG², Dae-Hyun KIM³, Jae Kwan CHA³ (1. Neurology, Dong-A University College of Medicine, Korean Dementia Association, Korea; 2. Radiology, Stroke center, Dong-A University College of Medicine, Korean Dementia Association, Korea; 3. Neurology, Dong-A University College of Medicine, Korean Stroke Association, Korea)

Introduction : The effects of carotid artery stenting (CAS) on cognitive function in patients with carotid artery stenosis have not been fully addressed. The aim of this study is to assess the effect of CAS on cognitive function in patients with carotid artery stenosis compared with control subjects. Method : We consecutively recruited 30 patients underwent CAS with high grade carotid artery stenosis ($\geq 70\%$) and 10 control subjects at baseline. Twenty two out of 30 patients underwent CAS and 9 out of 10 control subjects were included in our analyses. Main cognitive outcome measures were the Seoul Neuropsychological Screening Battery-Dementia version (SNSB-D) test which containing several cognitive domains. We evaluated the mean differences of cognitive outcome measures using SNSB-D in our cases between patients with CAS and control group from baseline to 3 months follow-up period, respectively. Results : The demographic findings and general cognitive function in patients with CAS (n=22) and control group (n=9) at baseline were as follows: age (67.1 ± 8.2 vs. 61.1 ± 7.4) and the score of mini-mental state examination (25.5 ± 3.7 vs. 26.2 ± 2.6). Twelve out of 22 patients with CAS had asymptomatic CS. During 3 months follow-up period, the patients with asymptomatic CS (n=12) as well as all patients underwent CAS (n=22) did not show significant change differences in all cognitive outcome measures compared with control group (p>0.05). Conclusion : Our results suggest that the effect of CAS on cognitive function were not detected in patients with carotid stenosis as compared with control group during 3 months follow-up. Keywords : carotid artery stenosis , carotid artery stenting , cognitive function

OP23 323-C-3

LOW BMI PREDICTS INCIDENT ALZHEIMER'S DISEASE IN OLDER ADULTS WITH AMNESTIC MILD COGNITIVE IMPAIRMENT. A 3-YEAR PROSPECTIVE COHORT STUDY

Leung-wing CHU (Department of Medicine, Queen Mary Hospital, The University of Hong Kong, Hong Kong)

Introduction : Weight loss is associated with subsequent development of Alzheimer's disease (AD). The objective of the present prospective

study was to investigate BMI as a predictor of progression to AD in older adults with aMCI. Method : Design: A three-year prospective cohort study; Setting: Ambulatory setting. Subjects: Chinese older adults, aged 55 to 93 years old, with aMCI by the Petersen's criteria. Measurements: Baseline demographic, BMI and clinical factors, and apolipoprotein E genotype. All subjects were followed for three years. AD was diagnosed by the NINCDS-ADRDA criteria for probable AD. Results : 138 Chinese older adults with aMCI were recruited. 25.4% (n=35) of them progressed to Alzheimer's disease by the end of three years. In multivariate logistic analyses, after adjustment for age, sex and apolipoprotein E genotype, low BMI and ischemic heart disease (IHD) were independent predictors of progression to AD. IHD increased the risk (RR =3.17, 95% CI 1.01, 9.13), and BMI reduced the risk (RR=0.88, 95% CI 0.77, 0.99). Age but not apolipoprotein E genotype also increased the risk. Conclusion : In older adults, low BMI predicts an increased risk of AD. Low BMI represents a preclinical somatic sign of pre-AD among aMCI older adults. Keywords : BMI, MCI, Alzheimer's disease

OP23 323-C-4

IMPACT OF DEMENTIA ON HIP FRACTURE MANAGEMENT IN GERIATRIC DEDICATED UNIT. PRELIMINARY RESULTS

Lorene ZERAH¹, Judith COHEN-BITTAN¹, Frederic KHIAMI², Mathieu RAUX³, Anthony MEZIERE⁴, Marc VERNY¹, Bruno RIOU⁵, Jacques BODDAERT¹ (1. Geriatric Department, Peri-Operative Unit, Pitie-Salpetriere Hospital, APHP. UPMC Paris 6, France; 2. Orthopedic Surgery, Pitie-Salpetriere Hospital, APHP. UPMC Paris 6, France; 3. Anesthesiology Department, Pitie-Salpetriere Hospital, APHP. UPMC Paris 6, France; 4. Rehabilitation Unit, Charles Foix Hospital, APHP. UPMC Paris 6, France; 5. Emergency Department, Pitie-Salpetriere Hospital, APHP. UPMC Paris 6, France)

Introduction : Dementia and hip fracture are frequent in elderly patients. However, studies on weight of dementia on prognosis in hip fracture surgery are scarce. The aim of our study was to analyze clinical and functional outcomes, and mortality in elderly patients admitted for hip fracture with dementia compared to patients without dementia. Method : We present the preliminary results of our monocentre study during a 30 months period (09/2009 - 03/2012). Patients admitted to the Emergency department with hip fracture and to our Geriatric Peri-Operative Unit were included. Dementia was defined by a diagnosis prior to the admission and/or a specific treatment. In-hospital parameters were reported with a 6 months follow-up. Results : 187 patients (age 86 ± 7 years) were included, 76 with dementia and 111 without. Before admission, dementia was associated with a greater functional decline (IADL 5 ± 3 vs 5 ± 3 , p < 0.0001), without any difference for associated comorbidities. After surgery, dementia was only associated with delirium (59 vs 24 %, p<0.0001). There was no difference for in hospital (90 vs 86 %, p = 0.6) or 6 months (25 vs 26 %, p > 0.9) walk ability. We found no significant difference between demented and non demented patients for in-hospital (6% vs 2%, p=0.3) and 6 months (16% vs 11%, p=0.6) mortality. Conclusion : Our results suggest that a geriatric dedicated management in patients with hip fracture leads to a comparable prognosis between patients with and without dementia. Keywords : hip fracture, orthogeriatrics, dementia

OP23 323-C-5

A NOVEL FAMILIAL PRION DISEASE CAUSING COGNITIVE IMPAIRMENT, POLYNEUROPATHY AND PAN-AUTONOMIC INVOLVEMENT

Kosuke MATSUZONO, Yoshio IKEDA, Shoko DEGUCHI, Tomoko KURATA, Toru YAMASHITA, Kentaro DEGUCHI, Koji ABE (Neurology, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Science, Japan)

Introduction : A 34-year-old Japanese female showed complex symptoms consist of polyneuropathy, memory disturbance, dysuria, alternate stool abnormality, and orthostatic hypotension started at age 26 years. Her mother had been suffered from similar disease, and died suddenly at age 49 years. **Method :** We performed neurological examination. The brain MRI and the single photon emission computed tomography (SPECT) with ^{99m}Tc -ethylcysteinate dimer (^{99m}Tc -ECD) were performed. The peripheral nerve conduction studies (NCSs) and the sural nerve biopsy were also performed. The 14-3-3 and tau proteins in CSF and the prion gene analysis were examined. **Results :** Tendon reflexes showed generalized areflexia. She had severe thermoanesthesia and hypoalgesia in lower limbs. Severe orthostatic hypotension was observed with changes of blood pressures from 115/80mmHg (lying) to 59/35mmHg (standing). Her cognitive function was mildly affected: Mini-Mental State Examination 27/30, and Frontal Assessment Battery 12/18. The brain MRI showed neither cerebral atrophy nor abnormal signal intensities. The SPECT showed decreased CBF mild diffusely. The NCS showed the compound muscle action potential in tibial nerves and the sensory nerve action potential in sural nerves were evoked. The CSF 14-3-3 and tau proteins were remarkably elevated 1125 $\mu\text{g}/\text{ml}$ and 2994 pg/ml , respectively. The prion gene analysis showed a 2 bp deletion in codon 178 that causes a premature stop codon and additional variable 25 amino acid C-terminal from the mutation. Unlike normal sural nerve, prion protein staining of the biopsy revealed ragged deposits in myelin. **Conclusion :** The novel prion gene mutation caused the characteristic complex phenotype of the peripheral neuropathy, cognitive disturbance and autonomic failure. **Keywords :** Prion disease, Novel gene mutation, HSN

OP23 323-C-6

DO THEY SUFFER? A STUDY OF THE PREVALENCE OF PAIN IN MODERATE TO SEVERE DEMENTED ELDERLY SUBJECTS RESIDING IN NURSING HOME

Doris Ka Ying MIU¹, Wendy Kc CHAN² (1. Medicine and Geriatrics, Kwong Wah Hospital, Hong Kong; 2. Private Practice, Hong Kong)

Introduction : Cognitively impaired elderly tend to have a decrease ability to communicate and report pain complaints which resulted in under-detection and under-treatment. We aimed to describe the prevalence of pain in moderate to severe demented nursing home elderly and to determine factors associated with pain. **Method :** Nursing home residents age >60 with MMSE <20 were recruited. Demographic data and comorbidity were recorded. Use of analgesics, restraints, presence of depression and behavioural disturbances were collected from medical records and from caretakers. Presence of pain was assessed by PAIN-AD. **Results :** 309 residents were included with a mean age of 85 (SD 7.5) and mean MMSE 9.6(SD 6.3). 61.5% experienced pain as defined by PAIN-AD>2. Only 30.7% have received analgesics. Subjects who experienced pain were more severely demented (mean MMSE 8.3 vs 11.2, $p=0.001$), male sex (45.3% vs 32.8%, $p=0.029$), poor mobility level (bed bound 71% vs walk with aids 35.2%, $p=0.003$), more likely to be put on restraints (74.2% vs 49.6%, $p<0.001$), prescribed with psychotropic drugs (38.1% vs 25.4%, $p=0.022$), presented with physical aggression (22.1% vs 10.9%, $p=0.012$) and non-communicable (41.6% vs 24.4%, $p=0.002$). The major predictors for pain were use of restraint (OR 3.1).and poor MMSE (OR 0.94). **Conclusion :** Pain is highly prevalent

among moderate to severe dementia nursing home residents and is associated with the use of restraints. However, only half of these subjects have been prescribed with analgesics. Improvement in carer's knowledge of pain assessment with provision of adequate treatment is necessary for caring of these groups of dementia subjects. **Keywords :** pain, dementia

OP23 324-C

EPIDEMIOLOGY OF AGING I

OP23 324-C-1

MORTALITY RISKS OF OLDER PERSONS LIVING ALONE IN THE SINGAPORE LONGITUDINAL AGEING STUDIES COHORT

Jin AIZHEN¹, Tze-pin NG², Liang FENG³, Ma Shwe Zin NYUNT³, Feng LEI² (1. Research and strategic Planning, Health Promotion Board, Singapore; 2. Psychological Medicine, National University of Singapore, Singapore)

Introduction : Elderly individuals living alone are vulnerable to poverty, social isolation, and adverse psychological and health outcomes. In Singapore (5 million), the proportion of older persons living alone is expected to grow 2.4 fold by 2030. Many cohort studies have variously reported that living alone was associated with increased mortality that were either stronger among men than women, or only among men, or paradoxically, with decreased mortality risk. **Method :** We investigated the mortality risk associated with living alone among 2553 older adults using data from 8 years mortality follow up of the SLAS cohort, from September 2003 to December 2011. **Results :** Compared to participants living with others, participants living alone (N=189, 7.4%) included significantly more who were older, female, had depressive symptoms, and living in low-end housing, but not significantly different in number of medical conditions or IADL-ADL disability. A total of 227 (8.7%) participants died. Participants who lived alone showed significantly higher sex- and age-adjusted mortality (HR=1.79, 1.15-2.77), which remained elevated after adjustment for housing type, multiple co-morbidities, IADL-ADL disability and depressive symptoms: adjusted HR=1.85 (1.18-2.88). Higher sex- and age-adjusted mortality risks associated with living alone were particularly found among subgroups of men (HR=2.82, $p=0.0007$), younger old <75 years (HR=2.45, $p=0.0015$), living in lower end housing (HR=1.77, $p=0.029$), and with multiple comorbidities (HR=1.92, $p=0.007$). **Conclusion :** Among Singaporean older persons, living alone was associated with increased mortality, especially among men, the younger old, and those with social and health deprivations. **Keywords :** Mortality, elderly, living alone

OP23 324-C-2

HEALTH STATUS OF IRANIAN OLDER PEOPLE: A DEMOGRAPHICAL ANALYSIS

Fatemeh SHOAEI¹, Vida ALIZAD², Malihe SABOOR² (1. Department of Counselling, The University of Social Welfare and Rehabilitation Sciences, Iran; 2. Iranian Research Center on Ageing, The University of Social Welfare and Rehabilitation Sciences, Iran)

Introduction : Ageing is a challenging phenomenon due to the fact that older people are heterogeneous individuals with special needs declining health status and consuming more services. The aim of this study was to explain the physical and mental health of older people based on their demographic variables. **Method :** A correlation design conducted through logistic regression. A demographic page and the Short Form (36) Health survey were administered by trained interviewers to 250 participants in Tehran, Iran in 2012. Participants

were recruited based on a classified multi stage sampling procedure. Results : Compared to women, men had better physical health. Low-income elderly had lower score in general, physical and mental health. Elderly residing at home or with an extended family did not face the same general and physical health in comparison with their peers at nursing homes, though their mental health was similar. Marriage provided general, physical and mental health benefits for elderly whereas, high level of education were associated with physical and mental health. Being caregiver was related to better physical health while having caregiver was associated with better mental health. Age, income and education predicted both physical and mental health. Sex, mental health, marital status, being caregiver and having caregiver predicted physical health while physical health predicted mental health. All studied variables except sex and mental health predicted significantly place of residence. Conclusion : Demographic variables predict health status of older people like other mental and physical variables. Policy makers should focus on variables predicting health status of elderly to have successful ageing in future. Keywords : Physical and mental health, Demographic variables, Older people, SF-36

OP23 324-C-3

THE HEALTH STATUS OF OLDER PERSONS IN MONGOLIA
Oyunkhand RAGCHAA¹, Byambasuren ERDENEKHUYAG², Zandi NYAMJAV³, Ochir CHIMEDSUREN⁴, Batsereedene BYAMBAA⁵
(1. Administration, National Gerontology Center, Mongolia; 2. Health Systems Research, Center for Health Development, Mongolia; 3. Training, Research and Foreign Affairs, National Gerontology Center, Mongolia; 4. School of Public Health, Health Sciences University, Mongolia; 5. Administration, 'Etugen' Medical School, Mongolia)

Introduction : In Mongolia, the population ageing process will begin in about 15 years and will accelerate the following 20 years. Goal Determine the health status of Mongolian elders in terms of physical, social and mental health. Method : One cluster from each of the 5 economic-geographical regions of Mongolia was chosen randomly and was comprised of 1207 elderly. The research was conducted by using the internationally recognized GDS with 30 items, ADL, IADL and MMET tests. Results : Out of survey involved 1207 elderly, 392 (32.5 percent) referred to men, 815 (67.5 percent) women and their mean age was 68.1±8.1. In terms of morbidity, 81.2 percent was suffered from diseases of cardio vascular system, 60.5 from urogenital system, 55.8 percent from diseases of eye and its adnexure, and 39.3 percent from diseases of digestive system in duplicated number. The mental and behavioral diseases refer to be 9.7 percent among total morbidity. Sixty point three percent of respondents were with normal cognitive ability, while 2.2 percent were with severe type cognitive impairment. Depression found to be 188 and anxiety 165 per 1000 elders. Among survey involved elderly, 87.4 percent had kept their ADL, while the loss of IADL was found for 29.9 percent, of which using the telephone was impaired mostly. Conclusion : 1. Fourteen point four percent of elderly found to be physically healthy, while 85.6 percent were ill and had approximately 3-4 diseases per person. 2. The prevalence of mental and behavioral diseases refers 9.7 percent among elderly. Keywords : ageing, disease

OP23 324-C-4

A CROSS-SECTIONAL SURVEY ON DISEASE CONSTITUTION OF ELDERLY INPATIENTS IN XUANWU HOSPITAL, CAPITAL MEDICAL UNIVERSITY IN 2011
Chen LIU , Yuqin WANG (Department of Pharmacy, Xuanwu Hospital, Capital Medical University, Beijing, China)

Introduction : Aging has become one of the most important social problems all over the world. This study focuses on disease constitution of elderly inpatients in our hospital in 2011 to learn about the local diseases burden and provide baseline data for further study. Method : Elderly (patients more than 60 years old) inpatients records in our hospital in 2011 were collected. Based on all the diagnosis in medical record at discharge, the diseases were standardized and classified according to the International Classification of Disease, 10th Edition (ICD-10). Data including general information of the inpatients and discharge diagnosis were rearranged and analyzed by Microsoft Excel 2003. Results : ①The total number of elderly inpatients were 13807 in 2011, and males were more than females (1.26:1). The average kind of disease each patient was diagnosed with was 4.41, ranging from 1 to 11. ②For patients with only one disease, nervous system diseases (26.17%) ranked first. For patients with two diseases, circulatory system diseases ranked first both in the primary (21.51%) and secondary (45.57%) disease. ③All the diagnosis included 18 categories; circulatory system diseases (42.54%) ranked first. The primary diagnosis included 18 categories; circulatory system diseases (31.07%) ranked first. ④In the circulatory system diseases, cerebral infarction (17.90%) ranked first. Conclusion : The disease constitution of elderly inpatient in our hospital is comprehensive. The disease burden of circulatory system diseases is heavy. In the following studies attention should be paid on drug utilization of circulatory system diseases to provide evidence for making the China specific elderly caring clinical pathway. Keywords : Disease Constitution, Elderly Inpatients, Cross-sectional Survey

OP23 324-C-5

CLINICAL PROFILE OF THE ELDERLY PATIENTS VISITING TO GERIATRIC OUT PATIENT DEPARTMENT OF ALL INDIA INSTITUTE OF MEDICAL SCIENCES, NEW DELHI

A.K. AMBASHTHA, P.C. DAS, P. CHATTERGEE, A.B. DEY
(Geriatric Medicine, All India Institute of Medical Sciences, New Delhi, India)

Introduction : The clinical profile and the prevalence of "Geriatric syndromes" among older patients in India is uncertain both in community and hospital settings, which affect the quality of life of a patient and are associated with disability. This study was conducted to determine the prevalence of geriatric syndromes and the associated comorbidities in a dedicated outpatient clinic of All India Institute of Medical Sciences, New Delhi and to correlate their association with commonly encountered co-morbidities. Method : OPD records of 343 older patients of the Geriatric Clinic of All India Institute of Medical Sciences, New Delhi, India, were reviewed between August 2010 and January 2011. Data on prevalence of comorbidities and Geriatric syndromes were collected and statistically analyzed for the significance of their association. Results : The mean age was 70.19(+5.60 years). Males outnumber the females and most of the elderly patients were between the age group of 70 to 79yrs (50%). The commonly associated co-morbidities were hypertension (39.4%), diabetes (21.6%), cataract (12.5%), COPD (10.5%) and osteoarthritis (OA) (8.2%). The prevalence of geriatric syndromes: Depression 28(8.2%), Dementia 5(1.5%), Falls 26(7.6%), Incontinence 15(4.4%) and Functional dependency 37(10.9%) were found. In our study CAD and osteoarthritis were strongly associated with dementia (p=0.000) and falls (p=0.004) respectively. CVA was significantly associated with depression (p=0.010) and falls (p=0.007). Conclusion : Multiple comorbidities and Geriatric syndromes were very common in patients visiting to Geriatric OPD. Comorbidities are very often independently

associated with these geriatric syndromes. Hence early recognition and management of these conditions is needed to prevent disability in elderly. Keywords : Geriatric syndromes, elderly, comorbidities

OP23 325-C

HEALTH PROMOTION AND DISEASE PREVENTION I

OP23 325-C-1

COMBINED RESISTANCE AND BALANCE-JUMPING EXERCISE REDUCES OLDER WOMEN'S INJURIOUS FALLS AND FRACTURES: A 5-YEAR FOLLOW-UP OF A 12-MONTH RANDOMIZED, CONTROLLED TRIAL

Saija KARINKANTA¹, Pekka KANNUS¹, Matti PASANEN¹, Kirsti UUSI-RASI¹, Ari HEINONEN², Harri SIEVANEN¹ (1. The Musculoskeletal Research Group, The UKK Institute for Health Promotion Research, Finland; 2. Department of Health Sciences, University of Jyväskylä, Finland)

Introduction : Earlier, 1-year four-arm RCT study was conducted among 70-79 year-old home-dwelling Finnish women (the KAAMU study, n=149). Exercise groups did either resistance, balance-jumping, or combined resistance and balance-jumping (COMB) training. The COMB group benefited most and improved muscle strength, balance, physical functioning and bone strength - all important risk factors for falls and fractures. The current 5-year follow-up reports the rate of injured fallers, injurious falls, and fractures among the participants. Method : Participants' health care visits from the end of the intervention (2003) to end of the year 2008 were collected from the computerized patient files. An injurious fall was defined as an event in which the subject contacted the health care system, or was taken to a hospital, due to a fall. The rate of injured fallers was assessed by Cox proportional hazard model, and that of injurious falls and fractures by Poisson regression. Age was used as a covariate. Results : 81 injurious falls including 26 fractures occurred during the follow-up. The rate of injured fallers was 62% lower in the COMB group compared to the controls (HR 0.38, 95% CI 0.17 to 0.85). In addition, the COMB group had 51% less injurious falls (RR 0.49, 95% CI 0.25 to 0.98) and 74% less fractures (RR 0.26, 95% CI 0.07 to 0.97). Conclusion : A 12-month intensive multi-component exercise seems to reduce older women's risk for injurious falls and fractures for years after the intervention. The intervention can be recommended for home-dwelling older women to prevent functional decline and fall-induced injuries. Keywords : exercise, injurious falls, fractures

OP23 325-C-2

A PILOT STUDY IN PRIMARY CARE USING Pedometer TO PREDICT PROSPECTIVE FALLS AMONG COMMUNITY-DWELLING OLDER ADULTS

Boon Chong KWOK¹, Yong Hao PUA² (1. Clinical Service - Allied Health, National Healthcare Group Polyclinics, Singapore; 2. Department of Physiotherapy, Singapore General Hospital, Singapore)

Introduction : The aging population is estimated to triple in the next forty years. Early fall risk detection in the community is important. Older adults with decreased physical activity are at risk of falls. This prospective pilot study evaluates the use of pedometer to predict falls among community-dwelling older adults. Method : Fifty-three community-dwelling volunteers age 60-85 were recruited for the study. Falls occurrence was collected over a year. Participants were assessed with Physiological Profile Assessment (PPA), Timed-Up-and-Go (TUG) test and Falls Efficacy Scale-International (FES-I) short form questionnaire. Stride length was measured with a 10-metre

walk (adjusted with leg length). Participants recorded pedometer readings (steps per day) daily over a month. Results : There were 39 non-fallers and 14 fallers at the end of 1-year follow-up. Fallers were significantly associated with the five variables, average steps per day (OR = 3.82; 95% CI 0.99-1.00; p = 0.003), PPA score (OR = 1.92; 95% CI 1.16-3.17; p = 0.011), FES-I (OR = 1.33; 95% CI 1.07-1.66; p = 0.010), TUG (OR = 1.25; 95% CI 1.01-1.55; p = 0.038) and adjusted stride length (OR = 3.57; 95% CI 1.26-10.12; p = 0.017). ROC analysis identified the optimal cut-off steps per day at 4747 (AUC = 0.83; 0.72-0.95). Conclusion : This prospective pilot study found older adults taking less than 4747 steps per day at risk of falls. Keywords : pedometer, falls, aging

OP23 325-C-3

EFFICACY OF NINTENDO WII TRAINING ON MECHANICAL LEG MUSCLE FUNCTION AND POSTURAL BALANCE IN COMMUNITY-DWELLING OLDER ADULTS: A RANDOMIZED, CONTROLLED TRIAL

Martin Grønbech JØRGENSEN¹, Uffe LAESSOE², Carsten HENDRIKSEN³, Ole NIELSEN¹, Per AAGAARD⁴ (1. Department of Geriatrics, Aalborg University Hospital, Denmark; 2. Physiotherapy Department, UCN, Denmark; 3. Department of Integrated Health Care, Bispebjerg University Hospital, Denmark; 4. Institute of Sports Science and Clinical Biomechanics, University of Southern Denmark, Denmark)

Introduction : Older adults show increased risk of falling and major risk factors include impaired lower extremity muscle strength and postural balance. However, the potential positive effect of biofeedback-based Nintendo Wii training on muscle strength and postural balance in older adults is unknown. Method : This RCT examined postural balance and muscle strength in community-dwelling older adults (75±6 yrs.) pre and post 10 weeks of biofeedback based Nintendo Wii training (WII, n=28) or daily use of Ethylene Vinyl Acetate Copolymer insoles (controls: CON n=30). Primary endpoints were maximal muscle strength (MVC) and Center of Pressure velocity-moment (CoP-VM) during bilateral static stance. Results : Intention-to-treat analysis with adjustment for age, sex and baseline level, showed that the WII group had higher MVC strength (18%) than the control group at follow-up (between-group difference=269 N, 95% [CI]=122;416, P=0.001). In contrast, CoP-VM did not differ (1%) between WII and CON at follow-up (between-group difference=0.23 mm²/s, 95% [CI]=-4.1;4.6; P=0.92). For secondary endpoints, pre-to-post changes favoring the WII group were evident in RFD (P=0.03), TUG (P=0.01), short FES-I (P=0.03), and 30-s Repeated-Chair-Stand-Test (P=0.01). Finally, participants rated the Wii training highly motivating at 5 and 10 weeks into the intervention. Conclusion : Biofeedback-based Wii training led to marked improvements in maximal leg muscle strength (MVC; RFD) and overall functional performance in community-dwelling older adults. Unexpectedly, static bilateral postural balance remained unaltered with Wii training. The high level of participant motivation suggests that biofeedback-based Wii exercise may ensure a high degree of compliance to home and/or community-based training in community-dwelling older adults. Keywords : Nintendo Wii, Muscle strength, Postural Balance

OP23 325-C-4

EFFICACY OF TILTING EXERCISES ON THE MOBILITY AND BALANCE OF SEDENTARY ELDERLY WOMEN

Charlene Brito De OLIVEIRA¹, Veronica Baptista FRISON², Thais De Lima RESENDE², Irenio GOMES¹ (1. Instituto de Geriatria e Gerontologia, Pontificia Universidade Catolica do Rio Grande do Sul,

Brazil; 2. Faculdade de Enfermagem Nutricao e Fisioterapia, Pontificia Universidade Catolica do Rio Grande do Sul, Brazil)

Introduction : There are no studies on the use of dynamic tilting exercises for the elderly, which enable them to overcome the limits of their center of gravity, facilitating the early responses and motor learning required for optimum balance. The present study was carried out to evaluate the effects of a dynamic tilting exercise program on the balance and mobility of elderly sedentary women. **Method :** This randomized trial was conducted with 33 women randomly distributed into Control (CG; n=17; 74.3±6.8 years) and Intervention Group (IG; n=16; 73.0±4.1 years). They underwent mobility (Timed Up and Go test - TUG) and balance tests (Berg Scale - BBS and Functional Reach - FR), at the beginning and end of the study. The IG underwent 16 sessions of tilting exercises (2 times/week, 30 minutes/session of stretching, sit/stand, anterior and posterior tilting) in the Chordata Equipment, which was developed by one of the authors (Frison VB). **Results :** Pre-intervention, the groups did not differ in terms of age, marital status, cognition, TUG, BBS or FR. After, their mobility and balance differed significantly: the IG improved (TUG pre=10.4±2.2s and post=8.5±1.7s; BBS pre=50.2±3.5 points, post=54.7±1.3 points; FR pre=23.8±5.9 cm, AF post=28.9±3.3 cm), whereas the CG did not show any statistical differences. There were no complications or undesired effects during or after the training with tilting exercises in the Chordata Equipment. **Conclusion :** It is concluded, therefore, that tilting exercises, besides being safe to be carried out by elderly people, led to significant improvement in functional mobility and balance, thus can help to prevent falls. **Keywords :** Accidental Falls. Aged. Postural Balance

OP23 325-C-5

EFFECTS OF 3-MONTH EXERCISE ON BLOOD PRESSURE DURING EXERCISE AND BATHING AFTER THE EXERCISE

Shuichiro WATANABE¹, Yoshinori FUJIWARA², Ryota SAKURAI², Masashi YASUNAGA², Taro FUKAYA², Shoji SHINKAI¹ (1. Graduate School of Gerontology, J. F. Oberlin University, Japan; 2. Research Team for Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology, Japan)

Introduction : This study was conducted to clarify the effect of 3-month exercise on blood pressure during exercise and bathing after the exercise. **Method :** Sixty-one community-dwelling frail elderly people (70.0±5.3 years, G group) and sixty-six middle-aged people at risk of cardio-metabolic disease (61.6±7.5 years, S group) participated in the study. Subjects were randomized to combined exercise and bathing intervention group (A), exercise group (B), and bathing intervention group (C). The A and B groups performed 90-min exercise (mainly resistance training, slight aerobic exercise was added in B group) twice a week for 3 months, and the A and C groups had additional hot bathing. Blood pressure was measured before and after the exercise, and after bathing. After 3 months, we evaluated the effects of the intervention. Of the participants, 26 men and 61 women were included in analyses. **Results :** At baseline, systolic blood pressure (SBP) significantly slightly increased by exercise only in A-G group (3.4mmHg). By bathing, SBP significantly decreased only in C group (-8.6mmHg), and diastolic blood pressure (DBP) significantly decreased in C group (-5.3mmHg) and A-G group (-4.9mmHg). After the 3-month intervention, the blood pressure was not increased by the exercise. While hypotensive response of bathing after the exercise tended to small in the A group, hypotensive response of bathing tended to increased in the C-G group (SBP: -9.6→-15.7mmHg, DBP: -3.6→-8.0mmHg). **Conclusion :** The exercise before bathing reduced a hypotensive response of bathing. Although the only bathing

intervention had no effect to prevent hypotension by bathing, the resistance training might improve hypotension after bathing. **Keywords :** exercise, bathing, blood pressure, randomized controlled trial, hypotension

OP23 325-C-6

NIGERIA: IMPLICATIONS FOR GLOBAL AGING AND PATTERNS OF NON-COMMUNICABLE DISEASES

Austin AGHO¹, Kristine A. MULHORN² (1. Health and Rehabilitation Sciences, Indiana University School of Health and Rehabilitation Sciences Indiana University Purdue, USA; 2. Health Administration, College of Nursing and Health Professions Drexel University, USA)

Introduction : The authors present a demographic analysis of a high population, low-income country with specific focus on global aging and chronic disease patterns. The Population Reference Bureau reports that non-communicable diseases (NCD) such as heart disease, lung disease, cancer, and diabetes are now the leading causes of death in much of the world (PRB, 2012). **Method :** The authors examine the patterns of non-communicable disease by age and gender. The capacity of Nigeria to address and respond to the risk factors associated with the increasing rates of non-communicable diseases will also be examined. **Results :** The impact of non-communicable diseases is more pronounced in low and middle income countries than in high-income countries because of differences in the availability of advanced medical technology. Like most countries in sub-Saharan Africa, Nigeria has a high proportion of deaths attributable to non-communicable diseases. Reasons for the high rates of non-communicable deaths in Nigeria include a high prevalence of physical inactivity, high rate of tobacco use, high prevalence of overweight, and a high prevalence of raised total cholesterol. **Conclusion :** As the most populous country in Africa with a relatively high fertility rate, the population of Nigeria is expected to soar to 400 million by 2050. Unless proactive measures are implemented to prevent premature deaths from non-communicable diseases, socio-economic development and political stability in Nigeria will be negatively impacted. **Keywords :** Nigeria; non-communicable diseases (NCDs); middle and low-income countries

OP23 326-C

ENDOCRINE DISEASE

OP23 326-C-1

PREVALENCE OF OBESITY AND ABDOMINAL OBESITY AMONG TURKISH ELDERLY LIVING IN AN URBAN AREA

Reyhan UCKU¹, Hatice SIMSEK¹, Reci MESERI², Simge YILMAZ¹ (1. Public Health, Dokuz Eylul University, Turkey; 2. Nutrition and Dietetics, Ege University, Turkey)

Introduction : Obesity is a risk factor for cardiovascular diseases (CVDs) and diabetes mellitus(DM).Some studies have shown that abdominal obesity (AO) is a better predictor of CVDs and DM than obesity. The objective of this study was to determine the prevalence of obesity and abdominal obesity in older people; an additional aim was to examine the correlation between different anthropometric measures of obesity. **Method :** In this cross-sectional study,2502 community-dwelling older people (aged 65 and over) of the Heart of Balçova (BAK) Project were included. Body mass index(BMI), waist circumference (WC), waist hip ratio (WHR), waist height ratio(WHtR) were calculated. Participants who had a BMI≥30.0kg/m² were considered as obese. Abdominal obesity was evaluated by WC, WHR, and WHtR. Pearson correlation analysis was used. **Results :** Mean age

of participants was 71.9±5.4(65-94) years; 61.1% were women. The prevalence of obesity was higher in women(60.6%) than in men(30.0%). For abdominal obesity, prevalences were 31.3% (WC), 77.8% (WHR), 91.2% (WHtR) in men; in women 72.5%,57.1%,95.3%,respectively. In men, all prevalences decreased after 75 years of age. In women, obesity prevalence decreased with age; prevalence of abdominal obesity as WC was lowest among those aged 80 years or more,but AO prevalences as WHR and WHtR were the highest in the 80+ age group. Positive and significant correlations were found between anthropometric measures and correlation coefficients were higher in men than in women. In both sexes, the lowest correlation was found between BMI and WHR. On the other hand, the highest correlation was between WC and WHtR. Conclusion: The obesity prevalence was high in the urban elderly and was higher in women than men. Keywords : prevalence, obesity, abdominal obesity

OP23 326-C-2

INSULIN RESISTANCE AS ONE OF INDICATORS FOR METABOLIC SYNDROME AND ITS ASSOCIATED FACTORS IN INDONESIAN ELDERLY

Arya Govinda ROOSHEROE (*Internal medicine, Division of Geriatric Faculty of Medicine, Univeristy of Indonesia - Cipto Mangunkusumo Hospital, Indonesia*)

Introduction : To obtain factors that are associated with insulin resistance in Indonesian elderly. Method : A cross sectional study was conducted at the Geriatric Outpatient Clinic of Cipto Mangunkusumo Hopital in 172 elderly patients. Data on subject characteristics (age and sex), body mass index, total body fat, peripheral subcutaneous fat, trunk subcutaneous fat, waist circumference, carbohydrate and fiber intake, physical activity, and 25(OH)D concentration were collected. Sample size was calculated in accordance with the formula of sample size on hypothesis testing for difference of two proportions and hypothesis testing for difference of mean of two independent groups. Significance level of 95% and power of 80% were used. Chi-square analysis and independent t-test were performed. Logistic regression analysis was conducted to recognize the most affecting variables for insulin resistance. P<0.05 was considered as the significance level. Results : We found that the prevalence of insulin resistance among elderly in our study was 25%. Bivariate analysis showed that there was a significant association of age and body mass index with insulin resistance in elderly. There were also significant differences of mean on fat mass, fat mass (%), waist circumference, peripheral subcutaneous fat, trunk subcutaneous fat, which were significantly higher in insulin-resistance group compared to the non-insulin resistance group. Results of multivariate analysis demonstrated that only several factors were correlated to insulin resistance in elderly, that were peripheral subcutaneous fat (OR 1.09; 95% CI 1.05-1.15) and trunk subcutaneous fat (OR 0.93; 95% CI 0.87-0.99). Conclusion : Peripheral subcutaneous fat and trunk subcutaneous fat are associated with insulin resistance in elderly. Keywords : insulin resistance, elderly

OP23 326-C-3

A LONGITUDINAL ANALYSIS OF SERUM ADIPONECTIN LEVELS IN RELATION TO LIPID PROFILES IN POSTMENOPAUSAL WOMEN IN TAIWAN

Chi-Ling CHEN¹, Keh-Sung TSAI², Wei-Shiung YANG¹, Shih-Te TU³, Jin-Shang WU⁴, Tai TONG-YUAN⁵ (*1. Graduate Institute of Clinical Medicine, College of Medicine, National Taiwan University, Taiwan; 2. Department of Laboratory Medicine, National Taiwan University Hospital, Taiwan; 3. Division of Endocrinology and*

Metabolism, Changhua Christian Hospital, Taiwan; 4. Department of Family Medicine, National Cheng Kung University, Taiwan; 5. Geriatrics, Taipei Jen-Chi Relief Institution, Taiwan)

Introduction : Serum adiponectin levels were shown to have profound influences on many aspects of human physiology, in addition to their effects on energy homeostasis. We aim to investigate the association between trends of serum adiponectin levels with changes of lipid profiles in postmenopausal women in Taiwan. Method : We used 201 postmenopausal women who participated in a two-year multicenter randomized double-blind placebo-control trial on the efficacy of BMD by the treatment of isoflavones and were free of hyperlipidemia at baseline for current analysis. The serum adiponectin and lipid profiles were measured at baseline, 48 and 96 weeks after randomization. Generalized estimating equations (GEE) model was used to investigate the longitudinal trends of lipid profiles in relation to adiponectin. Results : Adiponectin levels at baseline were positively associated with higher HDL-C levels at baseline ($\beta = 0.468$, $SE = 0.135$, $p = 0.001$), and inversely related to triglyceride levels ($\beta = -1.893$, $SE = 0.609$, $p = 0.002$), after the adjustment of age, isoflavon treatment, habitual alcohol consumption, BMI, history of diabetes and hypertension as well as average total mets spent and total calories consumed. In the GEE model with time, age, isoflavon treatment, history of diabetes and hypertension, average total mets spent ,total calories consumed and BMI, there was a statistically significant positive association between the trend of serum adiponectin levels and trend of HDL-C ($\beta = 0.491$, $SE = 0.095$, $p < 0.001$). The inverse association with triglyceride trends remained significant ($\beta = -2.039$, $SE = 0.528$, $p < 0.001$). Conclusion : This longitudinal analysis showed that higher adiponectin levels may protect the atherosclerosis process in postmenopausal women through increasing HDL-C and lowering triglyceride. Keywords : Adiponectin, lipid profiles

OP23 326-C-4

IMPACT OF REMOVABLE DENTAL PROSTHESES ON QUALITY OF LIFE OF MEXICAN ELDERS

Roberto Carlos CASTREJON-PEREZ¹, S. Aida BORGES-YANEZ² (*1. Epidemiologia Geriatrica, Instituto Nacional de Geriatria, Mexico, Mexico; 2. Dental Public Health, National Autonomous University of Mexico, Mexico*)

Introduction : Poor oral health status has a negative impact on quality of life of elders. Aim: To evaluate the impact of the functional status of removable partial or complete dental prostheses (RDP) on Quality of Life (QoL) of elders living in Mexico City. Method : Analysis of baseline data of the Coyoacan Cohort, a study carried out in a representative sample of people ≥70 years old residing in one district of Mexico City (N=32000). 821 persons were interviewed and dental examined. Independent Variables: functionality of RDP (retention, stability, occlusion), hygiene of RPD, utilization of RDP when sleeping, xerostomia, utilization of dental services. Covariables: age, gender, marital status, illiteracy, self-perception (SP) of general health, SP of oral health and SP of socioeconomic status. Dependent variable: Oral Health Related Quality of Life using a Mexican abbreviated version of the Oral Health Impact Profile (OHIP-EE-14). The dependent variable was dichotomized and a logistic regression model (LRM) was carried out. Results : Mean age was 79±7 years; 53.9% were women, 473 (57.5%) used RDP, 312 (66%) of RDP were nonfunctional. The OHIP-EE-14 median value was 4, mean=7±8.7. The LRM showed that illiterate persons, those perceiving their general health as fair or bad, those perceiving their oral health worse than persons of the same age, those using their RPDs while sleeping and those using nonfunctional prostheses have higher risk of negative

impacts on QoL. Conclusion : Nonfunctional RPDs have impact on QoL of elder people, self-perception of oral health and utilization of RPDs while sleeping were also associated. Keywords : Oral Health, Quality of Life, Dental prostheses

OP23 413-C NUTRITION

OP23 413-C-1 INCREASED RISK FOR NUTRITIONAL STATUS DETERIORATION AMONG ELDERLY CAREGIVERS

Yael KATZ¹, Michal MEIRSON², Adi DUVDEVANY³, Yulia KHAIKIN¹, Hillel VARDI⁴, Danit Rivka SHAHAR⁴ (1. Nutrition and Diet Department, Dorot Geriatric Medical Center, Israel; 2. Prolonged Mechanical Ventilation, Dorot Geriatric Medical Center, Israel; 3. Nutrition and Diet Department, Reuth Medical Center, Israel; 4. Department of Epidemiology and Health Services Evaluation, Ben-Gurion University of the Negev, Israel)

Introduction : Primary family caregivers of frail elderly are at increased risk for nutritional, functional and health-status deterioration. Data on caregiving dietary intake and nutritional status are scarce. Objectives: To compare the nutritional-status of elderly caregivers and non-caregivers and conceptualize a model predicting nutritional deterioration. Method : Participants were recruited from a geriatric nursing home and a community day-center. Nutritional status, dietary intake, health and functional status were assessed using personal interview. Results : We recruited 86 participants, 40 caregivers and 46 age-matched non-caregivers, mean age 75±7y. Caregivers had significantly higher intake of bread, fats, sugar and fruits and lower intake of vegetables, cereals and milk compared with the non-caregivers. Caregivers consumed more energy and sodium and less vitamins and minerals, higher percentage reported weight-loss, lack of appetite, disability in their daily physical and social functions and higher risk for depression compared with non-caregivers. Caregivers who lost more weight in the last year were older, had fewer children, higher depression rates and poorer appetite compared with caregivers who did not lose weight. Men were at higher risk for weight loss. The conceptual model suggests a cascade of event starting with caregiving, depression, and decreased appetite resulting in nutritional and health-status deterioration. Conclusion : We showed low diet quality in caregivers compared with their non-caregivers counterparts. These differences may stem from lack of time and attention for cooking for a single person, stress and lack of resources. Future studies should include larger sample sizes, evaluate more thoroughly the differences between genders and provide data for future interventions. Keywords : caregivers, diet, nutrition

OP23 413-C-2 ASSOCIATION OF NUTRITIONAL STATUS AND FUNCTIONAL CAPACITY AMONG HOSPITALIZED GERIATRIC PATIENTS IN MALAYSIA

Sakinah HARITH, Sze Lin TAN (School of Health Sciences, Universiti Sains Malaysia, Malaysia)

Introduction : Malnutrition can cause a decline in functional capacity and increased morbidity and mortality of geriatric patients. The aim of this study was to determine the association of nutritional status and functional capacity among geriatric patients at general hospitals in Malaysia. Method : A cross-sectional study was conducted at medical wards of four general hospitals from each of the region in Peninsular Malaysia from January 2011 to January 2012. A questionnaire-based interview was used to collect sociodemographic characteristics, health-

related behaviors, and clinical data. The patient's nutritional status was determined by the Mini Nutritional Assessment short-form (MNA-SF). The assessment of functional capacity was done by using the Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL) questionnaires. Anthropometric measurements were also taken using standard procedures. Results : A total of 305 geriatric patients (male, n=156; female, n=149) aged 65 years and above (mean age=72.67±5.62) were recruited. The findings showed that 16.1% of the patients were malnourished, and 58.4% were at risk of malnutrition. The overall prevalence of functional impairment was 85.9% and 65.2% according to ADL and IADL assessment respectively. Multivariable analysis revealed that nutritional status was a significant risk factor for impaired functional capacity. Indicators of functional capacity (ADL and IADL variables) were significantly more deteriorated in malnourished patients. Conclusion : Nutritional status is associated with the impaired functional capacity of geriatric patients at their hospital admission. Keywords : nutritional status, functional capacity, geriatric patients

OP23 413-C-3 IMPACT OF MALNUTRITION ON CO-MORBIDITIES, BONE METABOLISM AND OUTCOMES IN OLDER ADULTS WITH HIP FRACTURE

Alexander A. FISHER¹, Wichat SRIKUSALANUKUL², Michael W. DAVIS¹ (1. Geriatric Medicine, The Canberra hospital and Australian National University Medical School, Australia; 2. Geriatric Medicine, Canberra Hospital, Australia)

Introduction : Age-related changes in body composition increase the risk of chronic diseases and osteoporotic fractures. This study aimed to evaluate the relationship between nutritional status and clinical and laboratory characteristics in older patients with hip fracture (HF). Method : In 284 consecutive patients with non-pathological HF clinical data were recorded and serum concentrations of leptin, adiponectin, resistin, 25(OH)vitamin D, PTH, parameters of bone turnover, mineral, vitamin B12, folate and iron metabolism, renal, liver and thyroid functions were measured. Results : Malnutrition (serum leptin <6.5 ng/ml in females and <4 ng/ml in males) was diagnosed in 33.8%, vitamin D insufficiency (<50nmol/l) in 80.3%, low transferrin saturation (<20%) in 88.8%, low vitamin B12 (<250pmol/l) in 28.2% and low folate (<11nmol/l) in 15.6%.The malnourished group was older (83.6 vs. 81.2 years), had a significantly higher proportion of institutionalised subjects (43.9% vs. 23.2%) and persons with chronic neurological diseases (42.9% vs.27.4%) including dementia (34.0% vs. 22.8%)(all p<0.03). This group had significantly higher mean urinary excretion of deoxypyridinoline (14.6 vs.11.5 nmol/mmol), and type I collagen cross-linked N-telopeptide (222.7 vs. 126.9 nmol/mmol) and a higher prevalence of excess bone resorption (88.8% vs.69.3%, p<0.003). In multivariate regression (log)leptin was associated positively with osteocalcin and haemoglobin and negatively with age, glomerular filtration rate and adiponectin. Malnutrition was associated with post-operative myocardial injury (34.4% vs.22.9%), need of institutionalisation (60.7% vs. 41.9%), and in-hospital death (8.3% vs.3.2%) (all p<0.05). Conclusion : In older patients with hip fracture malnutrition is very common, multifactorial, interrelated with chronic diseases, excess bone resorption and poorer outcomes and needs targeted treatments. Keywords : malnutrition, co-morbidities, bone metabolism, hip fracture

OP23 413-C-4 BENEFITS OF A PILOT INTERVENTION BASED ON MODIFICATION OF NUTRITIONAL RISK FACTORS IN HOSPITAL-AT-HOME OLDER PATIENTS

Miquel Angel MAS¹, Sara GAMEZ², Veronica DELGADO², Josep Anton GONZALEZ-ARES³, Sebastia SANTA EUGENIA¹ (1. Department of Geriatric Medicine and Palliative Care, Badalona Serveis Assistencials, Spain; 2. Home Care Unit, Badalona Serveis Assistencials, Spain; 3. Research Unit, Badalona Serveis Assistencials, Spain)

Introduction : After acute illness it is crucial to identify nutritional risk factors in order to minimize comorbidities. Home care is an opportunity to manage nutritional risk. **Method :** A prospective pilot study was developed in Hospital-at-Home (HaH) patients. During the admission assessment, Mini-Nutritional Assessment (MNA) tool was used for the identification of main nutritional risk factors. We considered modifiable nutritional risk factors: acute cognitive impairment, polypharmacy, anorexia, immobility, feeding dependency, insufficient consume of protein/fiber/ water, incomplete meals and bad nutritional status perception. A specific protocol defined multidisciplinary strategies for the modification of risk factors during the intervention. We analyzed the response to the intervention reassessing nutritional risk with MNA at discharge. **Results :** We included 121 patients admitted consecutively during one year (age 83; female 67%; Early Discharge 60%; Diagnostic group: Medical 51%). **Evolution (%) of main nutritional risk factors was** (admission/discharge): acute cognitive impairment (16/0), anorexia (52/16), immobility (53/18), insufficient consume of protein (25/6)/fiber (6/3)/water (75/50) and incomplete meals (30/18). **Evolution of nutritional status (admission/discharge) was:** Malnutrition 29/14; Risk 63/ 49.5; Normal status 8/36.5. Nutritional risk factors reduction, better mobility and pressure ulcers resolution were significantly associated with improvement of Malnutrition patients at the end of the intervention. **Conclusion :** The modification of nutritional risk factors was related with improvement of nutritional status of HaH patients with malnutrition. Monitoring the evolution of risk factors of malnutrition using MNA is an innovative approach. More research is needed to confirm these descriptive data. **Keywords :** Nutritional risk, Mini-Nutritional Assessment (MNA), Hospital-at-Home

OP23 414-C **ONCOLOGY & VISUAL FUNCTION**

OP23 414-C-1 **VISION LOSS IS ASSOCIATED WITH CLINICALLY RELEVANT SYMPTOMS OF DEPRESSION AND ANXIETY IN COMMUNITY-LIVING OLDER ADULTS**

Gertrudis I.J.M. KEMPEN, G.A. Rixt ZIJLSTRA (Department of Health Services Research / CAPHRI, Maastricht University, Netherlands)

Introduction : Low vision is associated with several negative outcomes including mental health problems. Although associations between vision loss and symptoms of depression were studied frequently, less is known about symptoms of anxiety among older persons with low vision and the co-occurrence of symptoms of anxiety and depression. This study examined the association of low vision with clinically relevant symptoms of anxiety and depression among community-living older adults seeking vision rehabilitation services. **Method :** Differences in the prevalence of clinically relevant symptoms of anxiety and depression (assessed with the HADS) between 148 persons with low vision seeking vision rehabilitation services and a reference sample from the general population (n=5,279), all ≥ 57 years, were compared. **Results :** 14.9% of the older persons with vision loss had clinically relevant symptoms of anxiety and 14.2% had

clinically relevant symptoms of depression. These percentages were at least as twice as high as in the reference sample ($p < .01$). Patterns were similar for males and females but different according to age, i.e. younger older persons with vision loss reported more frequently symptoms than those in the reference sample. The percentage of older persons with vision loss and both clinically relevant symptoms of anxiety and depression was 9.5% while this percentage was 2.4% in the reference sample ($p < .01$). **Conclusion :** Vision loss is substantially associated with clinically relevant symptoms of anxiety and depression. Healthcare professionals may improve their quality of care and the quality of life of their clients as they take such information into account in their intervention work. **Keywords :** Depression, Anxiety, Quality of life

OP23 414-C-2 **THE POTENTIAL ROLE OF AMYLOID β IN THE PATHOGENESIS OF AGE-RELATED MACULAR DEGENERATION**

Victor Vladimirovich ERMILOV (Department of Forensic medicine and Pathology, Volgograd State Medical University, Russia)

Introduction : Age-related macular degeneration (AMD) is the leading cause of blindness and the pathogenesis of the condition is largely unknown. The appearance of amyloid β in eye tissues is related with development of some gerontophthalmological diseases. **Method :** With the help of selective methods of revealing amyloid and its types and by performing electron microscopy, we have investigated 111 enucleated eyes of people over 60 years of age. All of them had been first ophthalmologically investigated when alive with the diagnosis of AMD and for the second time morphologically, when expired. **Results:** In all the cases we found morphological signs of AMD. Comparative analysis of morphologic changes in tissues of the macular and paramacular areas of the fundus oculi and of the incidence of amyloid β incorporations in them permitted us to propose that accumulation of local senile amyloid is conducive to development and aggravation of AMD. A relationship between the degree of retinal pigment epithelium degeneration and accumulation of amyloid β in the fundus oculi was revealed. Ultrastructural studies of Bruch's membrane in the macular region have shown that amyloid fibrils are localised in inner collagenous zones of Bruch's membrane with fragments of degrading RPE cells closely attached to them. **Conclusion :** The authors put forward a hypothesis of the pathogenesis of some stages of AMD, in which the principal role in the formation of amyloid β , is played by degenerative cells of pigment epithelium. **Keywords :** Amyloidosis, eye, AMD

OP23 414-C-3 **EXPLORATION OF THE EXPERIENCES AND DECISION MAKING OF OLDER PEOPLE WITH CANCER**

Heather LANE¹, Sue-Anne MCLACHLAN², Jennifer PHILIP¹ (1. Centre for Palliative Care, St Vincent's Hospital (Melbourne), Australia; 2. Department of Oncology, St Vincent's Hospital (Melbourne), Australia)

Introduction : Australian society is aging and as cancer incidence increases with age, the care of older people with cancer is a growing concern. The majority of literature around cancer care, however, focuses on a younger population. The aim of this study was to explore the experiences, decision making and the impact of age on older people with cancer. **Method :** In this qualitative research, semi structured interviews were conducted with 10 older people with cancer. Interviews were audiotaped and transcribed. Consecutive interviews were continued until saturation of themes occurred. A

thematic analysis was undertaken, which was reviewed by a second investigator with points of divergence compared, discussed and consensus reached. Results : The interviewees simultaneously felt younger than their chronological age and had an awareness of age bought on by physical symptoms and having encountered losses. They spontaneously brought up thoughts about their own mortality. Interviewees generally followed their doctors advice with little questioning. When the patients chose not to follow the doctor's advice, they favoured an approach with goals of comfort over life prolongation, because they were aware of their limited life expectancy. When considering treatment options views and needs of family were central. Conclusion : Healthcare professionals need to be mindful that older people tend to follow medical advice with little questioning and therefore initiate opportunities for discussion and negotiation of treatment goals. The importance of the broader social network should be recognised and older people offered the opportunity to involve these people in healthcare discussions. Keywords : decision making, older people, cancer

OP23 414-C-4

EXPLORATION OF THE EXPERIENCES AND VIEWS OF HEALTHCARE PROFESSIONALS CARING FOR OLDER PEOPLE WITH CANCER

Heather LANE¹, Sue-Anne MCLACHLAN², Jennifer PHILIP¹
(1. Centre for Palliative Care, St Vincent's Hospital (Melbourne), Australia; 2. Department of Oncology, St Vincent's Hospital Melbourne, Australia)

Introduction : Australian society is aging and as cancer incidence increases with age, the care of older people with cancer is a growing concern. The aim of this study was to explore the experiences and views of healthcare professionals caring for older people with cancer. Method : In this qualitative research, semi structured interviews were conducted with 18 healthcare professionals working in cancer care. Purposive sampling was used. Interviews were audiotaped and transcribed, and continued until saturation of themes occurred. A thematic analysis was undertaken and reviewed by a second investigator with points of divergence discussed and consensus reached. Results : The overarching theme to emerge was competing tensions in decision making for older people with cancer. An increase in the age at which patients are considered "old", to between 70 and 80 years, was reported. A tension between avoiding causing harm through treatment toxicity whilst not undertreating on the basis of age, was a consistent challenge. Age was a factor in treatment decisions, although often comorbidities or functional status deficits were sort to legitimise treatment limitations. Tensions existed in family involvement; at times family were forgotten in treatment discussions, whilst at other times they became the decision makers and the patient's voice lost. Conclusion : Tensions exist for health professionals in incorporating age and family into treatment decisions. Explicit discussion about the influence of age may aid in determining its role in decision making. A careful balance to family involvement in decision making is required, ensuring the older person is enabled to express their views and wishes. Keywords : decision making, healthcare professionals, cancer

OP23 414-C-5

DIETARY COUNSELLING IN OLDER PATIENTS AT RISK FOR MALNUTRITION DURING CHEMOTHERAPY FOR CANCER: DECREASED RATE OF SEVERE INFECTIONS BUT NO EFFECT ON MORTALITY. MULTICENTRE INOGAD STUDY

Isabelle BOURDEL-MARCHASSON¹, Christele BLANC-BISSON², Adelaide DOUSSAU³, Christine GERMAIN⁴, Jean-frederic BLANC⁵,

Cyril LAHMAR⁶, Jerome DAUBA⁷, Eric TERREBONNE⁸, Cedric LECAILLE⁹, Joel CECCALDI¹⁰, Laurent CANY¹¹, Sandrine LAVAU-DENES¹², Nadine HOUEDE¹³, Francois CHOMY¹³, Pierre SOUBEYRAN¹³, Jessica DURRIEU², Mariane FONCK¹³
(1. Geriatrics, CHU Bordeaux; UMR 5536 Univ Bordeaux Segalen, CNRS, France; 2. Geriatrics, CHU Bordeaux, France; 3. USMR, CHU Bordeaux, ISPED, Univ Bordeaux Segalen, France; 4. USMR, CHU Bordeaux, France; 5. Oncology, CHU Bordeaux, France; 6. CH, CH Mont de Marsan, France; 7. Oncology, CH Mont de Marsan, France; 8. Gastroenterology, CHU Bordeaux, France; 9. Hepato-gastro enterologie, Polyclinique Bordeaux Nord, France; 10. Oncology, CH Libourne, France; 11. Oncology, Clinique Francheville, France; 12. Oncology, CHU Limoges, France; 13. Oncology, Institut Bergonie, France)

Introduction : Nutrition support is recommended for undernourished patients but no specific recommendations exist for those at risk. Method : MNA was used to screen patients >70y old with a solid tumour for whom chemotherapy was prescribed. Patients at risk for malnutrition (MNA 17-23.5) were proposed a randomised controlled trial during their treatment to evaluate a diet counselling intervention (DIG) consisting in face to face talk targeting main nutritional symptoms, compared to usual care. Patients in usual care group (UCG) received dietician advices if prescribed by oncologist. The main outcome was 1-year mortality. Results : Among 771 screened patients 338 were randomised: mean age of 78.6y (5.0), 51.6% male, mean MNA 20.2 (2.1). Distribution of cancer types was similar in the two groups; the most frequent were colon (22.3%), lymphoma (15.1%), lung (10.4%) and pancreas (16.9%). This was a first line chemotherapy in 83.8%. Death occurred during the first year in 142 without difference according to intervention (p=0.96). Grade 3 infections occurred more frequently in ICG than in DIG: 17 patients (10.8%) with 20 episodes compared to 7 (4.4%) with 9 episodes, p=0.03. Artificial nutrition was given to 15 patients in ICG compared to 8 in DIG, p=0.11. Similar rates of weight loss were observed for both groups (42.1%). Evolution of cancer disease was also similar. Conclusion : Despite a lack of effect on mortality, early diet counselling may be efficient in the prevention of severe infections in older patients with cancer receiving chemotherapy. Funding: Programme Hospitalier de Recherche Clinique 2006 ; Ligue contre le Cancer, AMGEN Keywords : nutrition , randomized control trial

OP23 414-C-6

PROGNOSTIC POTENTIAL AND TUMOR GROWTH INHIBITING EFFECT OF AGE-RELATED PLASMA ADVANCED GLYCATION END PRODUCTS IN NON SMALL CELL LUNG CARCINOMA

Andreas SIMM¹, Hans-stefan HOFMANN², Babet BARTLING¹
(1. Cardiothoracic Surgery, University Hospital Halle (Saale), Germany; 2. Department of Thoracic Surgery, Hospital Barmherzige Bruder Regensburg, Germany)

Introduction : The plasma fluorescence related to the standard fluorescence of advanced glycation end products (AGEs) is a simple measurable blood parameter for aging and distinct diseases but its importance in human cancer, including non-small cell lung carcinoma (NSCLC), is unknown. Method : Plasma samples of 70 NSCLC patients who underwent resection surgery of the tumor were analyzed for the distinct AGE-related fluorescence at 370 nm excitation/440 nm emission. In a retrospective study, we tested the prognostic relevance of this AGE-related plasma fluorescence. Results : The effect of circulating AGEs on the NSCLC growth was studied experimentally in vitro and in vivo. NSCLC patients with high (> median) AGE-related

plasma fluorescence were characterized by a later reoccurrence of the tumor after curative surgery and a higher survival rate compared with patients with low plasma fluorescence (25% versus 47% 5-y survival, $P = 0.011$). Treating NSCLC cell spheroids with patients' plasma showed an inverse correlation between the growth of spheroids in vitro and the individual AGE-related fluorescence of each plasma sample. To confirm the impact of circulating AGEs on the NSCLC progression, we studied the NSCLC growth in mice whose circulating AGE level was elevated by AGE-rich diet. In vivo tumorigenicity assays demonstrated that mice with higher levels of circulating AGEs developed smaller tumors than mice with normal AGE levels. Conclusion : The AGE-related plasma fluorescence has prognostic relevance for NSCLC patients in whom the tumor growth-inhibiting effect of circulating AGEs might play a critical role. Keywords : protein glycation, tumor survival, antagonistic pleiotropy

OP23 417-C DEPRESSION & OTHERS

**OP23 417-C-1
MAJOR DEPRESSIVE DISORDER IN ELDERLY:
DIAGNOSIS, TREATMENT AND FUTURE PERSPECTIVES**
Pinhas DANNON (*Psychiatry, Beer Yaakov MHC & Tel Aviv University, Israel*)

Introduction : Major depressive disorder (MDD) is a mood disorder characterized by severe affective and neurovegetative symptoms together. It is a common disorder seen in a quarter of consecutively admitted depressed patients and is often associated with severe symptomatology, increased suicide risk, poor acute response to antidepressants and poor acute and long-term treatment outcome. The question of the optimal duration of pharmacotherapy in order to prevent relapse and improve long-term (i.e., 5-year) outcome is a focus of current investigation. Method : This presentation will review currently recommended treatment strategies for the acute continuation and maintenance phases of therapy. Results : In particular, it will address the role of newer-generation antidepressants, the use of mood stabilizers and indications for electroconvulsive therapy. Conclusion : Other possible treatment strategies such as transcranial magnetic stimulation, vagus nerve stimulation, Deep brain stimulation and glucocorticoid receptor antagonists will be discussed in elderly. Keywords : MDD, ECT, treatment

**OP23 417-C-2
LATE-LIFE DEPRESSIVE SYMPTOMS, INCIDENT
DEMENTIA AND MORTALITY IN THE CARDIOVASCULAR
RISK FACTORS, AGING AND DEMENTIA (CAIDE) STUDY**
Anna-maija TOLPPANEN¹, Minna RUSANEN¹, Tiia NGANDU²,
Tiina LAATIKAINEN³, Alina SOLOMON⁴, Hilikka SOININEN³,
Miia KIVIPELTO⁴ (*1. Institute of Clinical Medicine/Neurology,
University of Eastern Finland, Finland; 2. Department of Chronic
Disease Prevention, National Institute for Health and Welfare,
Finland; 3. Department of Chronic Disease Prevention, Institute for
Health and Welfare, Finland; 4. Aging Research Center, Karolinska
Institutet and Stockholm University, Sweden; 5. Institute of Clinical
Medicine/Neurology, University of Eastern Finland and Department of
Neurology, Kuopio University Hospital, Finland*)

Introduction : Depression is a risk factor for dementia, although the association may be age-dependent. It can also be a prodrome for Alzheimer's disease. Both dementia and depression are associated with higher mortality. Method : We assessed the association between late-life depression symptoms (mean age 71.1 years), assessed with

Center for Epidemiologic Studies Depression Scale (CESD) and Beck Depression inventory, and dementia and mortality during 8.3-year follow-up in a population-based sample ($n=2000$) from Eastern Finland. Data on confounders (age, sex, bmi, health status, chronic diseases, smoking, alcohol use, apolipoprotein E genotype), mortality and depression was available for 1114 participants with Beck assessment and 1174 participants with CESD assessment. During the follow-up, 738 participants died and 852 participants attended second cognitive assessment. Sixty-two new incident dementia cases occurred during the follow-up. Results : CESD and Beck scores were correlated ($r=0.53$, $P<0.001$). According to Beck cut-offs, 75% had no depression, 15.6% had mild and 9.4% had moderate/severe depression. According to CESD cutoffs, 67.6% had no depression, 30.3 had mild and 2.1% had major depression. Proportion of overall agreement for categorical ratings was 0.69. Continuous or categorical CESD or Beck scores were not related to risk of dementia. In the unadjusted analyses, one-unit increase in Beck or CESD score increased the risk of death by 3% (95%CI 1.01-1.05), but the association was abolished after adjusting for confounders (1.00, 0.98-1.02). Beck/CESD categories were not related to mortality when confounders were taken into account. Conclusion : Late-life depressive symptoms were related to small increase in mortality, but this was entirely due to confounding. Keywords : Depressive symptoms, Dementia, Mortality

**OP23 417-C-3
DEPRESSIVE SYMPTOMS USING EURO-D SCALE ARE
ASSOCIATED WITH DECREASED GRIP STRENGTH,
SLOWER WALKING SPEED AND INABILITY TO STAND
FROM CHAIR WITHOUT USING ARMS IN A LARGE
EUROPEAN AGEING STUDY**
Sonja VESTERGAARD¹, Jesper RYG², Mette Lindholm ERIKSEN³,
Tahir MASUD⁴, Karen ANDERSEN-RANBERG³ (*1. Epidemiology,
Institute of Public Health, University of Southern Denmark, Denmark;
2. Geriatric Medicine, Odense University Hospital, Denmark;
3. Danish Ageing Research Centre, University of Southern Denmark,
Denmark; 4. Geriatric Medicine, Nottingham University Hospitals
NHS Trusts, United Kingdom*)

Introduction : Symptoms of depression [DS] in older people are associated with high morbidity, functional decline, and reduced quality of life. A better understanding of the complexity of DS may allow earlier preventive measures. Method : The Survey of Health, Ageing and Retirement in Europe (SHARE) is an ongoing longitudinal study of individuals aged ≥ 50 years in 14 countries. Using cross-sectional data we investigated if DS assessed by EURO-D scale were associated with: ability to rise from chair without using arms [CS](performed in those < 75 years), walking speed [WS](performed in those ≥ 75 years), and grip strength[GS]. Results : 30,268 participants, 54.2%=women, median age=64.8 (IQR=58.4-72.9) years were studied. DS (24.5%) were positively correlated with age. More DS were seen in women (30.9 vs 17.0%; OR=2.2; 95%CI=2.1-2.3; $p<0.001$), cognitively impaired (35.6 vs 19.9%; OR=2.5; 95%CI=2.3-2.6; $p<0.001$), vision impaired (38.3 vs 19.1%;OR=2.6; 95%CI=2.5-2.8; $p<0.001$), and hearing impaired (37.0 vs 21.8%; OR=2.1; 95%CI=2.0-2.2; $p<0.001$). Those unable to perform the CS (20.5%) had more DS (34.5% vs 19.1%; OR=2.2;95%CI=2.1-2.4; $p<0.001$). Compared to the highest sex-specific quartile of GS, the lowest quartile GS had more DS (34.8% vs 16.5%; OR=2.7;95%CI=2.5-2.9; $p<0.001$). Compared to the highest sex-specific quartile of WS, the lowest quartile WS had more DS (35.1% vs 19.6%; OR=2.3;95%CI=1.8-2.8; $p<0.001$). CS, GS and WS remained independently significantly associated with DS after adjustment for age, gender, country, current anti-depressive treatment and impairment of cognition, vision, and hearing. Conclusion : These

cross-sectional data show that the prevalence of DS is high and significantly associated with CS, GS and WS. Prospective data from SHARE will determine if these functional tests can predict DS in subsequent waves. Keywords : depression, functional tests, multinational study

OP23 417-C-4

DEPRESSION BELIEFS CORRELATES IN A GROUP OF MEXICAN ELDERLY

Mario PEREZ-ZEPEDA¹, Carmen GARCIA-PENA², Xochitl DUQUE-ALARCON³, Victoria ARANGO-LOPERA⁴ (1. *Clinical and Epidemiological Research, Instituto Nacional de Geriatria, Mexico*; 2. *Unidad de Investigacion Epidemiologica y en Servicios de Salud, IMSS, Mexico*; 3. *Mental Health, Health Minister, Mexico*; 4. *Education, Instituto Nacional de Geriatria, Mexico*)

Introduction : Despite high prevalence, and negative effects in quality of life, there is still a low proportion of elderly seeking for help when facing depression. Data from Garcia-Pena et al report that only 25% of elderly receive appropriate care. Different beliefs about depression could impact identification and help seeking of this problem, but also to treatment adherence. The aim of this study is to determine those variables associated with depression beliefs in a group of Mexican elderly. Method : Cross-sectional study was done, asking: 1.- Do you think depression is a normal process? 2.- Do you think depression is a disease? 3.- Do you think depression is a lifetime disease? 3.- Would you discuss your depressive symptoms with a physician?. Subjects belong to the largest social and health security system in the country. Results : 2,240 subjects were interviewed, mean age of 73.16 (SD 7.02), 67.19% of women and a mean scholarship years of 4.88 (4.38). 1,187 subjects believed that depression was part of aging (52.99%), 65.98% also believed that was a disease (1,478), 800 (35.71%) subjects having both beliefs. 30.04% of the subjects believed that was a lifetime disease, and 64.46% (n=1,444) would discuss depression with physicians. Higher age, male gender, low scholarship and been married was associated with negative depression beliefs. Conclusion : Multiple factors may impact depression beliefs. We found similar results to other populations, with the exception of a large proportion of subjects thinking as depression both as a disease and aging; equiparating both phenomena. Keywords : Depression beliefs, mental health literacy, aging beliefs

OP23 417-C-5

DEVELOPMENT OF A QUANTITATIVE ASSESSMENT SYSTEM USING DOPPLER ULTRASOUND FOR DYSPHAGIA

Baekhee LEE¹, Meekyung SUH², Hyewon LEE¹, Giltae YANG³, Saewon HONG⁴, Youngho LEE⁴, Duklyul NA², Heecheon YOU¹ (1. *Department of Industrial and Management Engineering, POSTECH, Korea*; 2. *Department of Neurology, Sungkyunkwan University School of Medicine, Samsung Medical Center, Korea*; 3. *R&D Research, SEED Technology, Korea*; 4. *R&D Department, Digital ECHO, Korea*)

Introduction : Dysphagia is the disorder related to difficulty in swallowing occurred in patients with neurologic diseases such as stroke and its prevalence is higher among people more than 65 years. The existing diagnosis methods of dysphagia such as Videofluoroscopic Swallowing Study and Fiberoptic Endoscopic Evaluation of Swallowing provide qualitative assessment and are limited due to radiation exposure and invasiveness, respectively. The present study developed a portable swallowing assessment device using Doppler ultrasound and a quantitative methodology for assessment of swallowing. Method : The swallowing assessment system calculates

five measures (peak amplitude, duration, number of peaks, peak interval, and impulse) using three parameters (starting time, ending time, and peak amplitude of swallowing) extracted from ultrasound swallowing signals. Swallowing signals of normal controls were compared with those of patients with dysphagia to examine the validity of the assessment system. Signals were collected over the pharynx for dry saliva, thin liquid (water; 1, 3, 9 ml), and thick liquid (beverage with thickener; 1, 3, 9 ml) conditions administered at random. Results : The number of swallowing peaks of normal controls was found less varied (1 or 2) than that of dysphagia patients (1 to 12). Of the swallowing measures, swallowing amplitude was found most sensitive by showing that its value of normal controls was 2~3 times higher than that of dysphagia patients for all the swallowing. Conclusion : The proposed swallowing assessment system can be useful for quantitative and real-time diagnosis of dysphagia. Future research is needed to develop a diagnosis model which evaluates the type and severity of dysphagia. Keywords : Dysphagia, Doppler ultrasound, Quantitative assessment system

OP23 418-S

LONG TERM CARE I

OP23 418-S-1

DEVELOPMENT AND PSYCHOMETRIC EVALUATION OF A QUESTIONNAIRE TO MEASURE NUTRITIONAL KNOWLEDGE OF NURSES IN LONG-TERM CARE

Silvia SCHONHERR¹, Ruud J.G. HALFENS², Christa LOHRMANN¹ (1. *Department of Nursing Science, Medical University of Graz, Austria*; 2. *Department of Health Service Research, School for Public Health and Primary care, Maastricht University, Netherlands*)

Introduction : Malnutrition is an internationally common health care phenomenon entailing serious consequences for those who are affected. Lack of knowledge among nursing staff is often discussed as a reason for deficits in nutritional practice across health care institutions. A valid and reliable tool is necessary to adequately assess knowledge of nutritional care and to further develop and refine nutritional education. Therefore the aim of this study was to develop and test the psychometric properties of a questionnaire aimed at assessing knowledge of nutritional care among nurses in long-term care. Method : The items of the questionnaire were derived from extensive literature review. Content validity was evaluated in a double Delphi procedure with eight international experts in nutritional care. Construct validity, item difficulty and discrimination index of the final scale were tested in a convenience sample of 1152 nurses. Results : The Knowledge of Nutritional Nursing Care - Geriatric (KoNN-G) Questionnaire consists of 20-items with five answer possibilities as well as the possibility 'I don't know' reflecting six dimensions. The Item-Content Validity Index (I-CVI) ranged from 0.75 to 1.00, and the Scale-Content Validity Index Average (S-CVI/Ave) was 0.91. The analyses of pre-defined groups showed significant differences in knowledge among participants with various levels of education and expertise. The difficulty index of the items ranged from 26.1-87.2 with a mean of 59.3. The item discrimination ranged from 0.05-0.59 with a mean of 0.34. Conclusion : The KoNN-G Questionnaire shows acceptable psychometric properties and can be applied to measure nutritional knowledge of nurses in long-term care. Keywords : questionnaire, nutritional knowledge, long-term care

OP23 418-S-2

THE RELATIONSHIP BETWEEN QUALITY OF CARE AND CARE PRACTICE ORGANIZATION IN EUROPEAN LONG-TERM CARE FACILITIES

Henriette G. VAN DER ROEST, Dinnus H.M. FRIJTERS (EMGO+

Institute, Department of General Practice and Elderly Care Medicine,
VU University Medical Center, Netherlands)

Introduction : Care practice in long-term care differs across countries and facilities. Until recently no international study in Europe has been executed to explore intercultural differences in long-term care organization and services. In the SHELTER study we explored differences between European long-term care facilities and the relationship between country specific organizational characteristics of long-term health care and quality of care. Method : The SHELTER study had a longitudinal design. Data collection took place in 59 long-term care facilities in eight European countries. Trained nurses collected data at baseline, after six, and 12 months. At baseline 4156 patients were included. Patient health status was comprehensively assessed with the interRAI-LTCF, of which quality indicators (QIs), case-mix indexes, and validated scales on patient functioning can be calculated. At baseline additional information on structure and process characteristics (e.g. size, staff formation, education) of the participating long-term care facilities was gathered with the use of a specially designed form. Results : Quality and organization of care varied widely across facilities. Facility location and (not) for profit status explained 28% of the variance found in communication decline among the population, whereas the ratio of housekeeping staff and working in a multidisciplinary team explained 51% of the variance found for ADL decline following an improvement. Variance in antipsychotic use was for 20% explained by the presence of special care units and the ratio of nurse aides in the facilities. Conclusion : Quality of care seems to be related to organizational characteristics, but needs to be studied more thoroughly. Keywords : quality of care, care practice organization, long-term care

OP23 418-S-3 STUDY ON KOREAN ORIENTAL MEDICINE AND AGING

Moon Mi JUNG, Young Shin WON (*Graduate School, Yonsei University, Korea*)

Introduction : This research focuses on the effects of Korean oriental medicine concepts on the aging of seniors, particularly in regards to ways which these concepts can help seniors overcome their injuries. Method : In accordance with the concepts of aging defined by the ancient Heo-jun Korean oriental medicine textbook based on the teachings of Dong-i-bo-gam, and the oldest Chinese-based literature based on the teachings of the Hwang-jae-nae-gyeong. Results : In the Dong-i-bo-gam the vital activities of people are comprised of the concepts known as Jeong(精), Gi(氣) and Shin(神). In regards to aging, the concept of Jeong was found to be the main key component. It was also found that aging is one of the main factors for the weakening of one's Lifeblood(精血). The Dong-i-bo-gam concluded that in order to remedy senior illnesses and control the aging process we need a method that can address the insufficiency of Jeong by increasing one's body energy. Conclusion : In the 'Thousand Year Publication' within the Hwang-jae-nae-gyeong it was written that for people in their sixties, the weakening of mood is a major factor for senior health and aging and contributes to symptoms of depression, becoming bedridden, excessive crying and nose mucus. The literature also points out that human life, lifespan, health and longevity rely heavily on such factors as the transformation between 'yin and yang,' adaptation to the changing of the four seasons, and food ingestion. If these factors are considered and one does not overwork, it was found that one may extend one's natural lifespan and be healthier overall. Keywords : Aging, Seniors, Korean Oriental Medicine

OP23 419-S WORK, LABOR AND EMPLOYMENT I

OP23 419-S-1 THE END OF A WORKING CAREER: THE COMBINED EFFECTS OF INDIVIDUAL TRAJECTORIES AND RETIREMENT REFORMS

Jim OGG, Sylvie RENAUT (*Unite des Recherches sur le Vieillissement, Caisse Nationale d'assurance Vieillesse, France*)

Introduction : In France, the objective set by the Lisbon agreement in 2000 to achieve 50% of active workers between the ages of 55 and 64 by 2010 has not been achieved. In order to contribute to a greater understanding of the reluctance of older French workers to prolong their careers, the research examines individual motives for preretirement or working beyond retirement age. Method : The data source is the Gender and Generations Survey (France). Panel data from three waves (2005, 2008, 2011) are examined for a sub-sample of respondents aged between 45 et 64 who were employed in the labour market in 2005 and who envisaged retirement within three years. Forty qualitative interviews were undertaken in 2012 to explore the link between motives for retirement, employer's policies towards senior workers and recent legal retirement reforms. Results : Retirement reforms, individual career and family trajectories and employer policies combine to create greater uncertainties regarding the timing of retirement for current generations of workers in the second part of their career. The timing of retirement is also gender specific. Incentives to encourage older workers to remain in the labour market remain unpopular. Conclusion : The results suggest that for many French older workers, there is an absence of measures that could encourage older workers to remain longer in the labour market, such as high quality working conditions and attractive remuneration. Socio-demographic transformations, such as the rise in recomposed families, may have a greater impact in the short term in keeping older workers in the labour market. Keywords : retirement, reforms, France

OP23 419-S-2 PENSION REFORM AND POTENTIAL OCCUPATION OF ELDERLY POPULATION IN UKRAINE

Nataliia PROKOPENKO (*Social Gerontology, State Institute of Gerontology of the Ukrainian Academy of Medical Sciences, Ukraine*)

Introduction : The study deals with the global issues relative pension reforms in Ukraine and worldwide. Method : Analyzed was an interrelationship between the demographic changes-related increase of retirement age and economics. Results : In conditions of economics transformation the presence of disproportion between the demand for manpower and its supply by profession is a significant factor, which limits employment opportunities of senior age persons. The results obtained showed that in the industry with an employment of over one quarter of working pensioners there is a significant reduction of the demand for manpower and, consequently, the elderly workers may occupy mainly unskilled and poorly-paid positions. Analyzed were changes in occupational employment of the elderly subjects during 1999-2010 (the longitudinal study). The results obtained showed that having higher motivation to work the "young" pensioners (pre-pensioners in 1999) vs. "old" pensioners (pensioners who continued working in 1999) worked half of the years after having reached the retirement age. The author has outlined the main factors limiting occupation of older people. Second, measures for maintaining their economic activity are proposed. Conclusion : In view of the plans to increase retirement age it is expedient and necessary to use capabilities of the elderly persons; this needs to be supported by the related legal

norms, which would ensure stable employment of the elderly workers according to their motivations and capabilities. Keywords : demographic prognosis, retirement age, older worker, occupation challenges

OP23 419-S-3

NEW ATTEMPT OF IDEAL SECOND LIFE WITH A SENSE OF FULFILLMENT IN COMMUNITY-DWELLING SENIORS: TO ACHIEVE 'AGING IN PLACE'

Kouji SHIBASAKI¹, Katsuya IJIMA¹, Hiroto MUROHASHI¹, Ikuko SUGAWARA², Naomi YATOMI¹, Nobuhiro MAEDA¹, Hiroko AKIYAMA¹, Jun GOTO¹, Yuichi HIROSE¹, Mikihiro OIDA¹, Yoshihiko SATO¹, Tetsuo TSUJI¹, Minoru KAMATA¹ (1. Institute of Gerontology, The University of Tokyo, Japan; 2. Institute of Social Science, The University of Tokyo, Japan)

Introduction : In Japan with increasing aging, a decline in the physical activity of many workers due to decreased frequency to go outside after retirement at the age of 60 or older is a major social concern. We explore their ideal second life with a sense of fulfillment through we offer the retired seniors restarting some works. Here, we objectively investigate whether our attempt is effective to increase their physical activity. Method : Subjects were 11 retired community-dwelling seniors aged 60 or older (Average age: 68.7±5.5, 7 males). They chose favorite jobs under the coordination of our institution. Step count, metabolic equivalents (METs) and calorie consumption were calculated using wristband-typed active mass meter as physical activity. Geriatric depression scale (GDS) was also measured to research psychological effect. All values were compared between before and after working. Results : They were employed as English teacher, cleaning staff of welfare facilities and so on. Before working, step counts, METs, calorie consumption and GDS were 4495±3132, 1.29±0.09, 1961±508 and 4.3±3.4, respectively. All variable were significantly improved to 6243±4450, 1.32±0.11, 2305±462 and 2.9±2.5, respectively after 6 months of starting work. Intriguing, even in holidays without working, a significant increase in these parameters of their physical activity was found. Conclusion : These beneficial observations suggest that it attributes to not only increase physical activity but also improve depressive mood by re-employment, suggesting that it leads to achievement of 'Aging in Place'. Keywords: second life, aging, physical activity

OP23 419-S-4

RECENT DEVELOPMENTS IN EMPLOYMENT POLICIES FOR OLDER WORKERS IN JAPAN

Koichi HIRAOKA (Sociology, Ochanomizu University, Japan)

Introduction : This study aims to clarify recent developments in employment policies for older workers in Japan, specifically focusing on the revision of the Law for the Stabilization of Employment of Older Workers in Japan in 2012, to analyze the background factors behind these developments, and to assess to what extent these developments will help achieve the objectives of providing adequate employment opportunities for older workers. Method : Review of academic literature; examination of documents published by the government, labor unions, and employer's associations; analysis of statistics on labor market situations of older workers. Results : Recent government policy has laid much stress on strengthening the employer's obligation to extend employment to the age of 65, while maintaining the legal minimum age of mandatory retirement at 60 and extending the scope of choice in employment arrangements for employees aged 60 to 64. The main reason for this development was the rise to 65 in the minimum age for entitlement to the public pension

scheme stipulated by the pension reforms in 1994 and 2000. Conclusion : It is highly likely that the government policy to strengthen the employer's obligation to extend employment to the age of 65 will achieve its objective. However, in order to provide more employment opportunities for persons aged 65 and over and to improve the quality of employment for older workers, more government efforts in the area of lifelong training, public employment service, support for employers, and so on, as well as concerted efforts by social partners, are needed. Keywords : older worker, employment policy, Japan

OP23 419-S-5

EMPLOYMENT STATUS AND HEALTH AMONG OLDER ADULTS IN SOUTH KOREA AND UNITED STATES

Hongsoo KIM¹, Young-Il JUNG¹, Min-Kyoung RHEE², Iris CHI² (1. Graduate School of Public Health, Seoul National University, Korea; 2. School of Social Work, University of Southern California, USA)

Introduction : The aim of this study was to examine the relationships between employment status and multiple health outcomes among people aged 50 or older in Korea and the U.S. using comparable datasets. Method : The sample included 4,972 Koreans and 15,889 Americans from the KLoSA (Korean Longitudinal Study of Aging) and HRS (Health and Retirement Study) datasets in 2006, respectively. Employment status was categorized as follows: currently working; unemployed and looking for job; and retired. Physical and mental health among people by employment status was examined within and between the countries. Results : More than half(54.9%) of the Korean respondents were working, about 38.7% were retired, and 6.4% were unemployed; the majority of the American respondents were retired(59.5%), 36.7% were working, and 4.5% were unemployed. Overall, physical health measured by ADL and IADL dependency rates was lower, but mental health measured by the prevalence of depressive symptoms was higher among Koreans than their counterparts. While adjusting for socio-demographic covariates, compared to the working group, the Korean unemployed group had a higher prevalence of depressive symptoms, while the American unemployed group had a higher IADL dependency rate. The retirees' physical and mental health was lower than the working group in both countries. Conclusion : Job status may affect physical and mental health in later life, but the patterns and mechanisms of the relationships may differ across countries with different cultural contexts and social systems. Further cross-cultural studies are necessary on the complex relationships between work and health in order to support policies for healthy and active aging. Keywords : Employment, Health, Cross-cultural studies

OP23 420-C

GERIATRIC ASSESSMENT II

OP23 420-C-1

TRANSLATION AND VALIDATION OF THE MANDARIN VERSION OF COMPREHENSIVE GERIATRIC ASSESSMENT QUESTIONNAIRE AMONG ELDERLY PATIENTS IN MALAYSIA

Sze Lin TAN, Sakinah HARITH (Dietetics Programme, School of Health Sciences, Universiti Sains Malaysia, Malaysia)

Introduction : The study aimed to translate and validate the Comprehensive Geriatric Assessment questionnaire in Mandarin language among elderly patients in Malaysia. Method : The questionnaire contains items on sociodemographic characteristics,

medical condition, quality of life (36-Item Short-Form Health Survey), nutritional status (Mini Nutritional Assessment Short Form), functional capacity (Basic and Instrumental Activities of Daily Living), and depression status (Geriatric Depression Scale Short Form). The forward and backward translation process of the original English version questionnaire was done by 3 independent linguistic translators and validated its content by an expert team of 5 geriatricians, dietitian, nurse and lecturer. The Mandarin version of the questionnaire was tested for face validity in 10 over 65 year old elderly patients admitted to medical wards in Hospital Universiti Sains Malaysia, Malaysia. The internal consistency reliability and construct validity were evaluated in a group of 192 elderly patients (mean age 73.1 years) at four general hospitals from each of the region in Peninsular Malaysia from January 2011 to January 2012. The questionnaire was administered through face-to-face interviews with patients. Results : Minor amendments were made after the content and face validity tests. The internal consistency reliability was good as the Cronbach's alpha of most of the domains was above 0.70, ranging from 0.71 to 0.93 with only one exception (MNA-SF, Cronbach's alpha 0.62). Factor loading of all domains were loaded satisfactorily above 0.40, ranging from 0.42 to 0.92. Conclusion : The Mandarin version of the Comprehensive Geriatric Assessment questionnaire showed evidence of satisfactory internal consistency reliability and construct validity in Malaysian geriatric patients. Keywords : Comprehensive Geriatric Assessment, validation, geriatric patients

OP23 420-C-2 SIMPLE TOOL TO ASSES FUNCTIONALITY IN OUT PATIENT SETTING

Vijay KUMAR, Prasun CHATTERJEE, A.B. DEY (*Geriatric Medicine, Aiims, India*)

Introduction : Functionality matters most for the vulnerable community specially for 75 + population. Gait speed assessment by 'Timed-up-go (TUG) score' 'hand grip strength' are two safe, easy to perform and well validated tool in busy outpatient clinic for this patients ,helps to predict about frailty ,disability and mortality. Method: Patients aged 75 years or more, attending the Geriatric Medicine OPD of AIIMS, underwent a detailed clinical evaluation after taking proper consent; detail history had been taken about history of previous falls., poly-pharmacy, comorbidities and previous hospitalization. Functional capacity was assessed by TUG score (3 metre), hand-grip strength (American standard), depression and cognitive function were assessed by MINICOG and GDS respectively. Then data were analysed in SPSS. Results : Out of a total of 123 (75+) patients only 19.5% were females; a major 72.3% had slow gait speed (TUG score more than 20) ; and 27.64% patients had poor hand grip (predicted for their BMI) Patients with past history of hospitalization had better TUG score (P=0.003) and hand grip strength (P=0.001). Out of 89 patients with impaired TUG, 86.51% had impaired IADL, 75.28% had impaired ADL, 66.29% patients had depression, and 65.16% had poor self reported health status. Out of the 34 patients with poor hand grip, all of them had impaired IADL, 88.23% had impaired ADL, 73.52% had depression and 67.64% had poor self reported health status. Conclusion : Abnormal TUG score and hand grip strength are invariably associated with various parameters of functional impairment in "75+" age group. These tests are non-invasive, easy, safe. Keywords : TUG score, hand grip, geriatric assesment

OP23 420-C-3 CLINICAL CHANGES IN OLDER PATIENTS DURING HOSPITALIZATION: RESPONSIVENESS OF THE MDS

INTERRAI ACUTE CARE INSTRUMENT

Nathalie Isabelle Helena WELLENS¹, Geert VERBEKE², Johan FLAMAING³, Philip MOONS¹, Steven BOONEN³, Jos TOURNOY³, Koen MILISEN¹ (*1. Department of Public Health, Center for Health Services and Nursing Research, KU Leuven, Belgium; 2. Department of Public Health, Interuniversity Institute for Biostatistics and Statistical Bioinformatics, KU Leuven, Belgium; 3. Geriatric Medicine, University Hospitals Leuven, Department of Clinical and Experimental Medicine, KU Leuven, Belgium*)

Introduction : Patient functioning can be highly unstable within the hospital stay of an older person. We evaluated the ability of the Minimum Data Set interRAI Acute Care, a comprehensive geriatric assessment system, to detect those clinical changes. Method : An explorative secondary data-analysis compared prospectively collected data at three points in time: pre-hospitalization, upon admission, and at discharge. The interRAI AC assessment was performed serially in 256 geriatric inpatients (83.2±5.2 years; 60% female) by clinicians of multiple disciplines in nine geriatric and eight non-geriatric wards of nine acute hospitals. Responsiveness (i.e. the capacity to detect changes within patients) was evaluated for the output scales on five domains: ADL, cognition, communication, depressive symptoms, and pain. Results : Significant differences in clinical status were found for all five domains, based on Friedman test. Post-hoc tests revealed differences between each assessment period, except for cognition and communication from admission to discharge and for depressive symptoms from pre-admission to discharge. The Guyatt's Responsiveness Index showed a good to excellent capacity to detect longitudinal changes during hospitalization for the areas of cognition, communication, and pain, as well as substantial performance for ADL and depressive symptoms. Conclusion : In older inpatients, fluctuations in ADL, cognition, communication, depressive symptoms, and pain can be captured with the interRAI AC output scales, enabling clinicians to evaluate longitudinal changes from admission to discharge and to provide a comparison with patient status before the acute onset of the illness. Our results support the use of these scales in both geriatric and non-geriatric wards. Keywords : comprehensive geriatric assessment, interRAI Acute Care, validation studies

OP23 420-C-4 THE LOGIC OF GERIATRICS

Patrik EKLUND¹, Milla IMMONEN², Tuula PETAKOSKI-HULT², Heidi SIMILA² (*1. Department of Computing Science, Umea University, Sweden; 2. Technical Research Centre of Finland, VTT, Finland*)

Introduction : Assessment scales as information entities are poorly equipped with rigorous typing of data. This disables the gap between logic and guidelines not only within geriatric assessment but also more generally within municipal and regional decision-making in elderly care. Logic is, on the one hand, a carrier of information, and, on the other hand, it includes mechanisms for rigorous logical inference which underlies decision-making. Method : We propose a logical ontology for assessment scales, in a broad sense, so that such a framework becomes based on a typing system where also uncertainty is canonically integrated. One of the main questions is where uncertainty actually resides, and how they are canonically retrieved rather than amalgamated in ad hoc approaches. Results : Our presentation is illuminated using traditional assessment scales e.g. as represented by a typical set of assessment scales which usually includes some ADL scales combined with suitable cognitive scales, or combination scales. Non-cognitive signs and BPSD oriented scales are also poorly typed with respect to information and information

structures. We also consider scales and scopes of risk factors related to falls. Conclusion : Gerontological conditions and circumstances is about information and knowledge and in this paper we focus on the information part. We have therefore provided examples on how gerontological data can be properly typed so as to open up possibilities e.g. for comparative studies and development of regional and national repositories involving gerontological data and information. Keywords : assessment, ontology, decision-making

OP23 420-C-5

VALIDITY OF A NEW PRIMARY CARE TOOL FOR THE IDENTIFICATION OF FRAILTY IN OLDER PERSONS: THE EASYCARE-TWO-STEP OLDER PERSONS SCREENING

Janneke Van KEMPEN¹, Rene MELIS¹, Henk SCHERS², Ian PHILP³, Marcel OLDE RIKKERT¹ (1. *Geriatrics, Radboud University Nijmegen Medical Centre, Netherlands*; 2. *Department of Primary and Community Care, Radboud University Nijmegen Medical Centre, Netherlands*; 3. *EASY-Care International Research and Development, Warwick Medical School, The University of Warwick, United Kingdom*)

Introduction : The first step in improving care for elderly is efficient identification of the elderly who will benefit integrated care: frail older persons. Existing frailty instruments are not developed nor validated in primary care. We developed the Easycare-TOS (Two-step Older persons Screening). The first step consists of the general practitioner's (GP) frailty judgement based on prior knowledge. If this judgement was uncertain, additional EASYcare-data on health and psychosocial aspects were collected by a primary care nurse. Here we present large population validity data on Easycare-TOS. Method : We compared the Easycare-TOS' frailty judgment with the results of related constructs (construct validity). Furthermore, we measured functional status of the participants 12 months after the Easycare-TOS baseline assessment (prognostic validity). Results : 587 elderly from 6 GP practices were included (77 ± 5 years; 56% female). According to Easycare-TOS 39.4% participants were frail. Easycare-TOS showed better correlation with the Frailty Index ($r=0.62$) than with the Fried frailty criteria ($r=0.52$). Moderate to good correlations were found with: multimorbidity (0.50), (I)ADL disabilities (0.53), mobility (0.55), cognition (0.31), mental wellbeing (0.38) and social context (0.28). Easycare-TOS frailty was associated with a significantly higher risk on mortality (OR 10.25), hospital admission (OR 1.90) and ADL decline (OR 3.58) after 12 months. After correction for age, sex, education, multimorbidity and (I)ADL disabilities Easycare-TOS frailty remained an independent predictor for functional decline (OR 2.03). Conclusion : This study shows that Easycare-TOS has good construct and prognostic validity. This makes Easycare-TOS a suitable instrument for the identification of frailty in primary care. Keywords : EASYcare, Frailty assessment

OP23 421-C

GERIATRIC ASSESSMENT III

OP23 421-C-1

INTRARATER REPRODUCIBILITY AND VALIDITY OF NINTENDO WII BALANCE TESTS IN OLDER ADULTS

Martin Grønbech JØRGENSEN¹, Uffe LAESSOE², Carsten HENDRIKSEN³, Ole NIELSEN¹, Per AAGAARD⁴ (1. *Department of Geriatrics, Aalborg University Hospital, Denmark*; 2. *Physiotherapy Department, University College of Northern Denmark, Denmark*; 3. *Department of Integrated Health Care, Bispebjerg University Hospital, Denmark*; 4. *Institute of Sports Science and Clinical Biomechanics, University of Southern Denmark,*

Denmark)

Introduction : Objective evaluation of balance control in older adults can be achieved thru force plate (FP) analysis. The FP technique, however, is often expensive, immobile and technically difficult to operate. The Nintendo Wii board, on the other hand, is an easy-to-use, portable and low-cost force platform, which contains bioelectric features similar to a FP. The aims of the current study were (1) to examine intrarater reproducibility of the Nintendo Wii Agility and Stillness tests and (2) explore concurrent validity of these tests against conventional FP analysis. Method : Within day Wii test-retest reproducibility was examined in 30 older adults (age 71.8 ± 5.1 yrs.), expressed by Intra-class correlation coefficients (ICC), coefficient of variance (CV) and 95% limits of agreement (LOA). Concurrent validity was determined by relating selected FP measures to obtained Nintendo Wii test-scores. Results : Averaging three trials in the Stillness Test yielded a test-retest ICC of 0.86 (CI 0.74-0.93), CV of 6.4%, LOA of 11.0 and LOA% of 17.9. For test-retest of the Agility Test, ICC was 0.73 (0.50-0.86), CV 5.3%, LOA 1.8 and LOA% 14.6. No systematic test-retest differences were found in the Stillness test, however Agility test scores differed between test-retest ($p<0.05$). Moderate-to-strong relationships ($r=0.65-0.82$, $p<0.01$) were observed between Stillness test scores and selected force plate variables. Conclusion : The Wii Stillness Test demonstrated a high intra-rater reproducibility and strong outcome validity when evaluated against force plate analysis. For the Wii Agility Test, a systematic test-retest difference was observed, suggesting a longer familiarization procedure is needed for this type of test. Keywords : Nintendo Wii, Reproducibility, Postural Balance

OP23 421-C-2

STATIONARY GERIATRIC EARLY REHABILITATION IS WELL KNOWN AND WELL ORGANIZED IN MANY COUNTRIES. BUT IS IT SUFFICIENTLY IN OUTCOME FOR PATIENTS FROM ALL ASSIGNING SPECIALIST DEPARTMENTS? AN OUTCOME TRIAL

Christian ANGLEITNER¹, Petra HEISE¹, Stefan TRAUSSNIGG², Inge REITER², Peter GOLMAYER¹ (1. *Department of Geriatrics and Remobilisation, Hospital of the Sisters of Charity Ried, Austria*; 2. *Institute of Physical Medicine and Rehabilitation, Hospital of the Sisters of Charity Ried, Austria*)

Introduction : Stationary geriatric early rehabilitation is very well implemented and sufficiently standardized in many countries. But is it possible to reach for all patients no matter from which department they come from a sufficient therapeutic progress in functional outcome? Method : The retrospective study includes all the patients from 2008 to 2011 with our department took over from the neurologic, traumatologic, orthopaedic and internal departments. The development was measured with the FIM (functional independence measure). The take over FIM was taken inside 72 hours after arriving and the discharge FIM was taken inside the last 48 hours before leaving. Results : The study contains 1,295 patients, 396 orthopaedic patients with an average age of 74.83 years, a residence time from 15.95 days and a FIM development from 101 to 115 points; 375 traumatological patients with an average age of 81.44 years, a residence time from 18.77 days and a FIM development from 82 to 103 points; 363 neurological patients with an average age of 75.88 years, a residence time from 21.08 days and a FIM development from 73 to 91 points as well as 161 cardio logical/internal patients with an average age of 80.17 years a residence time from 17.54 days and a FIM development from 81 to 96 points. The Fim development of all patient groups is 1.24 (+/- 0.16 points) per therapeutic day. Conclusion : It is possibly to

obtain a sufficient functional progress for all patients in stationary early geriatric rehabilitation independently from witch specialist department they were overtaken from. Keywords : stationary geriatric early rehabilitation, functional outcome, FIM,

OP23 421-C-3

EVALUATING QUALITY OF CARE OF OLDER COGNITIVELY IMPAIRED PATIENTS PRESENTING TO EMERGENCY DEPARTMENTS

Linda Maria SCHNITKER¹, Melinda MARTIN-KHAN¹, Ellen BURKETT², Elizabeth BEATTIE³, Len GRAY¹ (1. *The Centre for Research in Geriatric Medicine, The University of Queensland, Australia*; 2. *The Princess Alexandra Hospital, Emergency Service, Queensland Health, Australia*; 3. *School of Nursing, Queensland University of Technology, Australia*)

Introduction : This study examined the quality of care received by cognitively impaired older persons in emergency departments. Method: The medical records of 273 patients aged 75 years and over were reviewed from November 2010 - February 2011 to evaluate quality of emergency care represented by a published quality indicator set. Results : Records containing evidence of an attempt to carry out a cognitive assessment was identified in 150 records. A formal screening tool was used in 22 cases. The lack of routine appraisal of cognitive function precluded the further assessment of quality of care in 127 records. In 54 cases there was documented evidence of cognitive impairment. Our review of quality of care for older ED patients with cognitive impairment indicated that: 1) Of the 54 patients with cognitive impairment, 30 patients had no documented evidence of the presence or absence of an acute change in cognitive function from baseline; 2) Of 26 patients discharged home with a pre-existing cognitive impairment (i.e. no acute change from baseline), 15 had no documented evidence of the presence or absence of previous consideration of this issue by a health care provider. 3) 12 of the 21 discharged patients, who screened positive for cognitive issues for the first time, were not referred for outpatient evaluation. Conclusion : These findings suggests that the majority of older persons presenting to emergency departments are not receiving a formal cognitive assessment and over half of older ED patients with cognitive impairment do not receive quality of care according to quality indicators for geriatric emergency. Keywords : Emergency Department, Cognitive Impairment, Quality Indicators

OP23 421-C-4

RISK STRATIFICATION AND ON-SITE GERIATRIC ASSESSMENT IN AN EMERGENCY DEPARTMENT REDUCES FUNCTIONAL DECLINE - PRELIMINARY RESULTS

Chik Loon FOO, Vivian Wing Yin SIU, Hou ANG, Madeline Wl PHUAH (*Emergency Department, Tan Tock Seng Hospital, Singapore*)

Introduction : To examine the benefits of providing geriatric assessment to at-risk elders prior to Emergency Department (ED) discharge. Method : This is a prospective pragmatic ED study from 4th July 2011 to 13th September 2012. Patients 65 years-and-above with a Triage Risk Screening Tool (TRST) score 2-or-more were recruited prior to discharge. Allocation was performed by last-digit of their national identity number. Control group (odd) received standard ED care. Intervention group (even) received geriatric assessment and intervention. At 9 months, functional scores, unscheduled ED reattendance and hospitalisation were obtained via telephone and electronic medical records. Results : There were 468 and 239 patients

in the control and intervention groups respectively. There was no difference in age, gender, race and function at baseline. 83.3% of patients in the intervention group had hidden needs that required attention; 20.5% declined. Common interventions included geriatric clinic referral (28.5%) and physiotherapy review (18.8%). At 9 months, there was a trend towards reduced ED reattendance (57.8% vs. 51.6%, $p=0.32$) and hospitalisations (51.0% vs. 42.9%, $p=0.19$) in the intervention group. The intervention group also showed significant improvement in function at 9 months compared to the control group (Basic Activities of Daily Living, BADL -0.70 vs +0.41, $p<0.01$; Instrumental Activities of Daily Living, IADL -0.79 vs +1.50, $p<0.01$). Conclusion : Risk stratification followed by on-site geriatric assessment in the ED resulted in a promising trend towards reduced ED reattendance and hospitalisation rates, as well as significant improvement in function. Keywords : Emergency department, Geriatric screening, Geriatric assessment

OP23 421-C-5

COMORBIDITIES AND TREATMENT-LIMITING DECISION AMONG OLDER PATIENTS DYING IN EMERGENCY DEPARTMENT: IS THERE AN ASSOCIATION?

Laure de DECKER¹, Jehanne-Marie de BOISJOLLY-BONNEFOI², Pierre-marie ROY², Cedric ANNWEILER³, Olivier BEAUCHET³ (1. *Geriatrics, Nantes University Hospital, France*; 2. *Emergency Department, Angers University Hospital, France*; 3. *Neuroscience and Geriatrics, Angers University Hospital, France*)

Introduction : It has been shown that older patients treated in the Emergency Departments (EDs) have a higher risk of death compared to younger adults, and that 78% of those dying have a treatment-limiting decision. In addition, older patients treated in EDs have an accumulation of chronic diseases. The aim of this study was to determine whether the score on the Kaplan Feinstein Index (KFI) was associated with the treatment-limiting decision among older patients dying in ED. Method : All patients who died in ED of Angers University Hospital, France, between April 2008 and September 2009 were retrospectively included in this cross-sectional study. One hundred eighty-four patients who died in ED were included in this study (mean age 86.1±6 years; 52 % female). Results : Among them, a treatment-limiting decision was taken in 78.8% (n=145 patients). Multiple logistic regression model showed that long stay in ED before death ($P=0.029$), and neurologic ($P<0.001$), infectious ($P=0.043$) and respiratory ($P=0.021$) organs failures were significantly associated with a treatment-limiting decision. Conclusion : Our findings showed that, unlike acute diseases, the severity of comorbidities measured with KFI was not significantly associated with a treatment-limiting decision. Further research is needed to corroborate our findings. Keywords : treatment-limiting decision; comorbidities; emergency department; older adults

OP23 422-C

RISK FACTORS OF FALLS

OP23 422-C-1

FALLS AND HIP FRACTURE ISSUES IN BRAZIL, PERSPECTIVES FROM AN ORTHOGERIATRIC SERVICE

Luiz Eugenio GARCEZ LEME¹, Mariana DECKERS LEME² (1. *Ortopedia e Traumatologia - Orthogeriatrics, Universidade de Sao Paulo, Brazil*; 2. *Internal Medicine, Hospital das Clinicas da Faculdade de Medicina da Universidade de Sao Paulo, Brazil*)

Introduction : In Brazil, the overall incidence of falls over 60 in the city of Sao Paulo is 28.6% , reaching 40% among those aged over 80

years . Also osteopenia and osteoporosis over 70 are significant in men (from 33.3 to 57.4% and from 6.4 to 16.1%) and especially in women (from 36.6 to 56.5 % and from 22.2 to 33.2%) . Fracture rates are high and, nationwide in 2012; over 46 thousand people over 60 were hospitalized for hip fracture with an average of nine days of hospitalization and hospital mortality rate of 4.9%, higher by 7.6% among over 80 years . Mortality rates at one year are similar to the international average 23% (women) and over 60% (men). Method : The Orthogeriatric Group (OG) of our hospital (HCFMUSP) began in 1997. The group promoted an interdisciplinary and education orientation. A practical model of clinical evaluation of orthopedic surgery in older people is used. The initial goals are to improve patient care, build a gerontological culture among orthopedic surgeons and encourage other surgical groups to similar structures. Results : In these 15 years aside a decrease in hospital mortality we saw an increase in patient and health professionals' satisfaction. Furthermore, this model proved to be an important academic tool for training all health professionals, mainly residents in geriatrics and in orthopedics, and a new promising field for scientific research for evaluating frailty and cost-benefit models of care. Conclusion : The co-management model of care in hip fractures show to be a valuable resource in Brazil. Keywords : Geriatrics, Falls, Hip Fracture

OP23 422-C-2

FALLS ARE ASSOCIATED WITH DECREASED GRIP STRENGTH, SLOWER WALKING SPEED AND INABILITY TO STAND FROM CHAIR WITHOUT USING ARMS IN A LARGE EUROPEAN AGEING STUDY

Mette Lindholm ERIKSEN¹, Tahir MASUD², Jesper RYG³, Sonja VESTERGAARD¹, Karen ANDERSEN-RANBERG¹ (1. Danish Ageing Research Center, University of Southern Denmark, Denmark; 2. Geriatric Medicine, Nottingham University Hospital NHS Trusts, United Kingdom; 3. Geriatric Medicine, Odense University Hospital, Denmark)

Introduction : Falls in older people are associated with much morbidity, reduced quality of life and institutionalization. Better prediction of falls risk may allow earlier preventative measures. The Survey of Health, Ageing and Retirement in Europe (SHARE) is an ongoing longitudinal study of individuals aged ≥ 50 years in 14 countries. Method : Using cross-sectional data from SHARE wave 2 we investigated if three commonly used functional tests were associated with falls: ability to perform chair stand test (rising from chair without using arms, performed in those < 75 years)[CS], walking speed[WS] (performed in those > 75 years) and grip strength[GS]. Results : 31,043 participants, 54.1% = women, median age = 64.9 (IQR = 58.4-73.2) years were studied. Falls were reported by 4.1% and were positively correlated with age (spearman's rho 0.137, $p < 0.001$). Women had more falls (5.4 vs 2.6%; OR = 2.1; 95% CI = 1.9-2.4; $p < 0.001$). Those unable to perform the CS (19.9%) had more falls (6.8% vs 1.7%; OR = 5.7; 95% CI = 4.6-7.0; $p < 0.001$). Compared to the highest sex-specific quartile of GS, those with lowest quartile GS had more falls (7.6% vs 1.4%; OR = 1.8; 95% CI = 1.7-1.9; $p < 0.001$). Compared to the highest sex-specific quartile of WS, those with the lowest quartile WS had more falls (10.2% vs 4.3%; OR = 2.5; 95% CI = 1.7-3.7; $p < 0.001$). CS, GS and WS remained independently significantly associated with falls after adjustment for age, gender, and country. Conclusion : These cross-sectional data show that falls are significantly associated with CS, GS and WS. Prospective data are now planned from SHARE to determine if these functional tests can predict falls in subsequent waves. Keywords : falls, functional test, multi-national study

OP23 422-C-3

BALANCE IMPAIRMENT, COGNITIVE DECLINE AND FALLS IN OLDER ADULTS: PRINCIPAL COMPONENTS ANALYSIS MAY IDENTIFY THE BEST COMBINATION AT RISK OF FALLS

Jean-Baptiste MIGNARDOT¹, Olivier BEAUCHET², Cedric ANNWEILER², Thibault DESCHAMPS¹, Christophe CORNU¹ (1. Laboratory 'Motricite, Interactions, Performance' (UPRES EA 4334), University of Nantes, France; 2. Department of Neuroscience, Division of Geriatric Medicine, UPRES EA 4638, UNAM, Angers University Hospital, Angers, France)

Introduction : Cognitive decline and balance impairment have been both related to high risk of falls in older adults. There is a complex interplay between risk factors explaining that the identification of risk for falling is multifactorial and depends on the type of combination of risk factors. The objective of this study was to identify variables associated with falls among older adults without (Cognitive healthy individual [CHI]) and with cognitive decline (i.e., Mild cognitive decline [MCI], mild and moderated dementia) by using the principal components analysis (PCA) technique. Method : Based on a cross-sectional prospective design, 620 older adults (mean age 77 ± 8 years; 51.8% women) were recruited in Angers University Hospital. Clinical risk factors of falls and posturographic variables using a force platform balance were measured. The prevalence of falls differed between groups (32.4% in CHI, 27.1% in MCI, 48% in demented individual). Results : PCA identified three significant eigenvectors (i.e., dynamic postural - PC1 - , cognitive-physical - PC2 - and static antero posterior tilt variables - PC3) that represented 40% of variance. Related-postural (i.e., PC1 and PC2) and cognitive-physical variables discriminated significantly fallers from non-fallers ($p < 0.001$ and $P < 0.05$). Significant differences between CHI, MCI and dementia are also observed on PC1, PC2 and PC3 ($p < 0.05$). Conclusion : The findings confirm the prerequisite to differentiate the dementia status when aspiring to estimate accurately the falling risk. The PCA also allows to derive a "general postural factor" from the first "postural control" eigenvector, essential to data reduction of multivariable statistical models and their measure quality. Keywords : Falls prevention, Cognitive decline, Principal Components Analysis

OP23 422-C-4

ARE GAIT DISORDERS AN INDEPENDENT RISK FACTOR OF DEATH IN DEMENTED PATIENTS?

Moustapha DRAME, Dragos CIOCAN, Rachid MAHMOUDI, Francois BLANCHARD, Damien JOLLY, Jean-luc NOVELLA (Department of Geriatrics and Internal Medicine, Reims University Hospitals, France)

Introduction : The aim of the study was to determine if gait disorders are an independent predictive factor of death in demented subjects. Method : A prospective, multi-centre cohort study, including demented subjects aged 75 years or older, hospitalised through the emergency room was set up in nine French hospitals. They all underwent CGA in the first week of hospitalisation. Gait disorders were defined by a timed up and go test greater than 20 seconds. Relationship between gait disorders and death within the first year of follow up was determined using a Cox regression model, after adjustment for baseline characteristics. Results : The 589 subjects of this study were 86 ± 6 years with a majority of women (69%). Gait disorders rate was 86% ($n = 507$). Overall death rate within the first year was 46% ($n = 210$). Factors predictive of death were: gait disorders (HR = 1.65, 95% CI = 1.04-2.61); age (HR = 1.54, 95% CI = 1.6-2.04); and history of hospital admission (HR = 1.51, 95% CI = 1.15-2.0). Sex, denutrition, and

depression did not prove significance. Conclusion : When adjusted for CGA variables, gait disorders are an independent risk factor for death in demented subjects. When hospitalised, physiotherapy should be implemented as early as possible. Keywords : gait disorders, dementia, elderly

OP23 422-C-5

ASSOCIATION OF DEPRESSIVE SYMPTOMS WITH RECURRENT FALLS: A CROSS-SECTIONAL ELDERLY POPULATION BASED STUDY

Cyrille LAUNAY¹, Cedric ANNWEILER², Laure DE DECKER¹, Anastasiia KABESHOVA¹, Bruno FANTINO², Olivier BEAUCHET² (1. Geriatrics, Angers University Hospital, France, 2. Neuroscience and Geriatrics, Angers University Hospital, France)

Introduction : Screening of depressive symptoms is recommended in recurrent fallers. Compared to the 30-item and 15-item Geriatric Depression Scales (GDS), the 4-item GDS is easier to administer and quicker to perform. Our aim was to examine the association between abnormal 4-item GDS score and recurrent falls in community-dwelling older adults. Method : Based on a cross-sectional design, 2,594 community-dwellers (mean age 72.1±5.4years; 49.8% women) were recruited in health examination centers of French health insurance of Lyon, France. The 4-item GDS score (abnormal if score≥1) and recurrent falls (i.e., 2 or more falls in the past year) were used as main outcomes. Results : A total of 19.0% (n=494) participants were recurrent fallers in the cross-sectional study. Abnormal 4-item GDS score was more prevalent among recurrent fallers compared to non-recurrent fallers (44.7% versus 25.0%, with P<0.001), and was significantly associated with recurrent falls (Odd ratio (OR)=1.82 with P<0.001 for full model; OR=1.86 with P<0.001 for stepwise backward model). Conclusion : The current cross-sectional study shows an association between abnormal 4-item GDS score and recurrent falls. Based on these results, we suggest that recurrent falls risk assessment should involve a systematic screening of depressive symptoms using the 4-item GDS. Keywords : accidental falls; depression; screening; older adults

OP23 422-C-6

RISK FACTORS FOR SINGLE AND RECURRENT FALLS: A PROSPECTIVE STUDY OF COMMUNITY DWELLING ELDERLY WITHOUT COGNITIVE IMPAIRMENT

Tai-Yin WU¹, Kuan-Liang KUO², Wai-Kuen WONG², Wei-Chu CHIE³, Rong-Sen YANG⁴, Chen-Kun LIAW⁵ (1. Family Medicine, Taipei City Hospital, Renai Branch, Taiwan; 2. Department of Family Medicine, Taipei City Hospital, Renai Branch, Taiwan; 3. Institute of Epidemiology and Preventive Medicine and Department of Public Health, National Taiwan University, Taiwan; 4. Department of Orthopedics, College of Medicine, National Taiwan University Hospital, Taiwan; 5. Department of Orthopedics, Shin Kong Wu Ho-Su Memorial Hospital, Taiwan)

Introduction : An initial evaluation for an older people who falls was whether he/she fell two or more times in the prior 12 months. Different screening strategies were suggested for single and recurrent fallers. However, little is known whether the risk factors differed. We wish to study the factors associated with falls among community dwelling elders. Method : This is a cohort study conducted in a community hospital in Taiwan. Six hundred seventy one participants were randomly selected from the health examinees of the annual Senior Citizens Health Examination. Participants were interviewed with a detailed questionnaire. Participants were followed up with telephone interview one year later. The main outcome was falls in the prior 12

months. Results : The mean age of the 653 completers was 75.6± 6.4 years. Half (48.7%) were females. In multivariate model, blurred vision (adjusted odds ratio (aOR): 1.93, 95% confidence interval (CI): 1.02-3.67), minimal outdoor activities (aOR: 2.28, 95% CI: 1.06-4.88), overactive thyroid/parathyroid (aOR: 3.49, 95% CI: 1.29-9.50) were associated with single falls. For recurrent falls, frailty (aOR: 2.81, 95% CI: 1.11-7.09), decreased body height in adulthood (aOR: 3.15, 95% CI: 1.52-6.54) and taking sedatives/hypnotics (aOR: 4.23, 95% CI: 2.06-8.67) were the risk factors, while hypercholesterolemia (aOR: 0.37, 95% CI: 0.16-0.88) was inversely associated with recurrent falls. Previous falls (aOR: 2.64, 95% CI: 1.44-4.84 for single falls; aOR: 5.26, 95% CI: 2.61-10.60 for recurrent falls) was associated with all falls. Conclusion : Different risk profiles existed between single and recurrent fallers. Risk stratification and different interventional strategies should be developed. Keywords : falls, old age, risk factors

OP23 423-C

GERIATRIC NURSING

OP23 423-C-1

CROSS-NATIONAL COLLABORATION BETWEEN AUSTRALIA AND CHINA IN DEMENTIA CARE EDUCATION FOR HEALTH PROFESSIONALS

Lily Dongxia XIAO¹, Guoping HE², Jan PATERSON¹, Yao WANG², Anita DE BELLIS¹, Xiuhua WANG², Craig WHITEHEAD³, Zaijin JIAN⁴, Owen DAVIES³, Youyuan LI⁴, Kuanbao YAO⁵ (1. School of Nursing & Midwifery, Flinders University, Australia; 2. School of Nursing, Central South University, China; 3. Rehabilitation & Aged Care, School of Medicine, Repatriation General Hospital; Flinders University, Australia; 4. Department of Geriatrics, The Second Xiangya Hospital of Central South University, China; 5. Maternity and Child Care and Community Health Office, Health Department of Hunan Province, China)

Introduction : China has a large proportion of the world's population with dementia. The estimated number of people with dementia in China was 5.54 million in 2005 and will reach 27 million in 2050. Most people with dementia live at home as caring for older people has been viewed as a family responsibility. While health professionals in community care settings have a crucial role to play in meeting the complex care needs of people with dementia, they are largely underprepared for this role. Method : The aim of this project was to provide dementia care education for health professionals in primary care settings in Hunan Province in China through academic collaboration between Australia and China. A dementia care program for trainers with follow-up programs to support them to train their colleagues (trainees) was developed, implemented and evaluated. Evidence-based dementia care and knowledge translation frameworks informed the program design. A mixed-methods design was applied to program evaluation. Results : Eighty health professionals from 33 health care organisations participated in a 3-day program for trainers. The project team will assist the trainers to train their colleagues over a 6-month period. It is anticipated that up to 1400 health professionals will benefit from the dementia care education. A pre- and post-test of knowledge and teaching in dementia care from the trainer group revealed positive outcomes. Findings from the trainee group will be available on the completion of the project in May 2013. Conclusion : The cross-national collaboration has generated synergy in the development of health workforce in dementia care in China. Keywords: Dementia care, international collaboration, knowledge translation

OP23 423-C-2

THE IMPACT OF A NEWLY DEVELOPED MULTI-DISCIPLINARY PROTOCOL FOR WEANING FROM ENTERAL TO ORAL NUTRITION ON WEIGHT MAINTENANCE

Inbar SHMILOVITZ¹, Orly BERGERZON-BITON¹, Yulia GINZBURG¹, Irina ZWECKER-LAZAR¹, Hagar WECHSLER¹, Danit SHACHAR², Dror WASSERMAN¹ (1. Bayit Balev Hospital, Bayit Balev Hospital, Israel; 2. The S. Daniel Abraham International Center for Health and Nutrition and department of Epidemiology a, Ben-Gurion University of the Negev, Israel)

Introduction : Weaning from enteral nutrition is challenging in weight maintenance and prevention of nutritional status deterioration. An evidence-based guideline for weaning elderly patients from enteral nutrition is lacking. Our objective was to evaluate the efficacy of a newly developed multidisciplinary protocol for weaning elderly patients from enteral to oral nutrition and its impact on weight and nutritional status. **Method :** A newly developed protocol was developed based on Buchholz 1995 and tested longitudinally on elderly patients in sub-acute care hospital. Three distinct groups were formed among participants: patients weaned by the protocol, patients weaned without the protocol and patients with self withdrawal of the feeding tube. Data was collected retrospectively from the medical charts of all (n=67) patients, average age 73.4 years, who were successfully weaned from enteral feeding from November 1, 2004 to November 17, 2010. **Results :** The percentage of patients weaned from enteral nutrition who gained or maintained weight was higher in the group weaned by the protocol (81.3%) than that of the group weaned without the protocol (63.6%). Only 25% of the patients weaned by self removal gained or maintained weight (p=0.046). **Conclusion :** We showed that the newly developed weaning protocol was effective in maintaining patients' weight. **Keywords :** Enteral nutrition, weaning, Multidisciplinary

OP23 423-C-3

NON-IMAGING CLINICAL ASSESSMENT OF IMPAIRED SWALLOWING IN COMMUNITY DWELLING ELDERLY IN TAIWAN

Miao-Yen CHEN (Department of Nursing, School of Nursing, National Taipei University of Nursing and Health Sciences, Taiwan)

Introduction : Impaired swallowing is common in elderly patients as well as those with neurological disorders and degenerative diseases. Convenient and accurate assessments should be available to community dwelling elderly in order to diagnose and provide early management and care of swallowing difficulties. **Method :** The study adopted a survey method and recruited 216 community-dwelling elderly over 65 years of age in northern Taiwan; Researchers used tools including a swallowing test, questionnaire, water test, peripheral arterial pulse oximeter, and laryngeal S-EMG to assess participant swallowing functions and the prevalence of impaired swallowing. **Results :** We found a 9.5% prevalence of impaired swallowing based on swallow questionnaire and water test results; Age correlated negatively with swallowing speed; A one-way ANOVA showed a significant difference in swallowing speed among the four age groups (F=6.478, p<.00); A post-hoc Scheffe comparison showed significant differences in swallowing time between the 60-69 and 70-79 year old groups and 60-69 and 80-89 year old groups; Multiple regression of impaired swallowing on various independent variables demonstrated a significant standardized coefficient of 0.163 for age (t=2.328; p=.021); Logistic regression demonstrated a significant Wals test value for age (p=.007); The Kappa value was 0.307 for agreement analysis between impaired swallowing and SaO2 value reduction of more than

2%. **Conclusion :** Swallowing function deteriorates with age. Results of this study provide an assessment of the prevalence of impaired swallowing in community dwelling elderly in Taiwan. Results can help guide clinical nurses to enhance their objective assessment of impaired swallowing in order to improve patient quality of life. **Keywords :** Community-dwelling elderly, swallowing impairments, swallow assessment.

OP23 423-C-4

EMOLLIENT THERAPY FOR MANAGING DRY SKIN IN OLDER PEOPLE

Helen Yue-Lai CHAN¹, Diana Tze-Fan LEE¹, Susanna Sau-Ha CHAN², Maggie Wai-chi TSUNG² (1. The Nethersole School of Nursing, The Chinese University of Hong Kong., Hong Kong; 2. Nursing, Cheshire Home, Shatin, Hong Kong)

Introduction : Changes in skin due to ageing alter its function and pose older adults more susceptible to xerosis and skin breakdown. These not only cause discomforts that affect their quality of life, but may also lead to complications that resulted in increased care burden and cost. This study aimed to investigate the effects of emollient therapy on improving skin hydration among geriatric patients. **Method :** This was a quasi-experimental study for comparing two skin care regimens in geriatric wards over 8 weeks. For the intervention group, emulsifying ointment was used for bathing and a mixture of emollients was applied to body daily. For the control group, commercial bodywash of individual participant was used for bathing and aqueous cream was applied to body daily. Skin hydration was assessed by means of the Overall Dry Skin Score (ODS) and skin sensor at baseline and every two weeks. **Results :** Sixty-two participants, with a mean age of 81.6 years, completed the study. All of them were dependent in activities of daily living. The ODS of the intervention group was significantly lower than that of the control group at week 8. Readings of the hydration sensor over different body parts were increasing over the study period, but statistical difference was only noted in left hands. **Conclusion :** Findings suggest that emollient therapy was effective in improving the skin hydration of geriatric patients over 8 weeks. However, caution should be taken in interpreting the findings due to the small sample size. **Keywords :** Older people, Dry skin, Nursing care

OP23 424-C

EPIDEMIOLOGY OF AGING II

OP23 424-C-1

AGE MAY NOT BE A MAJOR RISK FACTOR FOR CHRONIC DISEASES

Gabriel Ioan PRADA¹, Ioana ALEXA², Raluca NACU³, Eliza TAPELEA³, Speranta PRADA³, Irina IGNAT³, Ioana FITA³ (1. Clinical Department, 'Ana Aslan' National Institute of Gerontology and Geriatrics, 'Carol Davila' University of Medicine, Romania; 2. Clinical Department of Geriatrics, 'Gr.T. Popa' University of Medicine and Pharmacy, Romania; 3. Clinical Department, 'Ana Aslan' National Institute of Gerontology and Geriatrics, Romania)

Introduction : Most textbooks consider 'age' as major and non-modifiable risk factor for chronic diseases. Aim of the study is to demonstrate that not age by itself is a risk factor. **Method :** At least five current accepted definitions of age are presented: chronological, psychological, social, biologic and demographic age. All these ages could be considered mainly outcomes rather than risk factors for diseases, except chronological age. The last type of age is most of the time considered the major risk factor for chronic diseases. **Results :**

Authors review several papers that demonstrate that vascular risk factors for dementia are risk factors for this disease if they are present around the age of 50, and not if they appear in older people. Consequently, there is a certain time of exposure to these factors required before they can make their effect obvious. Several other papers regarding frequency of dementia (prevalence and incidence) are presented and they show a certain trend, different at very advanced ages as compared to 'young-olds', that supports the same idea. Conclusion : Authors present a new concept, valid for most medical specialties. According to this, not age ('chronological') is the real risk factor for chronic diseases, but the time of exposure to risk factors (other than age). This new concept offers a series of advantages, amongst them being the fact that one can move one risk factor from non-modifiable category (age - nobody can change the passage of time, i.e. chronological age) into modifiable group offering a proactive approach. Other advantages are presented. Keywords : age, risk factor, chronic diseases

OP23 424-C-2

CARDIO-VASCULAR RISK FACTORS OF CERN EMPLOYEES AT THE TIME OF RETIREMENT: TREND OVER 25 YEARS

Francois R. HERRMANN¹, Veronique FASSNACHT², Gabriel GOLD¹, Dina ZEKRY³ (1. Internal medicine, rehabilitation and geriatrics, Geneva University Hospitals, Switzerland; 2. Medical Service, CERN - European Council for Nuclear Research, Switzerland; 3. Geneva University Hospitals, Internal medicine, rehabilitation and geriatrics, Switzerland)

Introduction : To describe, over time and across professional categories, the trends of selected cardio-vascular risk factors and related biological parameters in a population who benefited from long term working contract and shared the same access to health care (same medical follow-up and health care insurance). Method : Data collected routinely over 25 years were anonymously merged from 2 sources: the health medical service and the human resources of a large international organization. Using ANOVA, linear and logistic regression we quantify the effect of age, 5 years time period and 4 professional categories (pc1. manual work, crafts, trades; pc2. office and administrative; pc3. technical; pc4. scientific & engineering). Inclusion criteria were: male aged between 60 and 70.0 years, employed as staff. Only the last medical exam before retiring was considered for analysis. Results : 2040 employees meet the inclusion criteria (pc1: 22.7%, pc2: 4.7%, pc3: 42.1% and pc4: 30.5%). The evolution at the time of retirement of anthropometric variables, smoking status and blood pressure parameters will be presented. Conclusion : Despite work stability and an equivalent access to health care, a health gradient was observed with scientists having the lowest prevalence in most cardio-vascular risk factors. Keywords : retiree, health status, cardio-vascular risk factors

OP23 424-C-3

IMPACT OF METABOLIC SYNDROME ON THE PROGRESSION OF ATHEROSCLEROSIS IN JAPANESE OLD SUBJECTS - SONIC STUDY

Chikako NAKAMA¹, Kei KAMIDE¹, Ryosuke OGURO¹, Tatsuo KAWAI¹, Hiroshi KUSUNOKI¹, Mitsuru OHISHI¹, Yukie MASUI², Kazunori IKEBE³, Yasuyuki GONDO³, Hiromi RAKUGI¹ (1. Department of Geriatric Medicine and Nephrology, Osaka University Graduate School of Medicine, Japan; 2. Tokyo Metropolitan Institute of Gerontology, Tokyo Metropolitan Geriatric Hospital and Institute of Gerontology, Japan; 3. Department of Removable Prosthodontics, Osaka University Graduate School of

Dentistry, Japan; 4. Department of Clinical Thanatology and Geriatric Behavioral Science, Osaka University Graduate School of Human Sciences, Japan)

Introduction : Metabolic syndrome (Mets) is known to be a risk of cardiovascular (CV) events in the general population. However, there are few reports about influence of age on the relationship between Mets and CV events. It is reported that carotid intimal-medial thickness (IMT) measured by ultrasonography is a surrogate marker to predict CV events. The aim of this study is to clarify the impact of Mets on the progression of atherosclerosis and CV events in old subjects. Method : 384 with age around 70 years (70±1, 47% male) and 490 with age around 80 years (80±1, 48% male) in Japanese general population were included. We made a diagnosis of Mets according to Japanese criteria and performed the carotid ultrasonography. We assessed associations between Mets, carotid IMT and past history of CV events. Results : 79 people (20.6%) in 70 years and 118 people(24.1%) in 80 years were diagnosed as Mets. Mean-IMT(mm) and max IMT(mm) were 0.84±0.17, 1.49±0.92 in Mets and 0.78±0.16, 1.28±0.80 in non-Mets in age around 70 years (p<0.01, p=0.04, respectively) and 0.92±0.18, 1.82±0.89 in Mets and 0.88±0.18, 1.64±0.80 in non-Mets in age around 80 years (p=0.03, p=0.03). The prevalence of stroke history was significantly higher in Mets in age around 70 years (p=0.04), whereas there was no significant association in age around 80 years. Conclusion : Mets is a risk of the progression of atherosclerosis even in old subjects. However, the impact of Mets on CV events may be stronger in subjects with age around 70 than 80. Keywords : Metabolic syndrome, carotid intimal-medial thickness (IMT), cardiovascular events

OP23 424-C-4

LIVING WITH GERIATRIC SYNDROMES - AN OBSTACLE AGAINST ACTIVE AGEING FOR THE COMMUNITY DWELLING ELDERLY POPULATION

Prasun CHATTERJEE, Ramesh KANDEL, Akash Kumar AMBASHTHA, Swapnil S JATHAR, Vijay GURJAR, Shagufta KHATOON, Kavita YEDLAE, Arghya BANDHOPADHYAY, P.C. DAS, A.B. DEY (Department of Geriatric Medicine, All India Institute of Medical Sciences, India)

Introduction : Geriatric syndrome like falls, frailty, depression, dementia, malnutrition and urinary incontinence, are associated with substantial morbidity, disability for the elderly population all over the World. The objective of this study was to look for the prevalence of geriatric syndromes in community dwelling elderly population from developing country, various predisposing factors and association with co-morbidities of old age and also their impact on quality of life. Method : A cross-sectional study, 972 community dwelling older persons (age 60 and above) were assessed from Delhi and NCR (both rural and urban) for socio-demographic factors, co-morbidities, geriatric syndromes. The inter-relationship between these factors was statistically analyzed. Results : : 81% of study subjects had one or more geriatric syndrome with male predominance and increases with extreme ageing [P=0 CI= 5.88(1.79-19.3)] .Prevalence of Geriatric syndrome was significantly high in illiterate population [p=0 95% CI=15.93(9.10 to 27.9)] and patient from lower socioeconomic status[p=0,95%CI= 7.15 (4.149 to 12.33)] . Older subjects with positive health perception suffer significantly less [p=0.735, 95% CI=-.936 (0.638-1.37)] with such syndrome .Among the various comorbidities, paralysis [p=0 95% CI 4.827 (1.495 -15.57)], pallor [p=0, 95% CI 3.80(2.36-6.14)], showed statistically significant association with this syndrome. Smoking (current or past) [p=0 95% CI 1.737 (1.205-0.505)] and abuse [p=0, 3.57 (0.469-27.23)] were also

predisposing factor. It significantly [$p=0$] affects QOL for 80+ patient in all domain. Conclusion : Geriatric syndromes are widely prevalent in ageing community elders, with well recognized predictors and associations, also compromise QOL and prevent active ageing. Keywords : Geriatric syndrome, quality of life, extreme aging

OP23 424-C-5

ASSOCIATION BETWEEN PRIMARY LIFETIME OCCUPATION AND COGNITIVE FUNCTION IN ELDERLY KOREANS

Hyorim LEE, Jee Won PARK, Sung-II CHO (*Graduate School of Public Health and Institute of Health and Environment, Seoul National University, Korea*)

Introduction : This study analyzes which cognitive function is preserved through primary occupation in elderly people and examines the association between primary occupation and cognitive ability with K-MMSE (Korean version of the Mini-Mental State Examination). Method : This study used subjects from Korean Longitudinal Study of Aging (KLoSA) aged over 55 years and the total study population is 3,985. Regression was performed to identify the association between K-MMSE sub-scores and primary occupations. Adjustment was made for confounders such as gender, age, marital status, education level, depression, smoke, and income in the analysis. Results : Manager/professionals as primary occupation showed higher scores at memory, language, and spatiality domains ($p<0.05$), while service/sales workers had high scores at language section ($p=0.01$). Elementary workers showed better scores at command domain ($p=0.01$). When this study analyzed the complexity of job with data, people, and thing, the data group showed higher scores at memory, language, and spatiality domains ($p<0.05$). Also white collar had better scores at language and spatiality section ($p=0.002$) than blue collar. Conclusion : This study reflects a relationship between primary lifetime occupation and cognitive ability in elderly people. Hence, investigation of the primary lifetime occupation may suggest a standard of which cognitive ability is developed and preserved in elderly people. Keywords : primary occupation, cognitive function, K-MMSE

OP23 425-C

END OF LIFE & OTHERS

OP23 425-C-1

AMINOFF SUFFERING SYNDROME AND PAIN IN END-STAGE DEMENTIA

Bechor Zvi AMINOFF (*Geriatrics, Geriatric Division, Sheba Medical Center, Tel-Hashomer & Minerva Center at Tel-Aviv University, Israel*)

Introduction : To study possible interrelations between Aminoff Suffering Syndrome (ASS) and pain in end-stage dementia (ESD). Method : In a cohort study, 200 ESD patients with a 6-month follow-up period were evaluated by the Mini-Suffering State Examination (MSSE) scale (1999). The MSSE scale is available in English, Hebrew, Dutch and Spanish, and covers 10 items (range 0-10). Based on clinical experience, the following items were included in the MSSE: Not calm, screams, pain, decubitus ulcers, malnutrition, eating disorders, invasive action, unstable medical condition, suffering according to medical opinion, and suffering according to family opinion. The correlation of high MSSE scores with shorter survival periods and, irreversible and intractable aggravation of suffering and medical condition until demise has been defined as ASS. The results of clinical experience with this scale were presented at world and

regional congresses in Berlin (1999), Jerusalem (2000), Vancouver (2001), Stockholm (2002), Tokyo (2003), Las Vegas (2004), Rio-de-Janeiro (2005), Madrid (2006), Saint-Petersburg (2007), Trondheim (2008), Paris (2009), Honolulu (2010), Athens (2011) and in Copenhagen (2012). Results : On the day of admission to the Geriatric Department, 10.5% of ESD patients were diagnosed with pain (21/200) and 89.5% (179/200) were free from pain. Patients diagnosed with ASS and pain had a higher MSSE scale score (7.0 ± 2.4) than those without pain (4.0 ± 2.2), with a significant difference ($P < 0.0001$). Conclusion : Pain contributes to higher suffering and the development of ASS in ESD. Keywords : Suffering, pain, end-stage dementia

OP23 425-C-2

DIABETIC PATIENTS WITH JAPANESE WERNER SYNDROME EXHIBIT HIGH INCIDENCE OF CANCER

Shunichiro ONISHI, Minoru TAKEMOTO, Ryouichi ISHIBASHI, Peng HE, Takahiro ISHIKAWA, Emiko OKABE, Masaki FUJIMOTO, Harukiyo KAWAMURA, Kazuki KOBAYASHI, Koutaro YOKOTE (*Clinical Cell Biology and Medicine, Chiba university, Japan*)

Introduction : Werner syndrome (WS), a representative type of progeroid syndrome, is caused by mutation of the WNR gene (WNR). Since WS patients often have diabetes and malignant tumors, we initiated a nation-wide epidemiological survey in Japan to understand the current relationship between diabetes and malignant tumors among WS patients. Method : We sent 6000 questionnaire survey sheets to hospitals with more than 200 beds and detailed clinical data for 163 cases were obtained. The WS patients were divided into the following 2 groups: patients with ($n = 102$) and without ($n = 61$) diabetes. We examined the correlation among epithelial tumors (cancer) and non-epithelial tumors and diabetes using the chi-square test. Results : The morbidity rate of cancer and non-epithelial tumors were 11.7% and 19.0%, respectively. There was no significant difference in the morbidity rates of non-epithelial tumors in patients with or without diabetes. However, the prevalence of cancer was significantly higher in patients with diabetes (16.6%) than in those without (4.9%). Conclusion : It has recently been reported that WNR might act as a tumor suppressor. Diabetic patients are prone to developing malignant tumors, and insulin resistance has been proposed as one of the reasons for the high prevalence of cancer in diabetic patients. Diabetes with WS is usually caused by high insulin resistance, which may be one of the contributing factors for cancer development but not for non-epithelial tumors. This might be significant for understanding the mechanism of cancer and for the development of new therapeutic methods in the future. Keywords : Werner syndrome, diabetes, malignant tumors

OP23 425-C-3

ORTHOPAEDIC REVOLVING DOOR - SYSTEM, PATIENT OR SOCIAL FACTOR -

Edmund Kwok Yiu SHA, Elaine Yee Lan CHENG, Edward Man Fuk LEUNG (*Medicine & Geriatrics, United Christian Hospital, Hong Kong*)

Introduction : Hip fracture is a potential devastating condition for older people. Despite recent advances in management including early surgery, improve surgical technique and early mobilization, fracture hip still is an important cause of morbidity, mortality or institutionalization in elderly. Method : United Christian Hospital has pioneered the development of Joint Orthopedic Services for Geriatric Hip Fracture patients since 1990 to optimize the management of

elderly patients suffering from hip fracture. The Integrated Discharge Support Program (IDSP) was a pilot program in Hong Kong launched four years ago by the Labor and Welfare Bureau to coordinate and support the discharge of high risk elderly from the hospital. Enhanced support services including transitional home care services, rehabilitation at the Geriatric day hospital and telephone hotline were available upon hospital discharge. Elderly suffering from hip fracture was one of the target groups. Results : From 3/2008 to 9/2011, 1673 community dwelling elders with mean age of 81.3 had been admitted to United Christian Hospital due to hip fracture were managed by Ortho-Geriatric team and received support from IDSP. 384 patients (23%) were discharged directly back home. Nevertheless, 144 patients (9.4%) were unplanned readmission to hospital within 28 days of hospital discharge, majority due to medical causes. Conclusion : Further strengthening of post-discharge support service is required to reduce post-operative clinical problems and reduce early re-admission. Keywords : Hip Fracture, Re-admission

OP23 425-C-4

PREDICTORS OF LATE MORTALITY IN ELDERLY PATIENTS VISITING TO EMERGENCY DEPARTMENT OF A TERTIARY CARE HOSPITAL OF INDIA

P.C. DAS, Prasun CHATTERGEE, Prakash KUMAR, A.B. DEY
(Geriatric Medicine, All India Institute of Medical Sciences, New Delhi, India)

Introduction : The area of geriatric emergency care remains largely underdeveloped as it is seen as unrewarding in older patients with multiple comorbidities and geriatric syndromes. The current study examines the prevalence of comorbidities and predictors of all cause mortality at within year of emergency visit. Method : : Patients aged sixty or above attending the emergency services of AIIMS hospital, Delhi were the subjects of the study. Patients were treated as per standard protocol after extensive assessment. They were followed up with telephonic interview at 1 year of index visit to emergency and collected data on mortality. Results : 1643 older subjects who attended the AIIMS Emergency department were studied between 1.1.2009 and 30.06.2011. They included 919 males and 724 females. 90% of them had one or more co-morbidities. Hypertension and diabetes were the most frequent co-morbidities. One year after the index emergency visit, telephonic follow up on mortality, showed 683 (48.51%) died and 235 (14.30%) could not be traced. Death within one year increased significantly with age (60-69=46.37%, 70-79=48.73%, ≥80 =57.06% p=0.037. After multivariable adjustment, including all predictors in the model, the strong predictor of 1 year mortality were coma (Hazards ratio- 2.519), cancer (HR-2.12), chronic liver disease (HR-1.521), extreme of ageing (HR-1.537), physical inactivity (HR- 1.274), chronic renal failure (HR-1.712) and, respiratory failure (HR-2.448). Conclusion : Emergency Department visit is a serious event in the life of older persons indicating very high likelihood of death or severe disability in next one year. Keywords : mortality, Elderly, Emergency

OP23 425-C-5

NURSING HOMES FACING END OF LIFE

Yoram MAARAVI¹, Adir SHAULOV², Alan RUBINOV³, Meir FRANKEL³, Mayer BREZIS⁴ (1. Division of Geriatrics and Rehabilitation, Hadassah-Hebrew University Medical Centers, Israel; 2. Department of Medicine, Hadassah-Hebrew University Medical Centers, Israel; 3. Department of Emergency Medicine, Hadassah-Hebrew University Medical Centers, Israel; 4. Center for Clinical Quality & Safety, Hadassah-Hebrew University Medical Centers, Israel)

Introduction : Quality of care at end of life (EOL) faces many patients dying with suboptimal palliative care, no knowledge about their preferences, burdensome transitions and overuse of life-prolonging options. Method : We surveyed 30 nursing care facilities in the Jerusalem district. We asked about eliciting and respecting patient's preferences for EOL, and about pain care and tube feeding - using interviews and questionnaires of 135 healthcare providers, administrators and social workers. Results : At most sites, patient's preferences for EOL care remain unknown for the majority of residents and are not routinely elicited. Preferences are sometimes discussed with families at their request or when patient's health deteriorates. Healthcare proxies for EOL decisions are rarely designated. Even when known, patient's preferences are often not respected, communicated or honored during transfer to other providers. In many sites, allowing a patient to die peacefully at the nursing facility is the exception. Pain control appears suboptimal and the use of opiates is limited. Feeding tubes are commonly inserted because of aspiration, malnutrition or caregivers shortage, often against family's wishes and despite dubious effectiveness. Barriers to EOL anticipation include perceived demoralizing impact on patients, presumptions on opinions, sanctity of life, doubts about value of advance directives, misconceptions on regulation and fear of litigation or losing clients. Providers admit being poorly equipped, staffed and trained for EOL care. Most of them would not wish for themselves life-prolonging options they provide to patients. Conclusion : Considerable barriers impair the quality of EOL care, at multiple conceptual, psychological, organizational, financial and tactical levels. Keywords : end of life, palliative care, nursing homes

OP23 426-C

HEALTH PROMOTION AND DISEASE PREVENTION II

OP23 426-C-1

SOCIAL GRADIENT POTENTIAL IN NON-COMMUNICABLE DISEASE MANAGEMENT

Ana RAMOVŠ¹, Bozidar VOLJC¹, Joze RAMOVŠ², Blaz SVAB², Tina LIPAR¹ (1. Medical Gerontology, Anton Trstenjak Institute for Gerontology and Intergenerational Relations, Slovenia. 2. Social Gerontology, Anton Trstenjak Institute for Gerontology and Intergenerational Relations, Slovenia)

Introduction : Health, disease management and life expectancy of people depend on their socio-economic status; in other words, social gradient, which is usually perceived negatively, causing health inequalities. Vice versa, the tension between upper and lower poles of social gradient can be the energy directed in strengthening health, disease management and diminishing health disparity. Based on this hypothesis we performed an experiment, co-financed by European Commission. Method : Participants: patients with chronic hypertension aged 65-75, 3 study groups of 12-15 patients (first one in a city, second in Slovene periphery, third in Serbian metropolis), equally divided between those with lower educational level and poor disease management (lower gradient) and higher gradient; half men, half women. Physical and psychosocial parameters important in treating hypertension were measured before and after work with participants. Teaching plan and methods: 10 two-hour meetings weekly, intensive social learning from good experiences with physical, mental and social protective factors in day-to-day lifestyle of participants; supervised by two facilitators, trained in methods of group social learning. We monitored the unused positive potential of social gradient knowledge transfer and good experiences among group members. Results : The majority of participants (regardless their social gradient) from all three groups improved their lifestyle and hypertension management.

Conclusion : Finishing the program two groups voluntarily continue to meet monthly in self-help groups for hypertension management, which reinforces behavioral and perceptual changes. Based on these conclusions we developed a model for self-help groups for patients with hypertension, supervised by trained volunteer multipliers. Keywords : social gradient, chronic disease management

OP23 426-C-2

NOROVIRUS GASTROENTERITIS IS AN IMPORTANT VACCINE PREVENTABLE DISEASE AMONG ELDERLY

Lisa LINDSAY¹, Pierre VAN DAMME², Thomas VERSTRAETEN¹
(1. Pharmacovigilance and Epidemiology Services, P95, Belgium;
2. Faculty of Medicine and Health Sciences, Center for the Evaluation of Vaccination, University of Antwerp, Belgium)

Introduction : In high income countries (HIC) the elderly account for a substantial proportion of all-cause acute gastroenteritis hospitalizations and the majority of deaths, with norovirus an important cause. A new vaccine against norovirus has shown potential to prevent disease in a challenge study. We summarize the vaccine preventable disease burden related to norovirus among the elderly. Method : Review of studies published in English between 2007-2012 concerning norovirus epidemiology among elderly (≥ 65 years) in HIC. Results : Estimates of morbidity and mortality vary widely by methodology used and level of norovirus activity. Norovirus mortality estimates range from 1 to 30 per million person-years among elderly in HIC. On average, 10-20% of acute gastroenteritis hospitalizations are due to norovirus, with peaks over 30% during outbreaks. Between 0.1 and 1.0 norovirus-related hospitalizations occur per 1,000 individuals. With every hospitalization representing 12 medical visits, a yearly 1 to 12 medical visits for norovirus can be expected to occur among 1,000 elderly in HIC. Extrapolating to a global elderly population of 180 million in HIC results in an average 1.2 million norovirus medical visits, 90,000 hospitalizations and nearly 3,000 norovirus deaths per year potentially targeted through vaccination. During seasons with high norovirus activity, the burden of norovirus can be twice as large. Conclusion : A safe and effective norovirus vaccine would have the potential to prevent a considerable burden of disease among the elderly in high income countries. The burden of norovirus illness will further increase with longer life-expectancy and higher usage of long-term care facilities. Keywords : norovirus, gastroenteritis, vaccine

OP23 426-C-3

PEPTIDES GEROPROTECTORS IN THE PREVENTION OF AGEING ASSOCIATED PATHOLOGIES

Vladimir KHAVINSON, Galina RYZHAK, Lenar KOZLOV, Olga MIKHAILOVA (Biogerontology, Saint Petersburg Institute of Bioregulation and Gerontology, Russia)

Introduction : Ageing of population cause major concerns in many countries Russia included. During recent 10 years the number of population over working age in Russia increased by 2 mln. people and reached 31.8 mln. (22%). Considerable growth of the share of elderly people leads to increased number of pathologies (ARD, osteoporosis, arthritis; different brain degenerative diseases; diabetes mellitus; cardio-vascular diseases etc.). These diseases need long-term in-patient treatment based on application of a great number of medications creating a vital social-economic challenge. Method : An evidence-based real means to improve health and quality of life, reduce death rate and enhance human vital resource due to preventive application of a complex of peptide bioregulators (24 types) has been designed at the Saint Petersburg Institute of Bioregulation and Gerontology. A 35-year long experimental studies evidenced

normalization of the main organism functions, reduction of tumors occurrence and increase in mean life span by 20-30%. Results : Long-term application to humans showed that they contributed to the improvement of brain, endocrine, cardio-vascular, respiratory systems, gastro-intestinal tract, cartilaginous tissue and resulted in almost 2-fold reduction of death rate in the groups of patients aged 60-74 year during 15 years period of observation in collaboration with the Institute of Gerontology of the Ukrainian Academy of Medical Science. Conclusion : One of the attempts to maintain health and life quality would be implementation of the Programme "Prevention of age-related pathology and enhancement of vital resource of the organism" developed at the Institute of Bioregulation and Gerontology. Keywords : aging, quality of life, bioregulators

OP23 426-C-4

POOR NUTRITIONAL STATUS PREDICTS ADVERSE CLINICAL OUTCOMES AT 12 - 18 MONTHS IN ACUTE AND SUB-ACUTE OLDER PATIENTS

Karen Elizabeth CHARLTON (School of Health Sciences, University of Wollongong, Australia)

Introduction : Older malnourished patients experience increased length of hospital stay and greater morbidity compared to their well nourished counterparts. This study aimed to assess whether nutritional status at hospital admission predicted clinical outcomes at 12-18 months follow-up. Method : A retrospective analysis was undertaken in patients aged 65+ y admitted to acute (N = 2076) and sub-acute (N = 2602) hospitals in regional Australia between 2003 and 2008. Nutritional status was determined by Mini Nutritional Assessment (MNA). Outcomes included hospital readmission rate, total Length of Stay (LOS), change in level of care at discharge, and mortality. Major Disease Classification and age were controlled for in cox proportional hazards regression models. Results : Over half (54 %) of patients were at risk of malnutrition at admission, while 30-34% were malnourished. Well-nourished patients were more likely to be discharged home rather than to institutional care, and had significantly shorter hospital LOS. Follow-up data was available for 476 acute and 774 sub-acute patients. In acute patients, those at risk of malnutrition were 2.46 (95%CI: 1.36, 4.45; $p=0.003$) times more likely to have a poor clinical outcome (mortality/discharge to higher level of care), while malnourished patients had a 3.57 (95%CI: 1.94, 6.59; $p=0.000$) times higher risk. Similarly, in sub-acute patients, hazard rate for death in the malnourished group was 3.41 (95% CI: 1.07-10.87; $P=0.038$) times the well nourished group. Conclusion : Malnutrition carries a substantially greater risk of death and/or loss of dependency in older adults. Interventions to improve their nutritional status, both during and after hospital admissions are required. Keywords : malnutrition, mortality, length of stay

OP23 426-C-5

ASSOCIATION BETWEEN DURATION OF PYREXIA AND BACTERIAL INFECTION IN ELDERLY PATIENTS

Yasuhiro HAKAMATA (General Internal Medicine, Shizuoka General Hospital, Japan)

Introduction : Prolonged pyrexia can be life-threatening in elderly patients with bacteria. Therefore, it is necessary to determine the factors contributing to prolonged pyrexia. Method : Between April 2010 and March 2012, we enrolled 108 patients with bacteremia and studied the association between their clinical characteristics and the duration of pyrexia. The duration of pyrexia was used as a predictor of serious bacterial infections. Results : We encountered 108 positive bacterial blood cultures from a total of 580 inpatients. Urinary tract

infections were the most common form of bacterial infections (28.7%), followed by aspiration pneumonia (14.6%) and vertebral osteomyelitis (10.2%). There was no significant difference with regard to the duration of pyrexia among patients with infectious diseases. However, pyretic patients with cerebro-vascular diseases or those with vertebral osteomyelitis had longer febrile periods as compared to patients with other infectious diseases (5.37 vs. 3.28 days; $P = 0.011$) and (7.27 vs. 4.10 days; $P = 0.020$), respectively. Staphylococcus species were the most commonly isolated bacteria (33.3%), followed by Escherichia coli (27.8%) and Staphylococcus aureus (MSSA; 7.4% and MRSA; 3.7%). There was no significant association between the febrile period and underlying diseases such as diabetes or heart disease, which induce an immunocompromised state. The patients were divided into three groups on the basis of their age: < 65 years, 65-75 years, and > 75 years. We found that the duration of pyrexia was the shortest in the last group. Conclusion : The duration of pyrexia may be indicative of bacterial infections in the elderly with cerebro-vascular diseases or vertebral osteomyelitis. Keywords : duration of pyrexia, cerebro-vascular disease, osteomyelitis

Monday June 24th

OP24 101-S SOCIAL SERVICES II

OP24 101-S-1 TRANSNATIONAL AGEING, CARE NEEDS AND THE WELFARE STATE

Emilia K.M. FORSSELL (*Social Sciences, Ersta Skondal University College, Sweden*)

Introduction : There is still little knowledge about the impact of local social welfare policies (including concrete social work) on transnational contexts. In this presentation, the role of the Swedish welfare state in transnational migration contexts involving older people in need of care is discussed. Method : A pilot study about experiences and perspectives among social workers/care managers in the state elderly care sector was conducted in nine different municipalities in the county of Stockholm. The study was designed in a classically qualitative, descriptive and interpretive manner. Seven individual interviews and two focus group interviews focused on experiences in dealing with needs assessment of older people moving between countries and/or receiving care also from family members in transnational social networks. Results : Different examples are given of encounters between the welfare state and everyday transnational life where care needs are met through a combination of public elderly care, efforts by members in informal networks and by the older people themselves travelling across national borders. Care managers may have a comprehensive knowledge of the transnational mobility of older care users, and over time they develop practice according to individual professional experience. However, their awareness of their own role in transnational contexts seems to remain limited. Conclusion: Older transmigrants are dependent on the care managers' professional autonomy and ability to take advantage of the legislation's scope for individual assessments and special solutions. But transmigrancy is something of a blind spot in the welfare state social work context, and it challenges the perceptions of older persons guiding social care practice. Keywords : Needs assessors, Older transmigrants

OP24 101-S-2 THE EFFECTS OF SUPPORT GROUPS ON FAMILY

CAREGIVERS OF ELDERLY IN NEED OF NURSING CARE Ayelet BERG-WARMAN, Michal LARON, Jenny BRODSKY, Shirli RESNIZKI, Tal SPALTER (*Aging, Myers-JDC-Brookdale Institute, Israel*)

Introduction : As part of the effort to support family caregivers, the National Insurance Institute initiated and funded a national project in Israel to support family members caring for elders living in the community. The project comprised support and knowledge. The study goal was to evaluate the effects of these support groups on the participants. Method : Analyzing computerized logs for all 75 groups on all 12-week sessions; telephone interviews using structured questionnaires with a sample of 370 out of the 1,200 participants at the beginning and six weeks after intervention. Caregivers' burden was measured using Zarit 12-item scale. Results : The main contribution of the groups was emotional support and the opportunity to meet with caregivers coping with similar problems. The groups contributed to self-efficacy and a reduced sense of depression and loneliness. The contribution was higher among offspring compared to spouses. Relieving caregivers' burden was not significant. Participants improved their caregiving skills. Communication with care receiver improved, as well. Conclusion : Short-term support groups are an effective instrument to support family caregivers and equip them with tools to cope with the burden. Keywords : Family caregivers, Support groups

OP24 101-S-3 COMPARING THE EFFECTS OF AN INTERNET-BASED SUPPORT GROUP AND FACE-TO-FACE SUPPORT GROUPS FOR FAMILY CAREGIVERS OF ELDERLY IN NEED OF NURSING CARE

Ayelet BERG-WARMAN, Michal LARON, Jenny BRODSKY, Shirli RESNIZKI, Tal SPALTER (*Aging, Myers-JDC-Brookdale Institute, Israel*)

Introduction : As part of the effort to support family caregivers, the National Insurance Institute initiated and funded a national project in Israel to support family members caring for elders living in the community. The project comprised support and knowledge. One of the groups was Internet-based, using website and text technology. The study aims to compare the effects of the internet-based group and the face-to-face support groups. Method : Analyzing computerized logs for all 75 groups on all 12-week sessions; telephone interviews with a sample of 370 out of the 1,200 participants, at the beginning and six weeks after intervention. Burden was measured using Zarit 12-item scale. Results : The main contribution of the groups was emotional support and the opportunity to share with caregivers coping with similar problems, in both the Internet and face-to-face groups. The groups contributed to self-efficacy and a reduced sense of depression and loneliness. In the Internet group, satisfaction with the ability to share feelings with others was lower. Technical problems prevented many participants from entering the forum and taking part in the discussions. Relieving caregivers' burden was not significant in both Internet and face-to-face groups. Conclusion : An Internet-based support group is an equally effective instrument as a face-to-face support group in supporting family caregivers. Consideration should be given to minimizing the barriers of technical problems to enable participation in the forum. Keywords : Family caregivers, Internet-based Support Groups

OP24 101-S-4 NEEDS ASSESSORS IN ELDERLY CARE MEETS IMMIGRANT FAMILIES. THE WELFARE STATE

RECONSIDERED

Emilia FORSSELL¹, Anna OLAISON², Sandra TORRES³ (1. *Social Sciences, Ersta Skondal University College, Sweden*; 2. *Social Work Department, Linjoping University, Sweden*; 3. *Department of Sociology, Uppsala University, Sweden*)

Introduction : In Sweden, social workers doing need assessment in the publicly financed elderly care sector decide about care services to older people. In doing so they are expected to depart from an individual-based understanding of needs and not from the family-based understanding that is customary in other parts of the world. This point of departure is challenged now that the ethnic and cultural diversity of Sweden's older population has increased. In this presentation we will present data from a project that aims to fill the research gap that exists on the literature on need. **Method :** Empirical data about needs assessors' experiences and concrete work was collected through 12 focus group interviews with 60 needs assessors from seven municipalities in Sweden. In addition, case documentation regarding 110 older immigrants and 110 older Swedish-born has been compiled. The material has been analyzed through thematic analysis (focus groups) and content analysis (case documents). **Results :** The findings show that assessing the needs of older migrants can be a tricky business especially when dealing with late-in-life migrants whose understandings can be so different from the individualism that permeates need assessment regulation in Sweden and whose relatives lack a foothold in the labor market and regard the formalization of their informal caregiving duties as a potential source of income. **Conclusion :** In assessing the care needs of these migrants, Swedish welfare state representatives need to renegotiate and thus question the taken for granted assumptions about care and filial obligation that lay at the core of need assessment guidelines. **Keywords :** Needs assessors, Late-in-life immigrants, welfare state

OP24 101-S-5

DEPRESSION IN CAREGIVERS OF OLDER ADULTS WITH SEVERE MENTAL ILLNESS

Sharon CUMMINGS¹, Nancy P. KROPF² (1. *Social Work, University of Tennessee-Nashville, USA*; 2. *School of Social Work, Georgia State University, USA*)

Introduction : Approximately one million older persons have a severe mental illness (SMI) and this number is expected to double by the year 2030 (Cohen, 2003). Family support and care is critical to enhance care provision for older SMI individuals as up to one half of people with SMI live with a family member (Lefley, 2003). This study sought to investigate psychological distress and depression among caregivers of older adults with SMI. **Method :** A cross-sectional research design was employed with caregivers of community-dwelling older clients (55 years+) who had a psychiatric diagnosis (e.g. schizophrenia, bipolar disorder). Caregivers were surveyed with a total sample of 96 caregivers. Data were collected on subjective and objective burden, client symptoms, social support, psychological distress and caregiver rewards. **Results :** Most caregivers were white women, and the majority were in contact with their SMI family member several times a week. Caregivers were primarily adult children or siblings, and most had modest incomes (<\$30,000). Caregivers reported low to moderate subjective burden and moderate rewards. A substantial portion (25%) of the caregivers scored in the clinical range for depression. Results of regression analysis indicated that lower income, poorer caregiver health and higher subjective burden were predictive of caregiver depression, $F(3,81) = 10.8, p < .001; R^2 = .26$. **Conclusion :** Assessment of caregivers of older SMI clients is critical to maintain the functioning of both clients and caregivers. Additional research is

required to clarify the emotional and practical needs of those providing care for the growing population of older persons with SMI. **Keywords:** Caregiving; Severe Mental Illness

OP24 102-S

SOCIAL SERVICES III

OP24 102-S-1

SPIRITUALITY IN OLDER PERSONS: THE INFLUENCE OF HOSPITALIZATION

Liliana SOUSA, Gorete PEREIRA (*Health Sciences, University of Aveiro, Portugal*)

Introduction : Spirituality is the personal search for meaning and purpose in life which assumes particular relevance in old age. Hospitalization in old age is a period of high anxiety, and spirituality has shown to be a relevant coping strategy. This study compares old person's spirituality at hospital admission and discharge, analysing the influence of socio-demographic variables, pathology and period of hospitalization. **Method :** The sample comprises 250 participants (≥ 65 years old), 50.4% female. The Scale of Spirituality, 5 points Likert scale, comprising 5 items was administered by interview at admission and discharge. **Results :** Main findings suggest that: i) 57% of participants show a similar mean of spirituality when comparing admission and discharge, 22.5% maintain low spirituality and 22.5% maintain high spirituality; ii) 43% reveal alterations in their spirituality, 21.9% shows decreasing of spirituality between admission and discharge and 20.8% shows increase. Those participants living in couple tend to show increase in their spirituality. **Conclusion :** The hospitalization may have different impacts in the spirituality of old persons, what should be considered by practitioners when delivering care. **Keywords :** Spirituality, hospitalization, ageing.

OP24 102-S-2

CONSTRUCTING FAMILY INTEGRITY IN LATER LIFE: THE CASE OF OLDER DEMENTIA CAREGIVERS

Liliana SOUSA, Sara GUERRA, Marta PATRAO, Daniela FIGUEIREDO (*Health Sciences, University of Aveiro, Portugal*)

Introduction : Family integrity is a normal developmental challenge for older people influenced by factors within the family system, and constitutes a developmental approach to older people that also involves their families. Family integrity is the positive outcome, revealing overall satisfaction with life; family disconnection (dissatisfaction with some family relations) and alienation (sense of family estrangement) constitute the negative routes. This study aims to contribute to a better understanding of how the experience of caring for a relative with dementia can influence the development of a sense of family integrity in older caregivers. **Method :** An exploratory cross-sectional qualitative study was performed on 26 participants, 16 of whom were women, Mage = 74.11 (SD: 7.4). A semi-structured interview was carried out and subjected to content analysis. **Results :** The main findings suggest that old caregivers of a relative with dementia at home mainly face "difficulty in achieving projects" and "decrease of their reciprocity". The hierarchisation of the two most frequently mentioned categories according to the pathway shows: (a) family integrity: 1) "difficulty in achieving life projects"; 2) "decrease in the frequency of family contacts"; (b) family disconnection: 1) "increase in the frequency of family contacts"; 2) "difficulty in achieving life projects"; (c) family alienation: 1) "decrease in caregiver's reciprocity"; 2) "difficulty in achieving life projects and "difficulty in solving family conflicts". **Conclusion :** More attention

needs to be paid to research and practice regarding old age and older caregivers' developmental issues. Keywords : Families in later life; family integrity; family disconnection/alienation; dementia caregiving

OP24 102-S-3
CULTURAL AND SOCIAL BARRIERS OF OLDER TURKISH MIGRANTS IN USING HEALTH CARE AND SOCIAL SERVICES

Nilufer Korkmaz YAYLAGUL¹, Suzan YAZICI¹, George W. LEESON² (1. GERONTOLOGY, AKDENIZ UNIVERSITY, Turkey; 2. Oxford University Institute of population ageing (OIA), Oxford University Institute of population ageing (OIA), United Kingdom)

Introduction : A great deal of research on the access of migrants to health care and social services in Europe shows that their level of access is less than that of the native population. It is in this context that the main aim of this research is that older Turkish migrants, who are in general not well integrated into the host country, are disadvantaged with respect to their access to and use of health and social services. This research identifies the cultural and social barriers which lead to this disadvantaged position of older Turkish immigrants in two selected European countries. Method : 20 semi structured interviews with first generation older Turkish migrants have been conducted each in Denmark and United Kingdom. Results : The results show that generally older Turkish immigrants have poor health conditions and do not use health care services and social services effectively. Subjective and objective conditions such as the cultural, economic and social capital of older immigrants produce this disadvantaged situation. Conclusion : The research reveals that older Turkish immigrants develop new (coping) strategies in the host country and that these strategies have created a new lifestyle. These life styles include access to health care and social services but by an indirect way and less than the native population. Keywords : cultural and social barriers, health care, social service, older immigrants

OP24 102-S-4
THE QUALITY OF FLEMISH SENIOR ADVISORY BOARD COMMITTEES (SAC'S)

Els Daniella MESSELIS (*Elderly Studies, Tax and Social College - HUB, Belgium*)

Introduction : The decree concerning the policy participation of seniors has been accepted by the Flemish Parliament (April 2004). An implementation decree has never been developed ever since. In spring 2004, a research was organized in co-operation with Gaby Jennes and the students of the Senior Consultants' Training of the Tax and Social College - HUB. Its goal was to keep track of the functioning of the local SAC's. Method : 130 presidents (52%), from all over the country, were selected and questioned by random sample. In 2010, the research was redone by questioning 173 presidents. Results : The call for participation is not a temporary phenomenon. SAC's are well spread and their number has been risen spectacularly (from 75% in 2004 up to 88% in 2010). The presidents' profile was unilateral and still is: they're still most male, average age 70. The female presidents were scarce but have become less scarce. According to the majority of the presidents, loneliness was and still is the most important problem that seniors in Flanders experience. According to the presidents, the main reason of existence of the SAC is to act as the 'mouthpiece' and 'sounding board' of elder people. In reality however, the presidents conclude that their committee still often organizes festivities. The committee is also experiencing many internal and external problems. Especially the call for 'more education' has become bigger and bigger. Conclusion : Conclusion: although many positive evolutions, the

problem is not the existence as such but the structural inbedding and the quality of the functioning. Keywords : quality advisory committees

OP24 102-S-5
A STUDY ON THE IMPACTS OF DIGITAL LIFE ON THE QUALITY OF LIFE AMONG BABY-BOOM GENERATION IN KOREA

Chung Sun PARK¹, Meeryoung KIM², Soon-Jae KWON³ (1. Department of Family Welfare, Daegu University, Korea; 2. Department of Community Development and Welfare, Daegu University, Korea; 3. Department of Management, Daegu University, Korea)

Introduction : The impacts of the digital life of the baby-boomers on digital life satisfaction and overall life satisfaction are examined in this study. Since the baby-boomers have experienced the emergence and expansion of the digital devices in a very short time, some of them showed difficulty in adapting to new lifestyles, and even felt a high stress. Therefore, our study on the impacts of digital life on the quality of life among baby-boomers would suggest the direction of welfare policies for baby-boomers who took more than 15% of the population. Method : The total of 400 men and women of baby-boom generation were surveyed across the country. Results : The findings are as follows; the possession and the buying intention of digital devices was found out to be very strong; however, the actual buying behaviors for new devices were not seen frequently. The capability to utilize digital devices was strongly related to the respondent's socio-economic status. The participation rate in digital-related activity was related to the possession and the buying intention of digital devices, and the capability of the digital device utilization. The digital life satisfaction was strongly influenced by the possession and the buying intention of digital devices, capability of the digital device utilization, and accessibility to the device. Conclusion : Thus, for the enhancement of quality of life of baby-boomers, the education program or services should be systematically established. Policies were proposed to remodel the existing senior centers, which might be a good starting point for redesigning the digital life for baby-boomers. Keywords : baby-boomer, digital life, welfare policy

OP24 103-S
SOCIAL SUPPORT AND HEALTH

OP24 103-S-1
DISCUSSION NETWORKS, PHYSICIAN VISITS, AND NON-CONVENTIONAL MEDICINE USE AMONG OLDER ADULTS

Markus SCHAFFER (*Sociology, University of Toronto, Canada*)

Introduction : Building from the premise that network ties influence why and how older adults seek health care, this study examines whether different types of close relations predict two distinct forms of care utilization. On the basis of theory and past research, we expect that conventional care largely reflects social control processes typically associated with romantic partnership, but that non-conventional treatment is driven by exposure to information that resides largely outside the confines of kin relations. Method : Analyses are conducted with a national sample of older American adults aged 57-84 (n = 3005), the National Social Life Health and Aging Project (NSHAP). Social networks were assessed with name-generator methods during an in-home interview. Health care utilization was also measured during the interview. Hypotheses were tested using multivariate linear, logistic, and negative binomial regression. Results : Consistent with hypotheses, partnered men who are very likely to discuss health with a partner had a greater number of physician visits

in the past year, net of their health status and other relevant factors. On the other hand, the use of complementary and alternative medicine was predicted not by spousal or other family relationships, but by having non-kin ties with whom a respondent could discuss health. Conclusion: For many older Americans, a diversified health care portfolio involves both institutional obeisance and the ability to venture outside the mainstream and exert autonomy and self-expression. Results suggest that understanding the relational undercurrents of care utilization requires attention to diverse forms of social relations and to diverse expressions of care utilization. Keywords : social networks, health care, complementary and alternative medicine

OP24 103-S-2

INSTITUTIONAL STATUS VERSES SOCIAL STATUS IN ELDERLY PATIENTS/ YOUNGER PHYSICIANS INTERACTION AND COMMUNICATION IN LIBYA

Mayouf Ali MAYOUF¹, Li WEI² (1. English Department, University of Sebha, Liberia; 2. Chair of Applied Linguistics, Birkbeck College, University of London, United Kingdom)

Introduction : This research investigates how elderly patients in Libya interact and communicate institutionally with younger physicians. Method : Naturally occurring conversations between three elderly patients and their younger physicians were tape-recorded separately. The subjects were also interviewed. Conversation Analysis combined with social constructionist theories was employed as a method of data analysis. Results : The analysis of the interviews shows that elderly patients and their younger physicians (subjects) perceive each other socially rather than institutionally. Younger physicians insist that they cannot practice their institutional concessions when the patients are elderly. They cannot produce interruption, overlap or verbal refusal. In comparison, elderly subjects suggest that they perceive their younger physicians like their younger sons. The analysis of the naturally occurring conversations reveals that elderly patients and younger physicians summon each other as social actors (son/hajj or uncle) rather than institutional ones (doctor/sir). Elderly patients and younger physicians could not raise sex-related topics or directly name sexual organs (e.g. rectum) related to the elderly patient's case. Moreover, elderly patients employed social wordings such as proverbs and religious expressions when describing their medical cases to younger physicians. The conversations' exchange of turns was not thoroughly task-oriented. Rather, elderly patients address their younger physicians with social conversations (e.g. where are you from? Who is your cousin? Where do you live?). Elderly patient interactants manipulated the conversations' time-span. Furthermore, they employed the least preferable repair strategy. Conclusion : This research concludes that elderly patients in Libya interact and communicate with their younger physicians in accordance to their social construction which shows prevalence over the institutional hierarchy of the interactants. Keywords : social status, elderly patients

OP24 103-S-3

STRESS, RESILIENCE AND SUBJECTIVE WELLBEING: SINGAPORE LONGITUDINAL AGEING STUDIES

Tze Pin NG, May Li LIM, Xinyi GWEE (Gerontology Research Programme, National University of Singapore, Singapore)

Introduction : The negative effects of adverse life events on wellbeing vary among the elderly. Psychological resilience is a buffering factor against life event stress that reflects the ability to adapt to difficult or challenging life experiences and maintain a sense of wellbeing despite adversities. Research examining the effect of resilience in moderating the negative effect of adverse life events on subjective wellbeing

among the elderly is lacking. Method : In this study, we investigated the associations of adverse life events and resilience (measured by the Connor-Davidson Resilience Scale) with subjective wellbeing (measured by health-related QoL, Subjective Successful Ageing Rating, Satisfaction with Life Scale, Geriatric Depression Scale) among a population sample of 442 older adults aged 60 and above. ANOVA tests for the main and interaction effects of resilience and adverse life events were performed. Results : Increased number of adverse life events and decreasing resilience levels were associated (main effects) with poorer health-related QoL, successful ageing rating, life satisfaction and higher levels of depressive symptoms. Resilience significantly moderated the impact of life events on mental health functioning [$F(2,431)=6.59, p=0.002$] and depressive symptoms [$F(2,431)=13.15, p<0.001$]. Conclusion : Resilience moderated the effects of adverse life events on subjective wellbeing among the elderly, and may be a key to successful ageing. Keywords : Resilience, wellbeing, stress

OP24 103-S-4

EXPLORING LINKS BETWEEN SOCIAL EXCLUSION AND HEALTH OF OLDER CHINESE IN SHANGHAI, CHINA

Hongmei TONG, Daniel LAI (Faculty of Social Work, University of Calgary, Canada)

Introduction : Research has identified social exclusion as one important social determinant of health in later life. However, no research has examined the role of social exclusion in health of older Chinese despite that China has the largest aging population. Method : A stratified proportional random sample of 419 Chinese aged 60 years and older from three communities in Shanghai were invited to complete a structured survey. Physical and mental health was measured by a Chinese version of SF-12. Social exclusion was represented by variables related to material resources, social relation, civic participation, housing condition, basic services and neighborhood. Bivariate correlation and hierarchical multiple regression analysis were used. Results : Over 30% of the respondents reported experiencing two or more forms of social exclusion. Material resources, social relation, civic participation, basic services and neighborhood were significantly related to less favorable physical health while social exclusion related to material resources, social relation, civic participation, and basic services were correlated with less favorable mental health. When controlled for the demographics variables, significant associations were found between less favorable mental health and social exclusion related to material resources, social relation, and civic participation, while unfavorable physical health was significantly related to exclusion in social relation, civic participation, basic services and neighborhood. Conclusion : The findings indicated the potential effects of social exclusion on health of the aging population in China. For achieving a healthy aging society, there is a need to develop policies and programs to address the key social exclusion areas. Keywords : Older Chinese, Social exclusion, Health

OP24 103-S-5

SOCIAL AND PSYCHOLOGICAL STRESS: RISK FACTORS FOR ACCELERATED CELLULAR AGING AMONG AFRICAN AMERICAN MEN?

David H. CHAE¹, Karen D. LINCOLN², Robert J. TAYLOR³ (1. Behavioral Sciences and Health Education, Emory University, USA; 2. School of Social Work, University of Southern California, USA; 3. School of Social Work, University of Michigan, USA)

Introduction : African American men experience earlier onset and faster progression of aging-related disease outcomes compared to their

White counterparts. The disproportionate experience of social stressors, including negative interactions that are racially motivated, in addition to the psychological challenges facing African American men may contribute to accelerated aging in this population. This study examined racial discrimination, depressive mood, and anxiety in relation to leukocyte telomere length (LTL), an indicator of general systemic aging at the cellular level that has been associated with several aging-related health outcomes. Method : Cross-sectional observational study of 92 African American midlife men between 30-50 years of age. OLS regressions predicting LTL assayed from finger prick dried blood spots. Racial discrimination, depressive mood, and anxiety assessed through self-reported survey. Results : Greater anxiety was associated with shorter LTL ($b=-0.029$, $SE=0.014$, $p<0.05$). Although there were no main effects of racial discrimination or depression, there was a significant interaction between the two predicting LTL ($b=0.011$, $SE=0.005$, $p<0.05$). Plots of predicted values showed that there was little relationship between racial discrimination and LTL among those with high levels of depression, but a strong inverse association among those with low levels of depression. Conclusion : Our findings indicate that anxiety may contribute to accelerated biological aging among African American men, as measured by LTL. Among those with lower levels of depression, racial discrimination may constitute an added source of stress that leads to LTL shortening. Results from this study highlight the importance of considering both social and psychological sources of stress that impact aging among African American men. Keywords : African Americans, psychosocial stress, telomere length

OP24 103-S-6

HEALTH AND LIVING ARRANGEMENTS OF OLDER ADULTS IN SOUTH KOREA: IS LIVING NEAR CHILDREN A DISTINCT CATEGORY?

Borin KIM, Jersey LIANG (*Health Management and Policy, School of Public Health, University of Michigan, USA*)

Introduction : This study investigates the effects of health conditions on living arrangements of older Koreans. It focuses on living near children as a category which is distinct from co-residence with and living away from children. Method : Data were obtained from the 2006 and 2008 Korean Longitudinal Study of Ageing, and our sample restricted to older adults over 60 years old with at least one living child ($n=5,209$). We used multinomial logit regressions, and controlled for age, gender, education, rural residency, income, homeownership, marital status, number of children, whether or not having a son or having non-married child, social relations, and religious affiliation. Results : The proportions of living near children among Korean elders were 28% among the married and 17% among the unmarried. While unmarried elders with more functional limitations tended to live with children rather than live near or away from them, married elders with chronic diseases were more likely to live near children rather than live away from them. Conclusion : As a number of Korean elders living separately from children has significantly increased in recent years, policy concerns have arisen over whether this transition in living arrangements reflects a weakening of traditional family support. This study, however, demonstrated that older people with physical health problems still tend to live with or near their adult children. Living near children may be a substitute for co-residence in South Korea, where cultural norm of filial piety and the tendency to value privacy and independence coexist. Keywords : Living near children, Health

OP24 105-S

TECHNOLOGY IN LATER LIFE

OP24 105-S-1

WHAT DOES TELECARE CONTRIBUTE TO AGEING-ENVIRONMENT INTERACTIONS? EARLY FINDINGS FROM A STUDY OF OLDER PEOPLE AND THEIR CARING NETWORKS IN TWO LOCALITIES IN ENGLAND.

Sue YEANDLE (*Sociology and Social Policy, University of Leeds, United Kingdom*)

Introduction : This paper presents early findings from the 'AKTIVE' project (2011-14), which explores the lives of frail older people living at home in two contrasting locations in England. AKTIVE (url here?) is investigating what happens to older people and their caring networks (family members, neighbours, professional carers) when a package of telecare support (alarms, alerts, sensors and GPS monitoring devices) is installed in their home or provided for them to use when leaving their home environment. Method : The study uses 'Everyday Life Analysis', an innovative social scientific method involving repeat research visits to older people over 9-12 months, deploying ethnographic, biographical and observational approaches. This aims to gain understanding of the circumstances, lives, aspirations and reactions of frail older people, and to assess how far members of their caring network engage with and respond to the telecare technology installed to support them. Results : The paper analyses case material from the study, focusing on how older people with a range of needs use and respond to the telecare packages in place. It focuses on the challenges they and their carers face in using the telecare effectively to help them adjust to increasing mental and physical frailty, and on how this varies according to their differing needs, contexts and personal preferences. Conclusion : The paper concludes with some preliminary policy recommendations, based on dialogue with the study's consortium of experts, who include experts in design, ergonomics and assistive technology, clinicians and telecare manufacturers / commissioners, working with social scientists based at Leeds and Oxford Universities. Keywords : Telecare Networks Care

OP24 105-S-2

CORRELATES OF AND BARRIERS TO INTERNET USE AMONG THE ELDERLY

Janet CHANG, Carolyn MCALLISTER, Rosemary MCCASLIN (*Social Work, California State University San Bernardino, USA*)

Introduction : The study objectives were to examine correlates of current Internet use and barriers to using the Internet among older adults, frequency of Internet use, comfort level, and training needs for Internet use. Method : Data were collected from 567 participants, aged 60 to 92, residing in a southern county in California, using self-administered questionnaires. A convenient sample was employed and participants were recruited from various locations including community agencies, churches, supermarkets, etc. in Spring, 2012. Results : Over 58% of the participants reported they were using the Internet, and 85% of users indicated they were either "very comfortable," or "comfortable" using the Internet. When the non-Internet users were asked what prevented Internet use, lack of knowledge (61%) and lack of access (47%) were the most frequently cited. Logistic regression analysis was conducted to determine predictors of current Internet use. The results revealed that home internet access (19 times more likely), internet use at work (5.5 times more likely), age (elders in their 60's were 2.8 times more likely than in 70's or 80's), education, and ethnicity (Latinos were 40% less likely to use), were statistically significant in predicting the status of current Internet use, while income and marital status did not significantly contribute. Conclusion : The study findings suggest that Internet use among the elderly is increasing, except in older elders with lower

levels of income and education. Human service professionals need to strategize how to continue to reach out and serve non-Internet using elders and computer savvy elders in a technologically dominated human services field. Keywords : Internet Use Elderly

OP24 105-S-3

WHY DO FAMILY CAREGIVERS USE INFORMATION ONLINE? AN EXPLANATORY MODEL OF EHEALTH INFORMATION BEHAVIOR

Chiu Mei Lee TERESA (*Department of Rehabilitation Sciences, Hong Kong Polytechnic University, Hong Kong*)

Introduction : Empirical studies showed that some family caregivers used the Internet to access health information while some did not. The information behavior theories conceptualize the relationship of information source and information users. This study aimed to explore under what circumstances family caregivers would use information online. Method : A critical qualitative research was conducted with a sample of 46 family caregivers who took care of a person with dementia. The caregivers were provided the opportunity to access information and contact a therapist via the Internet. Both service users and non-users were interviewed to describe what happened when they sought and used the online services. Main themes were identified using a grounded theory analysis procedure and a substantive theorizing process. Results : Four paths of usage behavior were represented in a conceptual model of information users, information sources, and Internet-mediated support. Two paths represented the behavior of users who reached the information source by 1) browsing the information posted on the Internet, or 2) interacting with a therapist online. Two paths explained why some caregivers did not use the Internet to reach the information source. 1) They were satisfied with the information from the immediate family and social circle, or 2) they reached the information source directly without the Internet. Each path of (non)-usage consisted of different types of access barriers. Conclusion : A model of ehealth information behavior which can be used to design and evaluate Internet support services is proposed in this study. How the model has been applied to enhance ehealth practice will be discussed. Keywords : information behavior, family caregiver, ehealth innovation

OP24 105-S-4

BOOMER MATTERS: ADDRESSING THE NEEDS OF AGING BABY-BOOMERS

Deborah O'CONNOR¹, Heather WHITEFORD², Elizabeth KELSON³
(1. *Social Work, University of British Columbia, Canada*; 2. *Family Services, Family Services of Greater Vancouver, Canada*; 3. *Interdisciplinary Studies, University of British Columbia, Canada*)

Introduction : The face of aging in Western countries is changing as the baby-boomer generation begins to enter old age. With a reputation for being more active and vocal, rising divorce rates in middle age, and increased reliance upon technology, there is some reason to suspect that their needs as they enter old age will be different from preceding cohorts. This study explores needs and experiences of baby-boomers seeking counseling in a Community Centre. Method : Survey data, indepth personal interviews with program counselors, and telephone and personal interviews with 20 older adults who sought personal counseling at a local Community Centre were examined for themes. Results : Reasons for seeking intervention for boomers are collapsed into three main categories: family care issues including care of aging parents and difficulties with adult children often resulting in situations of abuse; partnering issues including learning to live single and negotiating a changing dating scene; and issues related to body image,

sexuality and physical abilities. Conclusion : Implications of findings include: the need to develop sexual health programs aimed at this generation; the importance of providing the space for boomers to examine their relationships with adult children as a step toward preventing elder abuse; proactive steps to help individuals challenge ageist societal beliefs about personal appearance and signs of aging; and the importance of groups for dealing with issues of loss and age-related changes. Keywords : Baby-boomer needs; sexual health; family relationships

OP24 105-S-5

HUMAN RELATIONSHIP, INDIVIDUALIZATION AND SATISFACTION WITH LIFE OF ELDERLY WOMEN IN KOREA: BASED ON A SURVEY RESEARCH

Young-hee SHIM (*Law School, Hanyang University, Korea*)

Introduction : This paper tried to study human relationship and satisfaction with life among elderly women from the perspective of individualization. This paper attempted to approach the elderly women not from the double jeopardy perspective, but from individualization perspective, that is from human relationship or identity perspective. Method : In order to do it, I conducted a survey with a structured questionnaire to 320 elderly people living in a central district of Seoul from August 24 to 25, 2011. Results : The research findings are as follows: Contrary to the double jeopardy assumption that elderly women are unhappy, this study reveals that elderly women are more satisfied with friends and community activities even though their satisfaction with married life is lower than elderly men. In a sense elderly women try to compensate their dissatisfaction with married life with their relationship with children on the one hand and new friends from welfare centers on the other. And the new friends from the welfare centers are related with individualization in the second modernity. Conclusion : The meaning of these findings is that for elderly women in Korea both the family (particularly children) of the first modernity and the friends of the second modernity are important. This can be considered as a unique phenomenon found in Korea, different from the Western one where even the family takes the forms of liberal individualization of second modernity. In this sense it can be said that individualization of Korean elderly women are different from that of the West. Keywords : family relationship, friend relationship, satisfaction with life,

OP24 106-S

WORK AND RETIREMENT

OP24 106-S-1

MARKET TRANSITION AND DISTRIBUTION OF RETIREMENT INCOME: THE CASE OF CHINA

Haowei WANG (*Sociology of TsingHua University, Sociology of TsingHua University, China*)

Introduction : This paper is concerned with the impact of the market-oriented reform on income distribution among aged people in China. The market-oriented reform in the 1990s has transformed the structure of the retirement income from pension to social insurance in order to release the burden of enterprises and make the market play its role in the distribution of the retirement income. China's change in retirement income of aged population provides a case to test a general belief that the transformation from the redistributive economic system to the market economic system is good to immediate producer rather than redistributors and is good to social, human, and cultural capital rather than political. Method : This examination of changes in distribution of retirement income relies on the data of China General Social Survey.

A sample of 1,728 people aged 60 were identified from the dataset and stepwise regression was used to compare personal retirement income before the reform to that after the reform, and compare the impact of some major social capital variables on the retirement income in different periods. Results : The findings are 1) those who registered as urban resident, employed in public sectors, and held a managerial position before retirement tend to obtain retirement income much higher than those who lived in rural areas, employed in private sectors and held non-managerial positions prior retirement; 2) market transition failed to narrow the retirement gap between producers and redistributors. Conclusion : This may imply that market transition does not automatically lead to more income equal in retirement-income distribution. Keywords : Retirement Income; Market Transition; Income Inequality

OP24 106-S-2

THE APPLICATION OF WORK ABILITY THEORY AND MEASUREMENT FOR AGEING WORKFORCES IN AUSTRALIA AND SINGAPORE

Philip TAYLOR¹, Ruth WILLIAMS², Christopher MCLOUGHLIN²
(1. Director, Graduate Studies, Monash University, Australia;
2. School of Business and Economics, Monash University, Australia)

Introduction : Levels of work ability are predictive of occupational injury, morbidity, mortality and early labour market withdrawal. Testing the utility of the work ability construct in organisational settings assists in identifying areas of the psycho-social work environment that require modification. The Work Ability Survey (WAS) is a robust instrument which measures personal and organisational capacity and comprises of several sub-scales such as workers' physical and psychological health, intrinsic and extrinsic work benefits, respect, and relationships with supervisors. Method : This paper considers levels of work ability among four case organisations; two in Australia, funded by the New South Wales Office for Ageing and two in Singapore, funded by the Singapore Government Ministry of Manpower. The two Australian surveys administered online and via self-completion, included 412 employees from a finance sector organisation and 238 from a health care sector organisation. The two self-completion surveys in Singapore included 303 employees from a hospitality sector organisation and 218 from a government transport. Results : Comparisons according to gender, age, occupation level, department and business unit, indicate key issues prevalent across all four case organisations concerning perceptions of lack of support from immediate supervisors, and workplace discrimination concerning barriers to promotion and job advancement. Additional analysis elicited counterintuitive results in relation to older age categories on the autonomy and work/life balance sub-scales, which may be influenced by cultural background. Conclusion : It is concluded that issues related to relationships with supervisors and management are prevalent organisational risk factors which can be measured and compared across industries, sectors and cultural contexts. Keywords : work ability, older workers

OP24 106-S-3

THE IMPACT OF PSYCHOSOCIAL WORKING CONDITIONS ON EXPECTED AND DESIRED RETIREMENT AGES IN A REPRESENTATIVE SAMPLE OF SWEDISH WORKERS

Martin HYDE, Holendro SINGH, Hugo WESTERLUND
(Epidemiology, Stress Research Institute, Sweden)

Introduction : Governments throughout the industrialised world are seeking to extend the working lives of their populations. However, relatively little is known about how the work environment affects

people's aspirations or expectations of working longer. Method : The data are drawn from the first 3 waves of the biennial Swedish Longitudinal Occupational Study of Health (SLOSH). The 4th wave will be added in November. This is a nationally representative longitudinal study (N = 26,000). Respondents were asked at what age they would like to retire and at what age they expected to retire. The psychosocial work environment was measured using a modified version of the Demand Control Model. Linear regression was used and all analyses were adjusted for socio-demographic factors. Results : At baseline poor psychosocial working conditions were associated with a lower desired age of retirement and a wider gap between expected and desired age of retirement. However there was no statistically significant association with expected age of retirement. There was no statistically significant relationship between change in psychosocial work environment between paired waves and change in expected or desired age of retirement or the difference between them. However for the subsample of respondents who were in work at all three waves (N = 2240) accumulated exposure to poor psychosocial working conditions has a statistically significant independent impact on the discrepancy between expected and desired retirement age. Conclusion: The results suggest that improving the quality of the psychosocial work environment could increase people's willingness to work until later in life. Keywords : Psychosocial, Retirement, Sweden

OP24 106-S-4

THE ECONOMIC CONSEQUENCES OF RETIRING TO CAREGIVE

Lynn MCCDONALD¹, Peter DONHAUE², Tamara SUSSMAN³, Tal SPALTER⁴ (1. Faculty of Social Work, University of Toronto, Canada; 2. School of social work, Renison University College affiliated with the University of Waterloo, Canada; 3. School of social work, McGill University, Canada; 4. Social Work, University of Toronto, Canada)

Introduction : To determine the economic consequences of retiring to caregive when the caregiving is over. Method : As part of a larger study of involuntary retirement and its impact on income, in-depth interviews were carried out with 24 caregivers who self-identified as retiring to caregive and who represented different points along the caregiving, retirement, post-caregiving continuum. Results : Findings from the analysis are organized into an analytical model according to caregiving-retirement-post caregiving trajectories and indicate: the transition into early retirement took two routes; the caregiving process was wrought with financial distress; at the conclusion of the caregiving, the "crisis" caregivers lived in abject poverty while the "planners" reported adequate income; post caregiving survival strategies included attempts at work re-entry, juggling debts, bartering services and pawning belongings; the caregiving, retirement, post caregiving trajectories were influenced by irreconcilable social norms about women that fluctuated over time. Conclusion : Greater understanding of the intersection of caregiver and retirement trajectories over time is necessary for planning financial supports for caregivers who retire. Although the caregiving may be over, the continued intervention of professionals is warranted to avoid the distressing economic consequences of retiring to caregive. Keywords : Life course, retirement, caregiving continuum.

OP24 107-R

ACTIVE AGING & AGING WELL

OP24 107-R-1

EFFECTIVE MEANS TO MAINTAIN BIORGANISM'S OPTIMAL VITAL ACTIVITIES AND PREVENT AGEING

Sergey IVANENKO, Elena TERESHINA (*Gerontology, WWMA AG, Worldwide Medical Assistance, Switzerland*)

Introduction : WWMA AG conducts fundamental scientific and applied researches aimed at creation of a system of effective means to maintain biorganism's optimal vital activities and prevent ageing. Theoretical works concern the origin and evolution of metabolic schemes at the cell and multicellular organism levels; metabolic system's homeostasis self-regulation and self-maintenance mechanisms; epigenetic regulation of functional system homeostasis mechanisms; ageing mechanisms. **Method :** We consider the human organism to be a thermodynamic system that converts the energy of glucose (partially oxidized substance) through certain metabolic pathways into the energy of fatty acids (highly reduced substance). Ageing is a process of permanent intracellular deposition of fat in extra-adipose tissues that triggers inflammation and oxidative stress and forces cells to convert into the adipose-like phenotype. Endogenous fatty acid synthesis and accumulation complete the "rotation" of the conjugate redox system that supervises proton flows and regulates respiration, proliferation, and energy consumption. That is the reason of age-associated diseases. **Results :** Our system offers a number of means to maintain the organism's homeostasis stationarity that allows us to delivery effective prophylaxis and treatment of age-associated diseases: metabolic disorders (dyslipidemia, diabetes mellitus type 2), cardio-vascular and neuro-degenerative diseases, cancers as results of stationarity disorders in tissues due to immune system suppression in middle and late ontogeny, infectious diseases caused by viruses, bacteria, or fungi typically found in elderly people. **Conclusion :** In addition, our system prolongs human reproductive period and active longevity with high quality of life within the limit of human life expectancy as a species. **Keywords :** Ageing, quality, longevity

OP24 107-R-2

ACTIVE AGEING : A POLITICAL FRAMEWORK AT THE CROSSROAD OF INTERNATIONAL ORGANIZATIONS AND SCIENTIFIC LITERATURE

Thibault MOULAERT¹, Jean-Philippe VIRIOT DURANDAL² (*1. IACCHOS, National Fund for Scientific Research & Université Catholique de Louvain, Belgium; 2. GEPECS, Université Paris Descartes, France*)

Introduction : Active ageing may be considered as one of the leading notion for policy makers to rethink ageing population since 1990's. Usually, literature insists on the importance of World Health Organization framework of 2002 and Walker is often referred in literature as one of the leader for theoretical explanations. They both present a holistic version of active ageing. **Method :** We analyze 24 texts from international organizations (World Bank, OECD, European Commission, United Nations and World Health Organization) and track "active ageing" in 17 Anglophone databases and 7 Francophone databases. **Results :** First we will show how, historically, "active ageing" started emerging in scientific literature. Second, by focusing onto the action of World Health Organization and of European Commission, we will show how international organizations play an important role in transforming the theoretical ideas (the concept or the notion of "active ageing") into a political framework for public policies (a "referentiel d'action publique" in French sociological literature). This will permit us to discuss some of Chris Phillipson's perspectives on globalization and ageing. Third, we will come back the scientific literature to show how "active ageing" receives plural definitions and, in particular, how different it has been at least until 2011 for Anglophone and Francophone literatures. **Conclusion :** In

conclusion, we propose to assess the future development of "active ageing" through the emergence of a new critic, more present in Anglophone literature, but also present in Francophone one. **Keywords :** active ageing, international organizations, scientific literature

OP24 107-R-3

DEVELOPING EVIDENCE-BASED POLICY IN AGEING WELL

Peter ORPIN¹, Judi WALKER², Kim BOYER³ (*1. Rural Health, University of Tasmania Private Bag 103, Australia; 2. School of Rural Health, Monash University, Australia; 3. Rural Health, University of Tasmania, Australia*)

Introduction : Population ageing has driven an increasing government interest in policies and practices to support ageing well. However, the complexity of interacting factors influencing the quality of the ageing experience means that ensuring that such policy and practice initiatives are evidence based presents a major challenge for policy makers. The purpose of this project was to construct a policy design framework to assist policy makers in this task. **Method :** The project involved the critical analysis of a broad range of ageing well policy documents. **Results :** While these initiatives showed a robust use of evidence in understanding the challenges of an ageing population and identifying the factors associated with ageing well, the strategic responses to these issues were notable for their lack of an evidence base. The complex and context specific nature of factors influencing the ageing experience both complicate the process of identifying appropriate evidence and limit the utility and transferability of any identified research evidence and/or models. Also, such evidence remains relatively scarce because, while it can only really be generated within the real world practice context, bureaucratic and political processes and timelines are relatively un-supportive of reflective and evaluative practice. **Conclusion :** We argue for an acknowledgement that complex policy initiatives, to a large extent, need to 'learn by doing'. We propose utilising a program logic framework to identify relevant mid-level theoretical evidence in the initial design stage but to build on that evidence and refine both policy and practice through rigorous and continuous quality improvement evaluation. **Keywords :** Ageing Well Policy Evidence-based

OP24 107-R-4

CREATIVE ACTIVITY AS THE AGED PERSON DEVELOPMENT POTENTIAL

Janna GLOZMAN¹, Valentina NAUMOVA² (*1. Psychology, Moscow State University, Russia; 2. Psychology, Vitis Bering Kamchatka State University, Russia*)

Introduction : Contemporary gerontopsychology views the ageing as a continuing development where involutory change is combined with new progressive formations. The last lead to emotional well-being, personality growth, openness to new, intention for self-development, independence, ability to organize own life. The personality of a creative individual is tolerant to ageing (E.F. Rybalko, 2001). An art-therapy program was developed based on the psychological understanding of personality as a system of human ? environment relationship and of creative work as specifically human, personal way of activity based upon projective and symbolic communication (A.I. Kopytin, 2010). **Method :** Purpose in Life test by J. C. Crumbaugh and L. T. Maholic (in D.A. Leontyev's adaptation); measure of individual reflexiveness by A.V. Karpov, V.V. Ponomaryova; survival test by D.A. Leontyev, E.I. Rasskazova; «Creative hobby questionnaire» by A.I. Kopytin. **Results :** The results prove significant differences after

art-therapy in survival indices: reduced inner tension, pleasure from own activities. The individual reflexiveness development facilitates the process of life reframing, re-estimation of relationships with surrounding world and own life awareness. The Purpose in Life test confirms the tendency towards personal activity, emotional intensity, determination of life purpose and life perception, ability to continue living in the present. The results of «Creative hobby questionnaire» show the transformation of quality of elderly people's life through their life reframing, intensification of emotional sensitivity, sensory activation, interpersonal communication. It provides an opportunity for meaningful and awarding life. Conclusion: The study proves that the art-methods influence person's creative activity, provide successive ageing. Psychological model of personal growth is proposed. Keywords : Aging, personality, creativity

OP24 107-R-5 ACTIVITY ENGAGEMENT AND HEALTHY AGING

Carolyn BAUM (*Program in Occupational Therapy, Washington University School of Medicine, USA*)

Introduction : Biological changes may limit older adult's participation in activity. In addition they are increasingly challenged with chronic diseases. Older adults may eventually lose the ability to perform activities as they used to, but their capacity to engage in activities and derive a sense of wellbeing from them still exists. This paper introduces a simple valid measure of activity participation that can be used to document changes in activity participation as people age and experience chronic health conditions. Method : Common data elements in approved studies provided 460 people age 55-100 living in the community. Sixty four percent were female, 86% Caucasian, 14% African American, and 36% lived alone. The Activity Card Sort (ACS) is a validated and culturally appropriate tool that measures instrumental leisure, fitness and social activities. For the purpose of this study, the activities were coded as those performed at home and those performed in the community. Results : Older adults under 65 spend less time in home and community activities than those 75-80. Between 65-75 years, they increase activities in both. The number of chronic diseases does not impact home and community activities, but their perception of health does. Older adults with more education are more active in community and home activities. There no differences in male and female home activities, but men engage in more community activities. Conclusion : The data demonstrate the usefulness of the ACS for clinical and research purposes. There are 8 culturally valid versions of the ACS that can be used in global studies. Keywords : activity engagement, activity pattern, healthy aging

OP24 107-R-6 UNDERSTANDING DECISIONS NOT TO VOLUNTEER AMONG KOREAN OLDER ADULTS

Hae Jung SHIN¹, Ellen L. CSIKAI², Nan Sook PARK³, Lucinda L. ROFF⁴ (*1. Director, Gwangmyeong Social Welfare Center, Korea; 2. Professor, School of Social Work, The University of Alabama, USA; 3. Assistant Professor, School of Social Work, University of South Florida, USA; 4. Professor Emerita and Interim Dean, School of Social Work, The University of Alabama, USA*)

Introduction : Volunteerism has long been seen as a positive civic engagement activity for people of all ages in the Western countries, but is a relatively new phenomenon in Korea. Governmental policies have recently encouraged volunteerism among older adults and in turn this has led to increased development of volunteer programs by social workers and project directors at social welfare and senior centers, especially in larger Korean communities. However despite this

attention, the volunteer participation rate remains low among Korean older adults. Method : In this phenomenological qualitative study, data were collected through in-depth, semi-structured interviews with a total 30 community-dwelling older adults, ages 60-75 (20 current volunteers and 10 non-volunteers) in two metropolitan cities in Korea. The focus of results presented here was limited to older non-volunteers' perceptions about volunteering and factors that may influence decisions not to volunteer. Results : Four salient themes related to decisions to not volunteer emerged from the data: Little information about volunteering such as lack of awareness and not seeking out information; little understanding and misconceptions of volunteer policies; lack of confidence in abilities related to perceptions of work required and health status; and preference toward enjoying leisure activities. Participants also indicated that policies providing payment (stipend) may be an important factor that could facilitate an initial decision to volunteer. Conclusion : The results suggested that strategies to increase awareness of volunteer opportunities and positive aspects of volunteerism were needed. Also, governmental and community agency policies and corresponding financial incentives to enhance recruitment of older volunteers must be further developed. Keywords : Older volunteer, senior volunteerism, volunteer decisions

OP24 123-C HYPERTENSION

OP24 123-C-1 BLOOD PRESSURE AND CARDIOVASCULAR DISEASE IN OCTOGENARIANS: LILACS NZ

Ruth TEH¹, Robert N. DOUGHTY², Carol WHAM³, Ngaire KERSE¹ (*1. General Practice and Primary Health Care, University of Auckland, New Zealand; 2. Dept Medicine, University of Auckland, New Zealand; 3. Institute of Food Nutrition and Human Health, Massey University, New Zealand*)

Introduction : Studies reported a paradoxical effect of higher blood pressure (BP) on risk of cardiovascular disease (CVD) in older adults. This paper aims to examine the association between BP, CVD and sodium intake in octogenarians. Method : The Life and Living to Advanced Age, New Zealand (LiLACS NZ) is a cohort study that recruited 421 Maaori aged 80-90 and 516 NonMaaori aged 85 (n=937) living in the North Island, New Zealand. CVD and hypertension were ascertained through a standardised questionnaire, general practice medical records, a national hospitalisation registry and physical assessment. Medications were classified using World Health Organisation-Anatomical Therapeutic Chemical Classification. Results : The median (IQR) for systolic/diastolic BP was 146(31)/80(17)mmHg. Sixty-eight percent of the participants were on BP-lowering medication, 21% had SBP/DBP $\geq 140/\geq 90$, 43% had SBP/DBP $\geq 140/<90$. Overall, 86% had hypertension, 65% had clinically manifest CVD. In nonMaaori, controlling for socio-demographic factors, traditional CVD risk factors, BP-lowering medication and sodium intake, a higher BP was associated with higher odds of having stroke ($p<0.05$) but a lower odds of having CHF ($p<0.01$). There was no association between BP and CVD, stroke or CHF in Maaori. The mean (SD) sodium intake was 2495(1024)mg/day. Sodium intake was not statistically different between those with and without CVD, stroke or CHF, and was not associated with BP. Conclusion : In this cross-sectional analysis, elevated BP is an independent risk factor for stroke but associated with a lower risk for CHF; sodium intake did not moderate these relationships. The effect of BP on stroke and CHF in LiLACS NZ are ethnic-specific. Keywords : Aged, cardiovascular disease, blood pressure

**OP24 123-C-2
TRENDS IN HYPERTENSION TREATMENT AMONG
TURKISH STROKE SURVIVOR**

Vildan BINAY SAFER¹, Umut SAFER², Ilker TASCI², Fusun KOSEOGLU¹, Huseyin DORUK² (1. *Physical Medicine and Rehabilitation, Ankara Physical Medicine and Rehabilitation Training and Research Hospital, Turkey*; 2. *Geriatrics, Gulhane School of Medicine, Turkey*)

Introduction : The incidence of stroke is declining in western countries, largely due to achievements in attaining target blood pressure lowering. However, overall rate of stroke remains high due to the aging of the population. Prospective clinical studies in recent years have demonstrated that all classes of antihypertensive agents may not be the same in the prevention of stroke. In the present study, we evaluated the antihypertensive use with respect to age among first-ever stroke survivors. **Method :** Stroke survivors who were recruited to a rehabilitation program between January 2009 and December 2010 were retrospectively examined in this single center study. Demographic data, etiology of stroke, duration of stroke, acute stroke care center, comorbid diseases and recent routine blood tests were recorded. **Results :** A total of 1002 patients with a history of recent stroke were screened. Among them 879 hypertensive subjects with stroke fulfilled the inclusion criteria and underwent assessment. Mean age of participants <65 and ≥65 years was 55.83±7.29 and 75.60±6.48, respectively. There were no significant differences regarding the ratio of untreated hypertensive cases, mono or combine antihypertensive treatment, and history of diabetes mellitus, peripheral arterial disease or dyslipidemia between these two age groups. Ischemic heart disease (31.3% vs.21.5%, p=0.002) and beta-blocker (45.2% vs. 37.2%, p=0.026) use were more frequent among the elderly participants. **Conclusion :** We found higher rates of beta blocker use among Turkish elderly stroke survivors. While this might be associated with a previously diagnosed ischemic heart disease, the results suggest that more potent antihypertensives had been used at relatively lower rates among these. **Keywords :** stroke, hypertension, elderly

**OP24 123-C-3
LONG-TERM EFFECT OF PERSONAL ANXIETY ON RISK
OF AN ARTERIAL HYPERTENSION AND STROKE IN
FEMALE POPULATION IN RUSSIA**

Valery GAFAROV, Dmitriy PANOV, Elena GROMOVA, Igor GAGULIN, Almira GAFAROVA (*Laboratory of psychological and sociological issues of internal diseases, Institute of Internal Medicine SB RAMS, Russia*)

Introduction : The aim is determine the influence of personal anxiety on risk of an arterial hypertension (AH) and stroke in female population of 25-64 years in Russia. **Method :** Under the third screening of the WHO 'MONICA-psychosocial' program random representative sample of women aged 25-64 years (n=870) were surveyed in Novosibirsk in 1994. Levels of personal anxiety were measured at the baseline examination by means of Spilberger's test. From 1995 to 2010 women were followed for the incidence of AH and stroke. Cox proportional regression was used for relative risk (HR) assessment. **Results :** High level of anxiety (HLA) in studied cohort revealed in 60.4% of women. HR of development of AH in women with HLA during the first 5 years of study was in 2.38-fold higher (95.0%CI:1.137-4.993;p<0.05), over 10 years it was 1.85 (95.0%CI:1.075-3.194;p<0.05) and HR was 1.46 (95.0%CI:1.023-2.079;p<0.05) over 16 years of follow-up compared to those with lower anxiety levels. Depending on the age groups the risk of AH incidence within 10 years was highest in older group with HLA aged

55-64 years (HR=10.2; 95.0%CI:1.244-83.609, p<0.05). HR of stroke incidence was in 3.5-fold higher (95.0%CI:1.020-12.015; p<0.05) in women with HLA than without it over 16 years of study. There were also tendencies of increasing stroke incidence in older age groups with HLA. **Conclusion :** There is high prevalence of HLA in Russian female population aged 25-64. During 16 years of follow-up women with HLA have significantly higher risk of AH and stroke especially in older age groups. **Keywords :** anxiety, hypertension, stroke

**OP24 123-C-4
MANAGING HYPERTENSION: OLDER SLAVIC
IMMIGRANT'S USE OF ETHNOMEDICINE**

Catherine VAN SON¹, Ambartsum M. OGANOV² (1. *College of Nursing, Washington State University, USA*; 2. *College of Pharmacy, Washington State University, USA*)

Introduction : Older immigrants from the former Soviet Union (FSU) find compliance to western medicine in the USA difficult. An understanding of the factors influencing compliance and approaches used by older immigrants is critical if hypertension is to be effectively managed. **Method :** Using a qualitative descriptive study, 25 older Slavic immigrant women were interviewed. Several themes related to adherence to prescribed recommendations for hypertension were described. **Results :** The theme regarding ethnomedicine use is presented in this paper. All of the participants talked about their distrust of western medicine and the various ethnomedicine remedies they used to manage their hypertension. Some of these remedies included herbs such as rosehips, yarrow, hawthorn, fennel, and dill. Dietary remedies were lemon, beets and raspberries. On occasion mumiyo was used, as were pharmaceuticals such as (Validol and Enap) from the FSU, mustard plaster and hot or cold water treatments. Most used and preferred their ethnomedicine to western pharmaceuticals prescribed by their physician. None of the participants reported that their hypertension was well managed and described an episodic and random approach to hypertension control. **Conclusion :** A complicated non-systematic approach to hypertension management with ethno and western medicine is used by older Slavic immigrant women. Healthcare providers are unaware of the herbal, dietary and foreign pharmaceuticals being used in combination with or in lieu of the western medications they are prescribing. Healthcare providers must be attentive to ethnomedicine use and provide more information about western medications and the harmful effects of combining remedies without consultation. **Keywords :** Hypertension, Immigrants, ethnomedicine

**OP24 123-C-5
BLOOD PRESSURE (BP) INCREASE OVER 2 YEARS IS
BENEFICIAL TO SURVIVAL IN THE OLDEST OLD: 7-YEAR
FOLLOW-UP STUDY IN 3397 OLDER ADULTS**

Jenny S.W. LEE¹, Tung-Wai AU YEUNG², Jason LEUNG³, Timothy KWOK⁴, Jean WOO⁴ (1. *Medicine and Geriatrics, The S H Ho Centre of Gerontology and Geriatrics The Chinese University of Hong Kong, China*; 2. *Geriatrics, The S H Ho Centre of Gerontology and Geriatrics, The Chinese University of Hong Kong, China*; 3. *The Jockey Club Centre of Osteoporosis Care and Control, The Chinese University of Hong Kong, China*; 4. *Medicine and Therapeutics, The Chinese University of Hong Kong, China*)

Introduction : Epidemiological studies have shown that hypertension treatment may not be as beneficial for those ≥80 years old, and that BP with the best survival rate in the oldest old was higher than the 140/90 recommendation. We examine whether an increase in BP over time may also be associated with survival benefit in very old age. **Method :**

3397 adults ≥ 65 years were examined for demographic, medical conditions, and BP in two assessments two years apart. Hazard ratio of systolic BP (SBP) and diastolic BP (DPB) changes between the visits were examined with respect to 7-year mortality, in those < 80 and ≥ 80 years old. Results : 239(13.8%)men and 272(16.2%)women were ≥ 80 years old, with 331(19.2%)(men) and 152(9.1%)(women) dead by March 2012. The very old had significantly lower DBP than those < 80 years. In women only, the oldest had higher SBP than those < 80 . The very old had significantly larger DBP drop since baseline but a larger SBP drop was noticed only in women. In very old men, an increase of 5mmHg in SBP and DBP at the 2-year visit was associated with a 6% and 11% respective increase in survival, and DBP ≤ 60 mmHg was associated with 81% higher mortality risk. No difference in survival was noted in men < 80 years old or in women. Conclusion : In the oldest old, both increases in SBP and DBP over time were associated with survival benefit. Low DPB(≤ 60 mmHg) was associated with higher mortality. This raises the question of whether increased BP should be subjected to pharmacological control in this age group. Keywords : Hypertension, very old, survival

**OP24 123-C-6
ADVANTAGEOUS APPROACH USING 'WEARABLE BLOOD PRESSURE SENSOR' TO ACHIEVE APPROPRIATE BLOOD PRESSURE CONTROL WITH CONSIDERATION FOR VERY SHORT-TERM VARIABILITY IN ELDERLY**

Katsuya IJIMA¹, Guillaume LOPEZ², Masaki SHUZO³, Ichiro YAMADA², Shintaro YANAGIMOTO⁴, Yasushi IMAI⁵, Tsukasa INAJIMA⁵, Naoki YAHAGI⁶, Masahiro AKISHITA⁷, Yasuyoshi OUCHI⁷ (1. Institute of Gerontology, Department of Geriatric Medicine, University of Tokyo, Japan; 2. Graduate School of Frontier Sciences, University of Tokyo, Japan; 3. Graduate School of Frontier Sciences, University of Tokyo, Faculty of Engineering, Kanagawa University, Japan; 4. Division for Health Service Promotion, University of Tokyo, Japan; 5. Department of Cardiovascular Medicine, University of Tokyo Hospital, Japan; 6. Department of Emergent Medicine, University of Tokyo Hospital, Japan; 7. Department of Geriatric Medicine, University of Tokyo, Japan)

Introduction : Excessive blood pressure variability (BPV) due to aging leads to aggravate hypertensive target organ damage due to a decline in multi-organ blood flow. Both disturbed baroreflex function and arterial stiffening make the management of hemodynamics more difficult. The arterial wall is stiffened by various pathogenic conditions including calcification. In the clinical settings, it has been frequently seen that the elderly have rapidly BP elevation and decline, leading to orthostatic disorders, post-urination syncope and various geriatric syndromes due to relative brain ischemia. We usually measure their BP using cuff-inflation with a single point mainly. However, this traditional ways have limits to detect the very short-term BPV in detail. Method : Here, we developed an advantageous approach of continuous systolic BP (sBP) monitoring in the elderly, using a newly developed device 'wearable BP sensor', without a cuff-stress. Beat-to-beat sBP is calculated using the basic concept of pulse wave velocity method. Results : The wearable BP sensor could reflect continuous sBP, heart rate (HR), their very close changes and double product (sBP X HR) as a major indicator of cardiac load. Elderly patients with excessive BPV were equipped with the device under free activity including sitting, standing, walking, climbing stairs and toilet. We could achieve the accurate and delicate sBP control using numerous detailed BPV data for each elderly patient. In addition, we could confirm the appropriate efficacy of anti-hypertensive drugs. Conclusion : Our new challenge using this wearable BP sensor might

approach the potential to improve the quality of anti-hypertensive treatment strategy with consideration for very short-term BPV. Keywords : excessive blood pressure variability, wearable BP sensing, accurate and delicate BP control

**OP24 208-S
SAMSUNG LIFE WORKSHOP "HOW TO LIVE LONG AND HEALTHY"**

**OP24 208-S-1
HEALTH PROMOTION AND DISEASE PREVENTION FOR ELDERLY PEOPLE IN SOUTH KOREA**

Won-Chul LEE (School of Medicine, The Catholic University of Korea, Korea)

Introduction : The high prevalence of the major diseases and sharp rising health care expenditure among the elderly in Korea has perceived as a critical public health and social problem, which incurred from the rapid aging compared to other countries. Method : The efforts for Health Promotion and Disease Prevention of the elderly can be stratified by three different phases: primary, secondary and tertiary phases. In Korea, It is very important to make the best use of medical check-ups and cancer screening programs because the government has taken good initiative to develop and support them as national screening program which means the cost is free. Results : Especially, the national health check-up for the transitional aging program targeting the people at the age of 66 is also providing life style improvement tools. If the target population is extended to older ages, it will greatly contribute to their health promotion. Patients who were diagnosed with hypertension or diabetes under the national medical check-up program would be referred to 'Hypertension-Diabetes Registration and Education Program' managed by the local governments. In this way, they will be connected to and managed by the primary physicians. The patients could take continuous medication for 365 days long during a year, and the life style intervention education which will lead to better disease control and prevention of complications. Conclusion : Even patients missed the above mentioned preventive measures and disabled consequently, he or she would become eligible for the National Long-term care plan. When the long-time discussed 'Healthcare Service Law' is passed, more healthcare service providers will be able to participate in the primary life style improvement activities. However, the effectiveness of these preventive activities, the size of medical cost savings and the rise of healthy life expectancy should be constantly evaluated as well as the potential harms caused by the same activities.

**OP24 208-S-2
A SUCCESS STORY ABOUT HOME CARE SERVICES IN KOREA: THE GOOD HEART**

Seung-Gug KIM (The Good Heart, Korea)

Introduction : Professional social workers of the non-profit social service organizations survived the competitive long-term care services market and entered into a new story in the Korean home care sector. This presentation will share a success story of the Good Heart which has become the top home care service provider in Korea over the last three years.

**OP24 220-S
WORKSHOP: "HOW TO PUBLISH IN GSA JOURNALS"**

**OP24 220-S-1
ZEN AND THE ART OF RESPONDING TO REVIEWER**

CRITICISM

Bob KNIGHT (*Gerontology, University of Southern California, USA*)

Dr Knight will discuss ways to understand and respond effectively to reviewer critiques of papers in order to do a good revision of the manuscript. These include handling one's personal response to the critiques, responding to all suggestions for revision, and handling errors made by reviewers. Elements of the cover letter to the editor are also discussed.

OP24 220-S-2

PUBLISH OR PERISH: OPTIMIZING SUCCESS FOR INTERNATIONAL SUBMISSIONS

Merril SILVERSTEIN (*Department of Sociology and School of Social Work, Syracuse University, USA*)

In this talk Dr. Silverstein will discuss strategies that international scholars can use to optimize the success of their manuscripts submitted for publication in social and behavioral science journals. This review will describe the process of editorial decision making, discuss the importance of meeting journal expectations, and outline common deficiencies found in manuscripts, particularly those submitted by non-native English speaking authors.

OP24 220-S-3

PICKING AND WRITING FOR A JOURNAL

Stephen KRITCHEVSKY (*Gerontology and Geriatrics, Wake Forest University School of Medicine, USA*)

Dr. Kritchevsky will present strategies for finding the best journal for communicating one's scholarly work to a gerontological audience. He will present 5 considerations in choosing a journal, and provide an editor's perspective on how submission to the Journal of Gerontology Medical Sciences are triaged and managed. Common mistakes in the preparation of articles that reduce the chances for acceptance will also be presented.

OP24 405-S

SOCIAL NETWORK AND SOCIAL SUPPORT I

OP24 405-S-1

SOCIAL INDICATOR FOR THE CARE AND RESPECT FOR ELDERLY PEOPLE IN HONG KONG SAR, CHINA

Paul T.M. SHEA, Daniel K.H. KWOK, H.K. MAK, C.C. WONG (*Youth Elderly Care Movement, China*)

Introduction : The study is to examine the public attitudes towards the elderly people in Hong Kong, by constructing a care and respect indicator with three dimensions namely affective, cognitive and behavioral. Method : 1200 questionnaires were distributed in three districts to secondary schools, district councils and non-government organizations from 1st October to 30th December 2011 in Hong Kong SAR, China. 1055 questionnaires were returned and the response rate was 87.9%. The participants were all Chinese in Hong Kong. The questionnaire consists of 12 questions covering affective, behaviour and cognitive element concerning care and respects towards elderly in Hong Kong. Results : The mean scores of affective, behavioral and cognitive components are 59.00, 51.41 and 47.77 respectively. The composite score of the Social Indicator for Care and Respect Attitude towards Elderly in Hong Kong in 2011 is 52.73. Single persons (score 53.66) are significantly more willing to live with elderly people than married persons (score 41.67). When comparing with students (score 64), housewives (score 65), and technical workers (score 66.7), people

working at managerial or professional level (score 58) are less willing to share the responsibility to take care of elderly parents. Conclusion : The study reveals that the respectful attitudes to elderly in Hong Kong is mainly in affective and The behaviour and cognitive component of respectful attitude are relatively weak among Hong Kong Chinese. Keywords : Elderly, Care, Respect, Chinese, Indicator

OP24 405-S-2

SUPPORTING STAKEHOLDERS IN INTERPRETER-MEDIATED COGNITIVE ASSESSMENTS

Jean TINNEY¹, Elizabeth CYARTO², Betty HARALAMBOUS¹, Sook Meng LEE³, Rachel PURCHASE⁴, Emiliano ZUCCHI⁵, Victoria RAYNER⁶, Dina LOGIUDICE⁷ (*1. Service Development and Evaluation, National Ageing Research Institute Poplar Rd, Australia; 2. Health Promotion, National Ageing Research Institute Poplar Road, Australia; 3. Aged Care Assessment Service, Western Health, Australia; 4. Service Development and Evaluation, National Ageing Research Institute, Australia; 5. Transcultural and Language Service, Northern Health, Australia; 6. Research, Orygen Youth Health, Australia; 7. Aged Care Health, Melbourne Health, Australia*)

Introduction : Social justice and equity of access to care can be compromised by the communication gaps which frequently occur during interpreter-assisted cognitive assessments. In multicultural Australia there is a shortage of interpreters in many languages, even in metropolitan areas, and there are barriers to access to services with appropriate interpreters. Recent developments in telehealth have improved access for some people, but there has been little research exploring the use of videoconferencing in mental health interviews. Method : This project aimed to explore clinician, family member and interpreter perceptions of their experience of a multicultural cognitive assessment; develop interpreter and clinician guidelines and a training DVD; and pilot the use of videoconferencing in interpreted cognitive assessments. Stage 1 methods include a literature review and scoping of current training and accreditation for interpreters in mental health; a demographic survey and focus groups and interviews with stakeholders; and analysis of findings. Stage 2 includes videoconferencing of interpreter-assisted cognitive assessments with the interpreter at a separate location, and the development of guidelines and training DVD to assist both clinicians and interpreters. Results : Project findings highlight the differing perceptions and challenges for all stakeholders in the multicultural cognitive interview, and will contribute to greater understanding between all parties. Videoconferencing methods in multicultural cognitive assessments warrant further exploration. Conclusion : The new guidelines and training materials will educate and support clinicians as well as interpreters, enabling improved collaboration between these groups of professionals. This will improve the experience for patients and their families, and contribute to better diagnosis and care planning. Keywords : interpreters; cognitive assessments

OP24 405-S-3

SOCIAL SUPPORT AND WELL-BEING OF OLDER ADULTS IN EASTERN ASIA: A SYSTEMATIC REVIEW

Vivian W.Q. LOU¹, Nan LU² (*1. Social Work & Social Administration, Sau Po Centre on Aging, The University of Hong Kong, Hong Kong; 2. Social Work & Social Administration, The University of Hong Kong, Hong Kong*)

Introduction : This study aimed to critically review empirical studies on social support and well-being among older adults in five Eastern Asian countries/communities - The People's Republic of China, Hong Kong, Chinese Taipei, Japan, and South Korea. Focuses were put on

the conceptualization and constructs of social support and its relationships with physical and psychological well-being. The roles played by gender and the Asian cultural context were also examined. Method : Key words such as social support and well-being were used to search the articles in four electronic databases, supplemented by Internet searches. After further screening by six inclusion criteria, 46 studies were analyzed. Results : We found that a large proportion of the studies were atheoretical. Findings revealed that: 1) operational definitions of social support varied, mainly because many studies used secondary data; 2) the findings on the role of the three dimensions of social support on well-being of older adults in Eastern Asia were inconclusive; 3) the role of gender was not consistent; 4) cultural specific conceptualization of social support was identified in some of the studies, which showed promise in reflecting the intergenerational family context in Asia. Conclusion : In East Asia context, theories on social support and well-being did not play significant roles in guiding the operationalization of measurements. The themes identified should be considered by future researchers to advance cultural-specific knowledge building in Asian and cross-cultural literature on social support and physical and psychological well-being of older adults. Keywords : social support, well-being, Eastern Asia

OP24 405-S-4

HEALTH STATUS AND SOCIAL RELATIONSHIP OF GERIATRIC POPULATION IN DHARAN, SUNSARI, NEPAL

Suman Bahadur SINGH¹, Baikuntha Raj ADHIKARI², Sailesh BHATTARAI¹, Vijay Kumar KHANAL¹, Shyam Sundar BUDHATHOKI¹ (1. School of Public Health and Community Medicine, B.P. Koirala Institute of Health Sciences (BPKIHS), Dharan, Nepal; 2. Psychiatry, B.P. Koirala Institute of Health Sciences (BPKIHS), Dharan, Nepal)

Introduction : On-going economic development and consequent change in family structure, makes the growing elderly population lose their relevance in their own house and they start feeling lonely and depressed. Despite the strong family ties in Nepal, the position of a large number of old people has become vulnerable. Morbidity and loneliness among elderly is a serious challenge to the limited available health services. Method : Cross-sectional study was done in Dharan Municipality of Sunsari district of Nepal. The sample size constituted 570 elderly persons of 60 years and above. House to house visit was done in each ward of Dharan to collect data by interview technique, using pre tested semi-structured questionnaire. Geriatric depression scale and University of California, Los Angeles (UCLA) loneliness scale were used. Results : Half of the elderly persons were in the age group of 60-69 years. About 36 % of the respondents were widowed. There were 45% persons engaging in some form of occupation. About 86% of them were living in non-nuclear families. Almost half (49.2%) of the respondents were found to be financially independent. About 66 % of the respondents rated their health status as fair. Around 93 % of them had complaint about health. Musculoskeletal problem (62%), eye problem (59%), and hypertension (39.3%) were common health problems. Mild depression (29.5%) and severe depression (14.8%) were prevalent. High level of loneliness was recorded among 16 % of them. Conclusion : Complaints about health were common among the elderly population of Dharan. They were living with depression and loneliness. Keywords : Health, Social Relationship, Geriatrics, Nepal

OP24 405-S-5

PERCEPTION OF THE COMPETENCIES AND EDUCATIONAL NEEDS OF THE HEALTH CARE WORKERS IN LONG-TERM CARE FACILITIES IN KOREA

Hyun Ju NAM, Hyun Sook KIM (*Department of Social Welfare,*

Korea National University of Transportation, Korea)

Introduction : This study aims to explore the health care workers in long-term care facilities how they recognize their own task performance competency, and suggests what types of continuing education and training program would be required to improve it. Method : The subjects of this study were 238 health care workers who work at long-term care facilities in Korea. Data were collected using structured questionnaires by self-report method, and analyzed using PASW Statistics 18.0 for Windows. Results : 80% of the subjects said that they needed education either 'somewhat' or 'strongly'. In the degree of perception of one's task performance competency, the care worker's 'basic nursing care skills', and 'work ethics and attitudes' were considered the most confident domains while 'Dying and hospice care skills', and 'service use support' were the least. In the educational needs of long-term care, the subjects chose 'first-aid training', and 'care skills for Alzheimer disease patients' the most highly ranked skills, while 'service use support', 'house chores and ADL support' were ranked the lowest. When comparing the degree of perception on task performance competency with the degree of educational needs, the area that showed statistically the most significant differences were 'first aid training' and 'dying and hospice care skills'. Conclusion : As these results suggest, educations needed most for health care workers in long-term care facilities are the first aid and hospice palliative care skills: implementing and establishing continuing education systems to enhance care worker's task performance competency are needed. Keywords : Health Care Worker, Educational Need Assessment, Long-term care

OP24 412-S

SOCIAL POLICY AND SOCIAL WELFARE

OP24 412-S-1

THE RELATIONSHIP BETWEEN HEALTH LITERACY AND SELF-MANAGEMENT

Suman BUDHWANI (*Institute of Health Policy, Management, & Evaluation, University of Toronto Ryerson University Health System Performance Research Network (HSPRN), Canada*)

Introduction : Self-management is advocated by policy makers as the foundational process that will enable the shift in the focus of health care systems from acute care to chronic disease management, particularly for older adults. In essence, self-management assumes clients will play an active role in managing their own care within the community, enabled through education and partnerships with health care providers. What is overlooked is the role of health literacy, a subcategory of the social determinant of health focused on literacy. The objective of this study was to examine the relationship between health literacy and self-management. Method : Data for the analyses was derived from the International Adult Literacy and Skills Survey 2003. Utilizing crosstab and correlational statistical analyses, health literacy was treated as both a dependent variable and an independent variable. Results : As the dependent variable, health literacy was found to be affected by participants' age, income, reading activities, and their prior use of a computer and/or Internet. As the independent variable, health literacy's effects were seen in the ability of participants to successfully obtain health information from the Internet, in their ability to learn by watching and/or getting advice from others, and in their self-efficacy or confidence levels, the three main dimensions operationalizing successful self-management. Conclusion : Hence, this analysis demonstrates that health literacy is a significant component of successful self-management in clients and that its significant role should be addressed in policies relating to self-management,

particularly those concerning older adults who are generally less likely to be health literate. Keywords : health literacy, self-management, social determinants of health

OP24 412-S-2

FALLING BETWEEN THE CRACKS: THE INTERSECTION OF AGE AND GENDER IN ORGANISATIONAL POLICYMAKING

Phillip TAYLOR¹, Erin LYNN², Ruth WILLIAMS² (1. Director, Graduate Studies, Monash University, Australia; 2. School of Business and Economics, Monash University, Australia)

Introduction : Older women are increasingly forming a significant proportion of the paid workforce but understanding of their place in organisational policymaking is lacking. This paper will consider the intersection of age and gender within three Australian industry sectors: financial services, state and emergency services, and university education. Method : 95 interviews were conducted, comprising of 56 Human Resource (HR) managers across the three aforementioned sectors and 39 key external stakeholders, including trade unions, advocacy groups for women, advocacy groups for seniors, pension fund consultants, government agencies, job recruitment agencies, public policy think tanks, board members and industry bodies. Results: Interviews revealed a significant disjunction between the two sets of interviewees in terms of understanding of the specific needs and aspirations of older women, particularly in relation to the key issues concerning: the increased caring responsibilities of the 'Sandwich Generation', denied professional development opportunities, inadequate pension fund balances and reluctance to assert themselves in the workplace. It was found that HR managers, in contrast to key external stakeholders, were generally unable to articulate how different equity agendas could be combined. Age and gender were treated as two operationally distinct categories by HR managers and seldom integrated in their application. Conclusion : It is concluded that older women are misunderstood as an entity at the workplace level, generally falling between the cracks of current HR policy and practice. Keywords : older women, policy

OP24 412-S-3

COMPARATIVE HEALTH AND SOCIAL POLICIES FOR AGEING SOCIETIES IN ASIA

Kai Hong PHUA¹, Lee Gan GOH², Mui Teng YAP³, Leng Leng THANG⁴, Tania Tze Lin NG¹ (1. Lee Kuan Yew School of Public Policy, National University of Singapore, Singapore; 2. Yong Loo Lin School of Medicine, National University of Singapore, Singapore; 3. Institute of Policy Studies, National University of Singapore, Singapore; 4. Faculty of Arts and Social Science, National University of Singapore, Singapore)

Introduction : This study aims to take stock and monitor the policy trends and issues in health and social care systems in rapidly ageing Asia. Taking a comparative approach, we will examine the extent of public-private-people participation in health and social care in Singapore, Japan and Hong Kong. Method : Comparative Trends Analysis: The study will synthesize information into a narrative form that concentrates on the interpretation and analysis of policy discourses, reforms or innovations, processes and reaction to emergent trends, and impact on interest groups and society at large. Results : 1) Definitions of health and related social needs 2) Delineations of responsibilities and target populations 3) Coordination between agencies - government, community, voluntary and private organizations 4) More data for planning and evaluation necessary for efficient resource mobilization and measurement of impact such as

equity and effectiveness of programs 5) Linkages between resource inputs, processes and program outputs and outcomes. Conclusion : This study aims to derive lessons and best practices from the experience of more aged cities for their potential for transferability to other fast-developing ageing cities throughout Asia. This is hope to improve caregiving for the elderly across the continuum of care in Asian countries with diverse systems of provision, financing and regulation. Keywords : Ageing, Public-Private Partnership

OP27 110-R-4

SAFETY OF URBAN AREAS ACCORDING TO THE PERCEPTION OF OLDER ADULTS LIVING IN SOUTHERN BRAZIL

Patricia MORSCH¹, Iride Cristofoli CABERLON¹, Joel Hirtz Do Nascimento NAVARRO², Andre RIBEIRO¹, Angelo Jose G. BOS¹ (1. Institute of Geriatrics and Gerontology, Pontifical Catholic University of Rio Grande do Sul, Brazil; 2. Estudante de Fisioterapia, Centro Universitario Metodista, do IPA, Brazil)

Introduction : The fast population aging in developing countries as Brazil is getting public health concerns. Older adults would receive the necessary attention to their specific needs. Thus it is important to understand the perception of older adults about the safety of urban area because this may be a determinant of their social relationships and daily interactions assuring an active aging. Objectives: To show the perception of older adults, living in Southern Brazil, about the safety of urban areas. Method : This study is a result of the research 'Older Adults' Profile in RS' involving 7316 older adults from 59 different cities. They answered a questionnaire based on the WHO report "Global Age-Friendly Cities: A Guide". Participant answered about the difficulty to leaving home, their perception on public places and about the barriers they encounter to walk in public spaces. Results : Twenty 20% said that lack of safety is the greatest difficulty to leaving home, 18% indicated unsafe environments as the main barrier to transition on public streets and 26% considered public places unsafe. Conclusion : With an unsafe environment older adults who will prefer to stay inside their homes preventing an active aging status. Studies that show this problem can serve as a foundation for building a Brazil urbanely welcoming for older adults. Keywords : Friendly cities, Active aging, Urban safety

OP24 412-S-5

ANATOMY OF INDIA'S AGEING POLICIES

Bhaskaran NAYAR (Ageing Studies, Centre for Gerontological Studies, India)

Introduction : India currently accounts for 112 million old people, which is second in the world. India enacted an ageing policy in 1999 and this has been revised in 2011. The paper examines the dynamics of implementing the first policy and the circumstances leading to the revision of that policy.)Method : The different action programmes in the policy of 1999 are analyzed in terms of their implementation strategies. Reasons for success/failure of this effort are examined.)Results : Only minor items in the policy have been implemented such as slight enhancement of pension, concession in train journeys and income tax and the like. Major items like family/health/social security and protection from abuse/neglect have not been implemented. These have been sidelined by government because they involve huge expenditure which the government is not willing to meet. This is because ageing is not a priority item for government. Also welfare of the old is in part the responsibility of the Indian States. The latter are always clamouring for grants from government of India for implementing these ageing programmes. A third reason is the lack of a

powerful NGOs lobby. The net result is that the much proclaimed ageing policy of 1999 did not have impact on the ageing population and government had to make a revised policy.)Conclusion : For a successful ageing policy the concerted efforts of all the three agencies - Government of India, State Governments and NGOs is necessary. The paper has brought this out in great detail from the perspective of political will. Keywords : Ageing,policies,iplementation strategies

OP24 425-C

ROUND-TABLE DISCUSSION: ADVANCES IN STRATEGIES ON FALL PREVENTION

OP24 425-C-1

ADVANCES IN STRATEGIES ON FALL PREVENTION : A ROUND-TABLE DISCUSSION

Eun Joo KIM¹, Hak C. JANG², Hwee Soo JEONG³, Hun Jong JUNG⁴, Chang Oh KIM⁵, Eunju LEE⁶, Hong Woo NAM⁷, Chang Won WON⁸, Jong Lull YOON⁹, Sung Hoon YU¹⁰, Hyung Joon YOO¹¹
(1. Department of Physical Medicine, National Rehabilitation Center, Korea; 2. Department of Internal Medicine, SNU Bundang Hospital, Seoul National University College of Medicine, Korea; 3. Department of Family Medicine, Dongguk University School of Medicine, Korea; 4. Department of Occupation and Environment, Konkuk Postgraduate Medical school, Korea; 5. Division of Geriatrics, Department of Internal Medicine, Severance hospital, Yonsei University College, Korea; 6. Division of Geriatric Medicine, Asan Medical Center, University of Ulsan College of Medicine, Korea; 7. Department of Internal Medicine, National Medical Center, Korea; 8. Department of Family Medicine, College of Medicine, Kyung Hee University, Korea; 9. Department of Family Medicine and Geriatrics, Hallym University College of Medicine, Korea; 10. Division of Endocrinology and Metabolism, Hallym University College of Medicine, Korea; 11. Division of Endocrinology and Geriatrics, Hallym University College of Medicine, Korea)

Introduction : Falls are a significant cause of harm to older people. To prevent falls, a range of strategies should be put into place for all older people. After falls prevention strategies are in place and after the assessment process is undertaken, those factors identified as contributing to a patient's risk of falling can be addressed in an individualized plan for daily care focused on prevention falls. Since the most important World Congress of Gerontology and Geriatrics is going to be held and a lot of experts get together, the round table on the meaningful topic such as fall prevention in older people would be worthwhile. Method : The panel of experts, expected to participate in IAGG 2013, is comprised of both the countries of Asia and Australia. Aims of the round table meeting is 1) To present each country's strategies of fall prevention in older people and summarize them, 2) To formulate evidence-based and, where possible, clinical practice recommendations on the assessment of older people and prevention of falls in older people based on the best consensus available to the panel of experts. Results : After meeting, we will put our consensus containing a summary of each country's recommendations and good practice points into shape of a report. Conclusion : This could be relevant to health care professional who share in caring for those who are vulnerable or at risk of falling and supplement the clinical knowledge, competence and experience applied by health professionals. Keywords : fall, elderly, prevention

OP24 425-C-2

PREVENTION OF FALLS BY COMPLEX COURSE OBSTACLE NEGOTIATION EXERCISE IN JAPANESE ELDERLY

Hidegori ARAI (Department of Human Health Sciences, Kyoto University Graduate School of Medicine, Japan)

We evaluated whether a complex course obstacle negotiation exercise (CC), a 24-week exercise program, can reduce falls and fractures in older adults, as compared with a simple course obstacle negotiation exercise (SC). This trial was carried out in older adults, aged 75 years and above in Japan. Total 157 participants were randomized into the CC group (n = 78) and the SC group (n = 79), and the intervention was done for 24 weeks. The outcome measure was the number of falls and fracture rates in the two groups for 12 months after the exercise class. Two participants (2.8%) in the CC group and 19 (26.0%) in the SC group experienced falls during 12 months. During the 12-month follow-up period after the intervention, the incidence rate ratio (IRR) of falls in the SC group against the CC group was 9.37 (95% CI = 2.26-38.77). One participant (1.4%) in the CC group and eight (10.9%) in the SC group had experienced fractures during 12 months after the exercise class. The IRR of fractures in the SC group compared with the CC group was 7.89 (95% CI = 1.01-61.49). The results of the present trial show that the participants who received individualized obstacle avoidance training under complex tasks combined with a traditional intervention had a lower incidence rate of falls and fractures during the 12 months after the intervention. We also present data showing the association of global brain atrophy on falls and physical performance in the elderly.

OP24 425-C-3

EPIDEMIOLOGY OF FALLS IN THE COMMUNITY DWELLING ELDERLY IN CHINA

Piu CHAN (Faculty of Geriatrics, Capital Medical University, China)

Falls have significant impact on physical and psychological health in elderly and are highly associated with mortality, hospitalization and quality of life. Ministry of Health (MOH) of China has recently published the first Fall Prevention Guideline. However there were few longitudinal studies of falls in community-based cohorts. To prevent the first and recurrent falls in elderly. Using data from our longitudinal community cohort study in Beijing, the prevalence and incidence of falls and recurrent falls was investigated in people older than 55 and the data were compared with reports from other areas of China. The prevalence of falls and recurrent falls in elderly people over 65 in Beijing is 7.06% and 19.27%, respectively, at the one follow-up survey. When control for age, gender and intervention effect, living urban districts, living alone, diabetes, depression, eye diseases, mental health problem, or taking more than 4 types of medication are significantly associated with increased risk for fall. Environmental conditions including having stair-rail problem, darker hallway or room lighting increase risk for fall. A general community educational intervention is negatively associated with fall (OR=0.81, p=0.0480). Tinetti's Balance score is a good predictor for fall.

OP24 425-C-4

RESEARCH IN FALLS PREVENTION AMONG OLDER COMMUNITY DWELLING PEOPLE IN AUSTRALIA: RESULTS AND TRANSLATION ISSUES

Keith HILL (School of Physiotherapy, Curtin University, Australia)

According to the 2012 Cochrane review of falls prevention among older people in the community setting (Gillespie et al, 2012), 25 of the reported randomised controlled trials conducted world-wide have occurred in Australia. These have included a number of studies of general older samples, as well as a number investigating effective interventions in specific high falls risk groups such as older people

presenting to Emergency Departments after a fall, or people returning home from hospital after hip fracture rehabilitation. This presentation will provide a snapshot of the successful and non-successful randomised controlled trials conducted in Australia that have contributed to our current understanding of effective interventions in falls prevention. The presentation will include brief reference to the lack of change in national indicators of fall related hospitalisations over the past 15 years, and suggest future directions for research in this area.

OP24 425-C-5

FALLS PREVENTION AMONG THE COMMUNITY DWELLING ELDERLY PEOPLE IN HONG KONG

Bernard Ming-Hei KONG (*The Hong Kong Geriatrics Society, Hong Kong*)

Studies in Hong Kong reveal that the prevalence of falls and recurrent falls in elderly people over 65 is 20% and 6 % respectively. According to the Hospital Authority, there were 32,636 elders admitted to hospital after falls in 2008, of which, 28,539 resulted in fractures and 198 died subsequently. Fall prevention program is highly advocated in the community but the best outcomes are those with fall risk. RCT of Tai Chi and resistant exercise on general public 65-74 shows no difference in balance, flexibility or number of falls. Most study population are recruited from hospital acute and emergency departments but there are small sample coming from local health centres with sub-optimal pick up rate. Programs varies from out-patient clinic, geriatric day hospital, health education, exercise class, balance training, Tai Chi, case management program to more sophisticated multi-disciplinary intervention. This presentation covers studies on fall prevention in the community, patients' expectation and the pit falls on current fall prevention in Hong Kong.

OP24 425-C-6

FALL PREVENTION FOR COMMUNITY-DWELLING OLDER PEOPLE IN TAIWAN

Liang-Kung CHEN (*Center for Geriatrics and Gerontology, Taipei Veterans General Hospital, Taiwan*)

Taiwan has become an aging country in 1993 and is estimated to become an aged country in 2017, which makes Taiwan one of the fastest aging countries in the world. Rapid population aging may pose special challenges to the health care systems and the societies. Amongst, fall is an important issue and deserves special attentions in the communities. A previous study in Taiwan showed the effectiveness of home visit fall prevention for community-dwelling older people, and the fall prevention program should be individualized according to their needs. Moreover, a community-based Tai-Chi program is effective in preventing decline of functional balance, gait, and fear of falling. However, Tai-Chi did not show significant effectiveness in reducing falls. Nevertheless, a combined Tai Chi plus education significantly reduced the risk of falls and shortened the intervention period for fall prevention. Multi-level community-based intervention program is considered more effective than a single intervention program. A recent large-scaled prospective study confirmed that multifactorial fall prevention program significantly improved physical function and fall incidence. However, the control group composed of education and recommendations also reduced incidence of falls without exercise program. In conclusion, effectiveness of fall prevention among community-dwelling elderly in Taiwan is dependent on multifactorial intervention with or without exercises. Exercises and Tai Chi significantly improved physical function, balance, and fear of falling but not incidence of falls. Further

prospective randomized-controlled trial for community-based fall prevention program is of great benefits.

OP24 505-S

SOCIAL NETWORK AND SOCIAL SUPPORT II

OP24 505-S-1

AN EMPIRICAL TYPOLOGY OF SOCIAL NETWORKS AND PHYSICAL AND MENTAL HEALTH AMONG KOREAN OLDER ADULTS IN THE U.S.

Nan Sook PARK¹, Yuri JANG², Beom S. LEE³, Jung Eun KO⁴, William E. HALEY⁴, David A. CHIRIBOGA⁵ (*1. School of Social Work, University of South Florida, USA; 2. School of Social Work, The University of Texas at Austin, USA; 3. Department of Mental Health Law & Policy and Department of Economics, University of South Florida, USA; 4. School of Aging Studies, University of South Florida, USA; 5. Department of Child and Family Studies, University of South Florida, USA*)

Introduction : We developed an empirical typology of the social networks evident in older Korean immigrants in the U.S. and examined the relationship of the social network types to self-rating of health and depressive symptoms. **Method :** The sample consisted of 1,092 community-dwelling older Korean immigrants in two geographic locations in the United States: Florida and New York. Typological analyses of social networks were based on social network characteristics (marital status, living arrangement, the number and frequency of contact with close family/relatives, the number and frequency of contact with close friends, and attendance of religious meetings and organized group meetings). We examined the associations between the social network types and background variables and the effects of social network types on self-rating of health and depressive symptoms. **Results :** Six social network types were identified using latent profile analyses: diverse, distant/diverse, family/co-residence, family/congregate, distant/restricted, and restricted. At the bivariate level, the social network types were significantly associated with background characteristics and health/mental health. In multivariate models, individuals categorized as embedded in diverse networks or in family networks tended to average higher ratings on health and lower levels of depressive symptoms. **Conclusion :** We confirmed the presence of robust social network types that have previously been reported in cross-cultural studies including diverse, family, and restricted types. Surprisingly, there was no distinct type specific to a network of friends, which is one of the most robust network types in cross-cultural studies. The social network types identified in the presented study may provide implications for understanding cultural differences embedded in social networks. **Keywords :** Typology of social networks, health, mental

OP24 505-S-2

LONELINESS, DEPRESSION AND SOCIAL SUPPORT IMPACTS ON THE WELLBEING OF OLDER PEOPLE

Charles WALDEGRAVE (*Social Policy Research Unit, Family Centre, New Zealand*)

Aim: This presentation will provide results from the New Zealand Longitudinal Study of Ageing (NZLSA). The specific aim of this paper will be to explore the relationships between loneliness, depression and social support respectively, and together, with quality of life and wellbeing. **Methods:** Amartya Sen's capabilities approach has formed the conceptual basis of the theoretical framework of this research programme (Sen, 1999). An extensive survey of a national random sample of 3,317 older New Zealand citizens aged between 50

to 84 years was carried out in the second half of 2010. The survey questionnaire included scales on loneliness (De Jong Gierveld Loneliness Scale), Depression (CES-D-10) and social support (Social Provisions Scale). These variables were tested for statistical associations with wellbeing and quality of life measures, including CASP 12, and WHOQoL 8. Findings: The results demonstrated highly significant relationships between each domain scale and wellbeing. Higher loneliness and depression scores were strongly associated with lower wellbeing scores, whereas higher social support scores were strongly associated with higher levels of wellbeing. We estimated a linear regression of wellbeing and the results showed a highly significant relationship for the whole model. Relevance: The results are relevant in that they demonstrate the important associations these three domains have with wellbeing. Serious problems arise if older people become socially isolated. The results point to the need for practical planning, policy and service responses to be designed to overcome the problems of social exclusion and the social causes of depression. Keywords : Loneliness, Depression, Wellbeing

OP24 505-S-3
DYNAMIC SOCIAL CAPITAL AND MENTAL HEALTH IN LATE LIFE

Tal SPALTER¹, Ariela LOWENSTEIN², Noah LEWIN-EPSTEIN³
(1. *Social Work, University of Toronto, Canada*; 2. *Center for Research & Study of Aging, University of Haifa, Israel*; 3. *Sociology and Anthropology, Tel-Aviv University, Israel*)

Introduction : The concept of social capital (SOC) encompasses a network that comprises different types of social ties, the resources that flow in the network and the potential or practical accessibility of these resources to the pivotal person. The impact of different types of SOC and their changing patterns in later life on changes in elders' mental health is at the core of this study. Method : Analyses were performed on two waves' data from the Cross-Sectional and Longitudinal Aging Study (CALAS) in Israel. Cluster analysis and linear regression models were estimated in order to test study hypotheses. Results : Findings show a hierarchy of five types of SOC. "Diverse" and "Local, Supported" types of SOC in comparison to the "Limited" type, lower significantly the chance of decreased mental health along the aging process above and beyond socio-demographics and functioning. Continuity in solid SOC and change for a better type of SOC also lower the likelihood of decline in mental health in comparison to continuity in slack SOC, however, not beyond socio-demographics and functioning. Conclusion : The productivity of elders' social capital is high when it moderates the impairment of mental health. That means that social ties, their mutually exchanged resources and their availability to the elderly throughout late life, constitute an important element in the evaluation of elders' subjective well-being. Keywords : Social Capital, Mental Health

OP24 505-S-4
SOCIAL SUPPORT ON CHANGES OF INSTRUMENTAL ACTIVITIES OF DAILY LIVING IN OLDER ADULTS IN TAIWAN: RESULTS OF A NATIONAL LONGITUDINAL STUDY

Wen-Chun LIAO¹, Chi-Rong LI¹, Chiu-Yueh HSIAO¹, Hua-Shan WU¹, Meng-Chih LEE² (1. *Nursing, Chung Shan Medical University, Taiwan*; 2. *Medicine, Chung Shan Medical University, Taiwan*)

Introduction : Cross-sectional studies have shown that social support and social engagement are predictors of disability among the elderly. The purposes of this study were to investigate the progress and the associations between social support and changes of IADL function in

community dwelling elderly in Taiwan over a 10 year period. Method : This is a prospective cohort study by using data of the Taiwan Longitudinal Study in Aging (TLISA) from 1996, 1999, 2003, and 2007. IADL disability was defined as difficulties in either grocery shopping or using telephone. 1742 elders (60-70 years) without IADL disability at baseline were included. Perceived social support including instrumental (1 item) and emotional (2 items) and social engagement including being a member of any association, or providing instrumental and emotional support to others were assessed at each waves. GEE model was used to examine the associations between social support and changes of IADL disability. Results : Among these elders in 1996, 84.7% received instrumental social support, 85% received emotional social support, and 10.8% providing instrumental social support. Otherwise, 5% engaged in volunteering, and 44.9% being a member of association. The GEE model showed providing instrumental (OR=0.599, p=.003) and emotional social support (OR=0.281, p=.007), being a member of an association (OR=0.666, p=.001), and engaging in volunteering (OR=0.462, p=.008) were associated with low probability of IADL disability; received more emotional social support had high risk of IADL disability. Conclusion: IADL disability is associated with less engagement in volunteering or providing support to others. Keywords : social support, instrumental activities of daily living, longitudinal

OP24 505-S-5
SOCIAL SUPPORT NETWORK AS A MECHANISM BEHIND THE RELATIONSHIP BETWEEN PROTEIN-ENERGY INTAKE AND PHYSICAL FUNCTION IN COMMUNITY-DWELLING FRAIL OLDER ADULTS

Chang-O KIM (*Department of District Health Care Service, Gangbuk-gu Community Health Center, Korea*)

Introduction : Protein-energy malnutrition is a major cause of functional decline in the elderly and is clearly an important component of frailty. However, information about social support network is rarely reported and no such comprehensive studies have yet been published. In this study, we attempt to examine the hypothesis that the association between protein-energy intake and physical function in frail older adults was mediated by social support network. Method : A total 87 frail older adults were participated in this cross sectional study from National Home Healthcare Services in Gangbuk-gu, Seoul, South Korea. Associations among three variables were tested by multiple regression analyses: protein-energy intake (independent variable), Wenger's network typology (possible mediator), and physical function (outcome variable). All analyses were adjusted for age, gender, education, household income, and number of chronic diseases. Results: Participants with a higher level of protein-energy intake (assessed by mean adequacy ratio, MAR) was associated with increased physical function (assessed by Physical Functioning, PF) ($\beta=0.05$; $p=.023$). Participants with locally integrated network type were associated with increased PF ($\beta=2.98$; $p=.010$) and MAR ($\beta=11.8$; $p=.029$). After additional adjustment for locally integrated network type in the first equation, a previously significant relation between MAR and PF was attenuated ($\beta=0.04$; $p=.079$), indicating the mediator effect of social support network. Conclusion : Findings are consistent with the hypothesis that the relationship between protein-energy intake and physical function is mediated through social support network in frail older adults living in community. Understanding factors that determine geriatric function in the community setting requires investigations that combine physiologic and psychosocial factors. Keywords : social support network, frailty, mediator

OP24 505-S-6

CHANGING ATTITUDES TOWARD SUPPORTING OLDER PARENTS IN KOREA AND JAPAN

Yoshiko SOMEYA (*Sociology, Tokyo Woman's Christian University, Japan*)

Introduction : Although supporting older parents by children is a strong tradition in East Asia, it has been changing according to drastic social changes. Filial piety is a strong tradition in Korea, however, there are significant differences between generations. This research investigates the changing attitudes toward supporting older parents among young women in Korea and Japan. Method : In order to investigate the young female attitudes toward supporting older parents, group interviews and questionnaire researches were conducted at Korean and Japanese universities from 2010 to 2011. Six group interviews were conducted at 2 Korean universities and 209 questionnaires at 4 Korean universities and those of 211 at Tokyo Woman's Christian University were collected. Results : As for living arrangements, both Korean and Japanese female students are not willing to live with parents-in-law, but it is acceptable to live with their own parents. The most favorable living arrangement is living nearby own parents. The largest difference among two countries is providing financial supports. Korean female students are willing to give financial supports to their parents even soon after start working, but not Japanese students. Korean's are more seriously thinking how to support their parents in the future than Japanese ones. Conclusion : Research results show that Korean female students have the strong idea of filial piety than those of Japanese. This is caused not only from the cultural tradition but from the financial independency of elderly people resulted from pension maturity. It is quite similar to the previous elderly generation in Japan. Keywords : family support, care, living arrangement

OP24 511-S SOCIAL SERVICES I

OP24 511-S-1 SMART SKIRTING BOARD: COGNITIVE ESTIMULATION, MEDITATION AND ALZHEIMER

Joaquim Parra MARUJO¹, Vasco Manuel FERNANDES², Maria Guilhermina Martins MOUTINHO³ (*1. Gerontology and Psychology Transpersonal, Unitranspessoal, Portugal; 2. Gerontology and Psychology Transpersonal, Residencia S. Pedro, Portugal; 3. Imunologia, Instituto Superior de Ciencias da Saude Egas Moniz, Portugal*)

Introduction : The Smart Skirting Board have a width of 15cm and height of 20-30 cm; has been placed above the ankle line (8-12cm above ground level) to facilitate movement without the wheelchair's hand rims touching the wall, thus preventing damage to the walls and simultaneously avoiding injury to the user's hands. These specific measurements accommodate the installed technology; the Snoezelen System, CD player, Video Camera, Microphone and Motion Detectors. The system has a voice device that allows for a conversation to take place in real time and a video camera that allows for motion detection inside the room and protection of the individual's privacy considering it has been placed 15 cm above ground level. The evening presence light ensures that when the elderly person wakes up at night he does not feel disorientated. It has an in-built music system for the elderly person to hear the radio, a CD player for relaxation CDS with voice instruction and music designed to promote reminiscence which is intended to stimulate memories and is equipped with one or more energy points for charging electronic equipment, such as mobile phones. The Snoezelen system, placed at the top improves memory,

verbal skills, concentration, sociability, mood and well-being. Method: Smart Skirting Board to cognitive estimation, meditation and alzheimer . Results : All people that participated (45) had positive results. Conclusion : Through the Snoezelen system built into the skirting board, brain stimulation is achieved, improving the elderly person's attention span, memory, mood, verbal skills and concentration. Keywords : meditation, cognitive estimation, alzheimer

OP24 511-S-2 ENHANCING RELATIONSHIP BETWEEN OLDER PEOPLE AND STUDENT NURSES THROUGH THE DEVELOPMENT OF A RADIO PLAY

Khim HORTON (*School of Health and Social Care, University of Surrey, United Kingdom*)

Introduction : The aim of this paper is to discuss how empathy and understanding between older people and student nurses can be enhanced through a collaboration involving the creation of a radio play and to determine the potential usefulness of intergenerational working and learning. Method : Adopting a case study approach, researchers aim to raise awareness and stimulate dialogue around a range of issues affecting both the lives of older people and student nurses through the development of a radio play. Over a four-month period comprising three four-hour workshop sessions, a convenience sample of seven older people and seven student nurses participated. Data collection also included Pre and Post empathy measures from student nurses; a focus group conducted with students at the last session; and field notes made during all sessions. Descriptive statistically analyses of Pre and post empathy measures were conducted. Qualitative data were analysed thematically. Results : This innovative approach to working with older people and student nurses has led to a greater understanding and empathy towards one another and a sense of awareness of the lived experiences of individuals. The social participation of older people and student nurses has generated positive approach and understanding towards ageing. Conclusion : The development of a radio play and the processes involved illustrated that intergenerational learning and collaboration can lead to a greater empathetic understanding of the meaning of ageing. The voices of older people and student nurses together is something new and may never been heard before in this way. Keywords : ageing, radio play, empathy

OP24 511-S-3 THE REGENERATIVE COMMUNITY AS LEVERAGE FOR CULTURAL CHANGE

Pnina GUTMAN-FRISH (*Eshel, JDC, Israel*)

Introduction : Cultural change is the common and representative term for a concept based on values of respect/fairness/self-determination, and choice in life. Changes in homes for the elderly might require changes in organizational procedures, especially in relationships at all levels. This model answers the need for change in the relationships and the discourse patterns between the institution's staff, residents, and families. The home for the aged is no longer viewed as a place governed by the typical hierarchical medical model, but as a "community": a partnership of people with equal rights. Method : Building a community through daily meetings, based on several principles: interpersonal relationships are the cornerstone of cultural change, attention to wishes and desires as they relate to physical and cognitive needs, every elderly person is entitled for self-determination, communality is the opposite of institutionalization, development and growth should be promoted even in old age. Creating a "community-developer" post whose goal is to engage the entire institution. It

requires abilities for leadership, involvement, and advocacy in order to lead the change. Results : Fourteen homes joined the project, following concentrated training program. The residents' community turned into an active-social hub and a source of occupation and therapy. Daily life got renewed meaning and purpose. Each resident was perceived as a complete entity with physical/mental/spiritual/social/emotional needs, while putting emphasis on the contribution of every individual. Conclusion : An empowering/loving/nurturing culture among people residing in institutions will allow them to be healthier, happier, and more active. Giving people back control over their lives emphasizes elements of partnership/communality. Keywords : culture-change, community, partnership

OP24 511-S-4

AGE MANAGEMENT IN A CHANGING WORLD - GOOD PRACTICES FROM EUROPE AND AN NEW EUROPEAN RESEARCH PROGRAMME

Gerhard NAEGELE (*Gerontology, TU Dortmund University, Germany*)

Introduction : Corporate personnel policies are highly affected by the demographic change and the ageing of the workforce. Worldwide companies have to adapt constantly to stay innovative and competitive. This leads to the need of implementing age-management measures not only for an ageing workforce but also for all employees in all stages of life or with different cultural or ethnic background. The paper firstly presents endeavours of companies which have been awarded as good practice in corporate age-management within the framework of 'Best employers Award for workers over 60 - international' organized by the American Association of Retired persons focusing on EU member states. The author was member of the international Jury. Secondly the paper presents current research activities on 'innovative solutions' in order to 'extend working lifes' and to rise the employment rate of older workers in Europe, aided by life long learning. The respective research will be carried through within the framework of a project called 'Mobilising the potential of active ageing in Europe' (MOPACT) which will be carried out by a European research Consortium between 2013 to 2016. The author is work-package leader for the workpackage 'employment'. Method : The paper will present key results and research assumptions. Results : The paper will present transferable 'good practices' in age management with a special focus for stakeholders and endusers. Conclusion : Conclusions for national and international policies are expected. Keywords : Age management, Active Ageing, good practice

OP24 511-S-5

SHARED NARRATIVES IN COMMUNITY INTERVENTIONS: THE CASE OF THE LOWER NGAU TAU KOK SENIOR COMMUNITY IN HONG KONG

Lin JIANG (*Graduate School of Social Work, University of Denver, USA*)

Introduction : The case history reported here investigates the combined use of community work and shared narrative strategies in a setting in which older adults from a collective society experienced weakened social support and loss of a sense of community due to larger societal changes. This study is based on an intervention project with older adults at the Sheng Kung Hui Welfare Council Ngau Tau Kok Community Center in Hong Kong. Method : The intervention was implemented in the form of new community organization, staffed by social workers, social work students, residents, volunteers, scholars, and government officers. Residents were assisted by staff with the development of personal and neighborhood oral histories. These

histories were shared in larger gatherings and annotated. The histories are archived, shared, and occasionally revised. Interviews, observation, and narrative analysis techniques were used to extract the interpretive framework. Results : The participants reported strengthened sense of community and feelings of social support in their work with staff to conduct project together. The special knowledge of the social workers around social support and contextual issues was critical to success. An extracted interpretive framework found that the combined approach had significant effects at the individual, community, and social levels. Conclusion : The author postulates lessons for practice and poses important questions within an interpretive framework that addresses the effective use of shared narratives in the resolution of senior community problems. Suggestions are made for effective use of the strategy, particularly when supplemented with social media. Keywords: shared narratives, community intervention

OP24 520-S

ACTIVE AGEING

OP24 520-S-1

DIMENSIONS AND DETERMINANTS OF PRODUCTIVE AGING IN THE ELDERLY

Jacqueline WALLEN, Hyeun CHUNG (*Family Science, University of Maryland, College Park, USA*)

Introduction : World populations are aging rapidly, raising fears that countries will not have sufficient resources to meet the needs of their elderly citizens. Often the contributions that elders make to society are ignored. This study investigates the dimensions and determinants of productive aging in the elderly. Dimensions of productive aging studied are: engaging in paid work, engaging in unpaid or volunteer work, and engaging in self-care. Method : The study uses data from the 2010 Health and Retirement Study, a longitudinal panel study that surveys a representative sample of Americans over the age of 50 every two years. The sample for this study includes 10,695 respondents 65 and over. Descriptive statistics are presented for the entire sample and by age group (65-74, 75-84, and 85 or older). Regression analysis is used to explore the relationships of the following independent variables to productivity in each of the three areas: age, gender, race, being married, education, self-reported health status, and fewer depressive symptoms. Results : Each of the independent variables has a statistically significant relationship with engaging in paid work and engaging in self-care. Together, they explain a significant amount of variance in those dependent variables. Findings for unpaid work differ. Only marital status is significantly related to unpaid work. Conclusion: Elderly Americans make significant contributions to society, throughout their lives, though rates of participation are lowest in the 85+ age group. Education, health, and depression influence paid work and self-care and can be improved. More research is needed on predictors of unpaid work in the elderly. Keywords : Producting aging

OP24 520-S-2

THE ATTITUDE OF THE ELDERLY TOWARD AGEING IN JAPAN'S COMMUNITY SPORTS CLUBS

Tzu Yu LIN¹, Seiichi SAKUNO² (*1. Graduate school of sport sciences, Waseda University, Japan; 2. Faculty of sport sciences, Waseda University, Japan*)

Introduction : The population of Japanese elderly reached a new peak of thirty million people in 2012. Previous studies from various disciplines have indicated that sports can benefit the elderly. However, information about how community sports clubs affect the elderly member's attitudes toward ageing is limited. This study thus aimed at

determining how Japanese elderly members in a community sports club coped with their ageing status. Differences between the various socio-demographic groups will also be investigated. Method : This study utilized a survey, comprised of three sets of questionnaires, to examine the integration of ageing attitude, self-rated health assessment, and the influence of participating in sports activities. The study involved around 500 subjects in 8 community sports clubs, as well as 25 interviewees in urban and rural areas of Japan. Results : This study demonstrated that the number of sports activities the elderly participated in was related to their attitude toward ageing. They are able to maintain a positive attitude and react well toward changes in their daily living situation through engaging in sports. An ANOVA indicated significant differences for participants with higher educational levels, females, and younger elderly. Participating in clubs was frequently a significant factor for a positive ageing attitude, wellness, and supportive communication network. Participants with more positive ageing attitudes tended to show a more well-developed sense of self-actualization. Conclusion : This study concluded that while the elderly varied in their attitudes toward ageing, engaging sports activities gave them a more positive overall approach to living. Keywords : positive ageing attitude, community sports club

OP24 520-S-3

UNDERSTANDINGS OF ACTIVE AGEING IN ASIAN CONTEXT: THE PERSPECTIVES OF OLDER THAI PEOPLE
Kattika THANAKWANG, Sang-arun ISARAMALAI, Urai HATTHAKIT (*Faculty of Nursing, Prince of Songkla University, Thailand*)

Introduction : Active ageing is an important aspect facilitating to life quality for older adults. Research on active ageing has grown over recent decades but the knowledge continues to be based overwhelmingly on Western studies. However, Asian elders may have a distinctly different perspective from Westerners concerning the meaning of active ageing. Specifically, little is known about the ways in which older persons view or define active ageing in Asian context. This study, therefore, focused on the views of the characteristics and components of active ageing among older Thai people. Method : Using qualitative research methods, in-depth interviews and focus group discussions were conducted with 64 community-dwelling adults aged 60 and over. Participants were recruited from four provinces at the four regions (i.e., North, Northeast, Central, and South) of Thailand. Data were analyzed using thematic analysis. Results : This study helped build an understanding of what active ageing means by asking older persons themselves. For these older Thai adults, six themes of active ageing were defined as (1) being self-reliance, (2) being physically and mentally active, (3) maintaining healthy lifestyles, (4) being active engaged with society, (5) growing spirituality, and (6) managing life security. Conclusion : The perceptions of active ageing among the Thai elderly are multidimensional involving health, social participation, and security in life that are the three key pillars of active ageing suggested by World Health Organization. Specifically, active ageing appears to have both intrapersonal and interpersonal that is a culturally specific nature of older Thai people. Keywords : active ageing, Thai elders, qualitative study, culture, Asian context

OP24 520-S-4

SOCIAL-STRUCTURAL LAG IN THE DESIGN OF GERONTECHNOLOGIES
Alexander - PEINE, Louis NEVEN (*Copernicus Institute of Sustainable Development, Utrecht University, Netherlands*)

Introduction : In a recent paper, we have revisited Lawton's classic distinction between individual and social-structural lag to show that a social-structural lag perspective has a number of implications for designing Gerontechnologies. In particular, we have demonstrated that a social-structural lag perspective asks for design processes that are informed by an imagery of pro-active older technology users. In this paper, we explore empirical evidence for these claims. Method : More specifically, we have conducted 30 open interviews with key personnel in 12 design projects. We explored the methods used to involve older technology users, and applied an open coding scheme to understand the imagery of older users that has informed the projects. Results : It was striking that, although most projects started with a broad and active imagery of older persons, such images became gradually replaced by ideas of frail and ill older technology users. This suggests that incorporating an imagery of active older technology users is posed with significant difficulties. We zoom in on one such difficulty: an imagery of frail and ill older technology users seems to fit nicely with existing methods to address and specify user needs as an input for product design. We explore in more detail this affinity between the methodological repertoire of user involvement and ideas about frail older persons. Conclusion : We conclude that doing justice to the full breadth of gerontological insights into later life asks for rethinking the methodological repertoire to elicit user needs innovation. We specify design implications of this perspective. Keywords : active ageing, Gerontechnology, social-structural lag

OP24 520-S-5

A COMPARATIVE STUDY ON SOCIAL SUPPORT FOR ADOPTING SPORT ACTIVITIES IN JAPANESE OLDER ADULTS
Daichi SONODA¹, Makoto CHOGAHARA², Megumi TANI¹, Kei HIKOJI³, Yuki MATSUMURA¹ (*1. Graduate School of Human Development, Kobe University, Japan; 2. Faculty of Human Development, Kobe University, Japan; 3. Faculty of Education, Wakayama University, Japan*)

Introduction : In recent years, the rate of aging has been more and more increasing in Japan, and it is considered that participating in any physical and sport activities are very important for healthy lifestyle among older adults. The purpose of this study was to examine the age differences of the social support which encouraged older adults in adopting sport activities. Method : A questionnaire survey was conducted in 2009 on 3,002 adult people who were chosen by random sampling in Takarazuka city in Japan. The number of valid response was 1,351(45%). The survey contained the intentions to play sports activities, the physical activity status, and their own needs to play the sports activities. Results : In all responses, the number of respondents who intended to adopt new sport (i.e. adopters) was 783, whereas those who intended to adhere to play the sports which they had already played (adherers) was 387. Using the SPSS Text Analysis for Surveys, we classified adopters' needs(the 730 linguistic data) into 9 support categories: "informational", "instructional", "financial", "equipment", "time", "friendship", "program", "motivational", and "dealing with difficulties". Compared by age, the informational support tended to be more needed by 60s and elder respondents than 20s to 50s. Conclusion: In this study, the concrete social support information to adopt sport activities were extracted from over 700 free answers. Moreover especially for older adults, the informational support by community like circulars and local newspapers will be the trigger to adopt sport activities. Keywords : social support, adoption

OP24 520-S-6

THE PRESENT SITUATION OF THE DEVELOPMENT OF

THE RURAL OLD-AGE ROOM RESEARCH, LICUN IN SHANDONG PROVINCE AS AN EXAMPLE

Yanfang MAO (*Institute of Gerontology, Renmin university of China, China*)

Introduction : Our country is gradually stepping into the senile society, the aging of the rural population has more than speed and the old urban area, but affected by various factors, the rural areas pension guarantee measures is not perfect, the existing measures in the process of implementing appeared many loopholes, traditional endowment way also suffered serious impact. In this study, the author mainly utilizes the interview method, observation method and the literature material method to Lijiabairang village endowment room development to carry on the investigation, and describes and analyzes the Lijiabairang village endowment room this between community endowment and family pension mode between endowment with current situation and existing significance and problems, and the endowment way and Wenzhou Qiujiann village 'one yuan room' is compared, This paper puts forward some policy Suggestions with pertinence, but also in the community and the home village changed the situation endowment room development trend was predicted. **Method :** Interview method, Observation Method and the Literature Material Method. **Results :** From the investigation, we found that: first, the presence of endowment room has a very important practical significance; Second, endowment room there is also some problems; Third, in the policy implementation process, the government should provide guidance and certain preferential policies. **Conclusion :** This kind of housing pattern in Lijiabairang village has its realistic significance, along with the rural labor resource continuous outflow, the concentration of the elderly live will be conducive to the development of rural elderly community service, medical services and other services for the elderly measures. **Keywords :** Endowment room; Community endowment; Family endowment; Rural endowment

OP24 521-S AGEING AND CAPABILITY & ABILITY

OP24 521-S-1 VALIDATION OF TWO MOTION SENSORS TO ASSESS DAILY PHYSICAL ACTIVITY IN INSTITUTIONALIZED ELDERLY

Sofie MARTIEN, Jan SEGHERS, Filip BOEN, Christophe DELECLUSE (*Department of Kinesiology, KU Leuven - Faculty of Kinesiology and Rehabilitation Sciences, Belgium*)

Introduction : In order to design or to evaluate physical activity interventions in older adults, it is important that we can accurately measure the amount of physical activity. However, the measurement of physical activity in institutionalized elderly is a challenge as they are less active and perform activities at very low intensities. The purpose of this study was to determine the validity of a piezoelectric pedometer and an activity monitor in measuring steps during daily life activities in a sample of institutionalized elderly. In addition, the influence of walking speed, walking aids and body mass index on step count accuracy was examined. **Method :** Sixty-eight nursing home residents (54 women, 14 men), instrumented with two hip- and ankle-worn pedometers New Lifestyles 2000 (NL, New Lifestyles, USA) and an activity monitor Sensewear Mini (SW, BodyMedia, USA), performed three activities of daily living. Simultaneously, the actual steps were tallied by an investigator. **Results :** The number of steps recorded by the SW and NL were significantly lower than the actual steps. The SW and ankle-worn NL counted 10.4% and 79.2% of the steps performed by the subjects, respectively. Regarding the accuracy

of the ankle-worn pedometer, walking speed was a significant predictor and explained 41.6% of the variance in percent error. The threshold speed, obtained by a ROC curve, was set at 2.35 km/h, providing percent error scores within $\pm 5\%$. **Conclusion :** The results from this study showed that the ankle-worn piezoelectric pedometer was most accurate for counting steps in institutionalized elderly, especially at walking speeds above 2.35 km/h. **Keywords :** step counters, validity, institutionalized elderly

OP24 521-S-2 THE ROLE OF TOPOLOGICAL PROPERTIES IN REASONING AGING

Danqi ZHUANG (*Psychology, Beijing Normal University, China*)

Introduction : Topological theory proposed by Chenlin regarded the nature of the topological properties as a one-to-one unchanged transformation, and the aware of the topological properties occurred in the early stages of visual perception. His research of bees' visual sense showed that animals could perceive the graphical changes in topological properties as well, and indicate this perception as a primitive and basic ability in visual system. Reasoning ability, as one of the primary mental abilities, declines with increased age in old adults which have been found in many studies. However, the differences between the topological and geometric properties of the test items were not concerned. According to topological theory, the elderly will be more sensitive to the graphics with topological properties than those with geometric properties and may have better performance in reasoning test task including the former. **Method :** Two types of graphics reasoning test items, which either topological properties or geometric properties changed, were designed in this study. A total of three age groups included 31 children, 31 undergraduate university students and 19 old people participated in the experiment. **Results :** 1 With age increased, old adults' scores were the lowest in both types of items and the undergraduate students performed best. 2 Old adults' performances in topological transform items were significantly higher than that in geometric ones, which was also found in child group. Meanwhile, there was no difference between the scores of two types of items in undergraduate students. **Conclusion:** The relatively original visual perception develops faster and decays slower. **Keywords :** Reasoning ability Ageing Topological properties Geometric properties

OP24 521-S-3 CAN BRAIN TRAINING WITH VIDEOGAMES IMPROVE ATTENTIONAL FUNCTIONS IN OLDER ADULTS?

Soledad BALLESTEROS¹, Julia MAYAS¹, Fabrice B.R. PARMENTIER², Pilar ANDRES² (*1. Dept. of Basic Psychology II, Universidad Nacional de Educacion a Distancia, Spain; 2. Dept. of Psychology, University of the Balearic Islands, Spain*)

Introduction : A major goal of recent research in ageing has been to examine cognitive plasticity in older adults and its capacity to counteract cognitive decline. The aim of our study was to investigate whether or not older adults could benefit from brain training with videogames in a cross-modal oddball task measuring distraction and alertness. **Method :** Two groups of healthy older adults from the European AGNES project participated in the present study. The experimental group received 20 1-hour videogame training sessions in our laboratory while the control group did not receive the treatment, but attended meetings with the other members of the study several times during the study. Both groups were tested before and after treatment or an equivalent period of time without training. The experimental group practiced a commercially available brain-training

package (Lumosity) involving problem solving, mental calculation, working memory and attention tasks. Results : The results showed a significant reduction of distraction and an increase of alertness in the experimental group and no variation in the control group. Conclusion : The suppression of irrelevant information to concentrate on the relevant task is a central cognitive mechanism. The prefrontal cortex, involved in this process, deteriorates early with aging. The results of the present study suggest that brain training may transfer to cognitive performance on attentional tasks and may contribute to successful ageing. Keywords : Brain training, Cognition, Healthy ageing

OP24 521-S-4

TRAJECTORIES OF EYESIGHT IN OLDER PEOPLE IN THE UK: THE ROLE OF AGE AND SOCIAL POSITION

Jennifer WHILLANS, James NAZROO (*Cathie Marsh Centre for Census and Survey Research (CCSR), University of Manchester, United Kingdom*)

Introduction : Visual impairment becomes more prevalent with age. Rather than a uniform decline in visual acuity with age, the strength and direction of change varies between people. Analyses that posit multiple trajectories allow for a more specific description of the developmental course of vision change and its relationship with social position. Method : The analysis uses the responses of 2,956 respondents, aged 60 years and over, followed over eight years (five observations) as part of the English Longitudinal Study of Ageing (ELSA). At each observation respondents self-reported their visual acuity, creating a 4-state response variable. Optimal matching, hierarchical clustering, and multinomial logistic regression were used to describe the sequential data, produce a typology of vision trajectories, and examine the socio-demographic characteristics associated with different trajectories. Results : Eight distinctive trajectories were identified: There were three trajectories of stable vision, three of deterioration, and two of improvement. The probability of reporting different vision trajectories varies with a change in age; however, the magnitude of change is associated with social position. Social position, measured by wealth and subjective social status (SSS), had a notable effect on the likeliness of reporting different trajectories of vision and revealed considerable social inequalities. The highest quintiles of both wealth and SSS were likely to report stable excellent vision or stable good vision more than any other trajectory, irrespective of age; while those in the lowest quintiles were more distributed across clusters, even for the youngest age group. Conclusion : The analysis provides evidence in support of the diversity of the older population in terms of health outcomes, specifically visual acuity. Keywords : visual acuity, trajectory

OP24 521-S-5

“MORE AND MORE, I HAVE THE FEELING THAT I HAVE BEEN PASSED OVER BY THE TIMES.” PERCEIVED OBSOLESCENCE, COGNITIVE IMPAIRMENT, AND THE ABILITY TO MANAGE EVERYDAY TECHNOLOGIES

Laura I. SCHMIDT¹, Hans-Werner WAHL², Herbert PLISCHKE³
(1. *Network Aging Research, Heidelberg University, Germany*; 2. *Department of Psychological Ageing Research, Heidelberg University, Germany*; 3. *Generation Research Program, Human Science Center, LMU Munich, Germany*)

Introduction : Contrary to widely held opinions, older adults' general attitudes towards technology have found to be relatively positive. Compared to younger ages, however, older adults reveal more difficulties in learning a new technology, need more time to get used to new devices and report higher frustration. The current project aimed

to better understand the role of overall cognitive status for technology performance. Method : In particular, the use of a blood pressure meter, an age-friendly mobile phone and an e-book reader was assessed in cognitively healthy participants and participants with mild cognitive impairment (MCI, MMSE-Score: 24-28). Besides a multidimensional cognitive assessment including visuo-spatial abilities and working memory, perceived obsolescence was considered as part of a set of additional psychological constructs that also contained self-efficacy and technology attitudes. Technology performance was video-taped and coded according to relevant categories (e.g., number of mistakes) with high interrater agreement (95%). Results : Preliminary data analysis relies on 129 video sequences of 43 participants aged 60 to 88 years (22 cognitive healthy; 21 with MCI). As expected, participants with MCI needed more time for task completion, made more mistakes, and reported lower usability of the devices. Significant positive correlations between successful handling and both working memory and visuo-spatial abilities, but also with self-efficacy were found. While controlling for age, participants higher in obsolescence committed more errors and needed more time for the tasks across all three devices. Conclusion : Findings suggest that a combined cognitive aging, self-efficacy and obsolescence perspective is in place to understand variation in technology use in later life. Keywords : technology performance, perceived obsolescence, cognitive impairment.

OP24 522-S

DEVELOPMENTAL CHANGE

OP24 522-S-1

ADVERSE GROWTH IN MIDDLE-AGED AND OLDER ADULTS AFTER OPEN-HEART SURGERY: A LONG-TERM FOLLOW-UP

Amy Lee AI¹, Daniel HALL², Kenneth PARGAMENT³, Terrence TICE⁴, Hyejin KIM¹ (1. *College of Social Work, Florida State University, USA*; 2. *VA Pittsburgh Healthcare System, University of Pittsburgh, USA*; 3. *Department of Psychology, Bowling Green State University, USA*; 4. *Professor Emeritus of Philosophy, University of Michigan, USA*)

Introduction : In certain Asian cultures, crises offer opportunities for advancement. Despite the growing knowledge of posttraumatic growth, only a few studies have examined personal growth in the context of cardiac health. Similarly, longitudinal research is lacking on the implications of religion/spirituality for patients with advanced cardiac diseases. This U.S. study aims to explore effects of preoperative religious coping on long-term postoperative personal growth and potential mediation effects. Method : Analyses capitalized on a preoperative survey and medical indices from the Society of Thoracic Surgeons' National Database of patients undergoing cardiac surgery. Participants in the current follow-up study completed a mailed survey 30 months after surgery. Hierarchical regression analysis was performed to evaluate the extent to which preoperative use of religious coping predicted growth at follow-up, after controlling for key demographics, medical indices, mental health, and protective factors. Results : Predictors of posttraumatic growth at follow-up were positive religious coping and a living status without a partner. Medical indices, optimistic expectations, social support, and other religious factors were unrelated to posttraumatic growth. Including religious factors diminished effects of gender, age, and race. Including perceived spiritual support completely eliminated the role of positive religious coping, indicating mediation. Conclusion : Preoperative positive religious coping may have a long-term effect on postoperative personal growth, explainable by higher spiritual connections as a part

of significance-making. These results suggest that spirituality may play a favorable role in cardiac patients' posttraumatic growth after surviving a life-altering operation. The elimination of demographic effects may help explain certain previously mixed findings. Keywords: religious and secular reverence, cardiovascular diseases and open-heart surgery, hospital length of stay

OP24 522-S-2

EMOTION DECODING IN AGEING: UNCERTAINTY AS THE UNDERLYING DIMENSION OF AGE-RELATED DIFFERENCES IN DECODING BASIC EMOTIONS FROM DYNAMIC VISUAL CUES

Despina MORAITOU¹, Georgia PAPANTONIOU², Pantelis GINOS¹, Theofilos GKINOPOULOS³, Daphni KOTSELIDOU¹, Magdalini NIGRITINOI¹ (1. School of Psychology, Aristotle University of Thessaloniki, Greece; 2. Department of Early Childhood Education, University of Ioannina, Greece; 3. School of Psychology, Panteion University, Greece)

Introduction : Emotion recognition is vital to everyday life. However, numerous studies have found that older adults are less adept at identifying emotions, compared to younger adults. The aim of the present study was to identify the pattern of age differences in the ability to decode basic emotions from naturalistic visual emotional displays. Method : The sample comprised a total of 208 adults from Greece, aged from 18 to 86 years. Participants were examined using an emotion evaluation test which was designed to examine a person's ability to visually identify six emotions and discriminate these from neutral expressions, when they are portrayed dynamically by professional actors. To find the pattern of age differences in emotion decoding, structural equation modeling (SEM) techniques were applied to the data. Results : The structural model of emotion evaluation that was finally confirmed indicated that decoding of five emotions is taking place along the broad affective dimension of 'uncertainty'. On the other hand, this model indicated that happiness decoding is the only ability that does not follow the same pattern. The addition of age into the model as a covariate showed that age negatively affects the ability to distinguish emotional from non-emotional cues and to decode all the basic emotions except happiness. Conclusion : The pattern in which emotion decoding from visual cues is affected by normal ageing is formulated according to the rate of uncertainty that either is related to difficulties in recognizing subtle differences in negatively-valenced emotional displays or is inherent to a specific emotion. Keywords : affect, emotion recognition, lifespan development

OP24 522-S-3

A PATH MODEL OF WISDOM: ROLE OF AGE AND CULTURE

Seungyoung KIM¹, Bob G. KNIGHT² (1. The Davis School of Gerontology, University of Southern California, USA; 2. The Davis School of Gerontology / Department of Psychology, University of Southern California, USA)

Introduction : As the concept of wisdom has become a subject of growing scientific interest, researchers have been interested in individual differences in the conception of wisdom, such as age and cultural differences. To explore how age and culture affect wisdom, and how those effects are related to life satisfaction, we tested a wisdom path model. Method : We investigated the roles of age, culture, and openness to experience in development of wisdom, as well as the impact of wisdom on life satisfaction. We also examined how emotion regulation mediates the effect of wisdom on life satisfaction.

98 older adult (range 58-96) and 96 younger adult (range 19-39) Korean immigrants participated in a survey. Wisdom was measured by the Korean version of The Three Dimensional Wisdom Scale (3D-WS-K), which refined 3D-WS (Ardelt, 2003) to be more applicable to Korean culture. The 3D-WS-K consists of Cognitive Flexibility, Viewpoint Relativism, and Empathic Modesty factors. Results : The proposed path model yielded a good fit, $\chi^2/df = 1.874$, CFI=.948, RMSEA=.067. We found that age was positively associated with Empathic Modesty, which in turn led to higher emotion regulation and life satisfaction. Biculturalism had direct and indirect relationships with Viewpoint Relativism. The indirect correlation was mediated by openness to experience. Wisdom had not only a direct effect on life satisfaction, but also had an indirect effect mediated by emotion regulation. Conclusion : These findings suggest that age develops certain components of wisdom, but not all components of wisdom. High involvement in diverse cultures may help to have an open-mind, resulting in increased wisdom. Keywords : wisdom, age, culture

OP24 522-S-4

SUCCESSFUL AGING, ACTIVE AGEING AND HUMAN RIGHTS: TOWARD AN AGENDA CROSSING SCIENCE AND LAW

Jose Ferreira ALVES¹, Susan B SOMERS², Lia Susana DAICHMAN³, Fernanda FARINHA⁴ (1. School of Psychology, Department of Basic Psychology, University of Minho, Portugal; 2. Secretary General of INPEA, INPEA- IAGG, USA; 3. ILC - Argentina, President, ILC, Argentina; 4. Retired, Ex-Vice president Probation services Ex-Deputy secretary of General Prosecutor Service, Portugal)

Introduction : The meaning of the concept of successful aging is varied, depending on the bio psychosocial factors taking into account. One of the most fruitful ways to guide our look to successful aging is through developmental theory, namely adult developmental theory, as was stated by Ryff (1982, 1989). Looking to successful aging just as successful living - as it is done often - is missing the unique positive psychological and developmental challenges and tasks of adult life and old age. This view that looks to adult life and old age as periods of positive opportunities to continue human development is sometimes called eudaemonic to differentiate it from hedonic view. These last view looks into quality of life, life satisfaction, happiness as synonymous or indicators of successful aging. These could be obviously important outcomes but when they are not linked to the achievement of a sense of purpose in life, or to sense of growth, they miss the opportunity to construct positive and constructive views for old age. These view of successful aging and so the experience of eudaemonic well-being was empirically associated with significant lower levels of biological risk indicators for illness (Ryff, Singer, & Love, 2004). Method : Literature review confronting different definitions of successful aging. Results : Human rights are based on the respect for human development possibilities. Conclusion : Will discuss a new agenda for research and practice that crosses scientific evidence and law, namely the need to ground the rights of older persons with the right to age successfully. Keywords : successful aging, human rights, psycho-social development

OP24 522-S-5

FROM THE BEGINNING UNTIL NOW? THE TRANSFORMATION IN OLDER ADULTS' LEARNING PROCESS

Yahui LEE, Chun-ting YEH, Ching-yi LU (Department of Adult and Continuing Education, National Chung-Cheng University, Taiwan)

Introduction : Learning is an essential element which contributes to

successful aging. More and more older adults participate in various learning activities in Taiwan. But what is the transformation in older adults' learning process? Method : To answer this question, we conduct one-to-one semi-structured interviews with 32 adults between 52-82 years of age, 64.13 years on average. Results : The findings of this study are identified: (1) the interviewees' learning styles are transitioned, and the transition may be occurred among formal, informal and non-formal learning; (2) the role and learning attitudes have changed, from learner to teacher, and from passive learning to active learning; (3) interviewees' learning may be based on ancient experiences, combined new experiences, disturbed by old or new experiences. Conclusion : The implications of the results for enhancing older adults learning are discussed. Specific future applications for older adult learners, educators, programs are proposed. Keywords : older adult learners, older adult learning, transformative learning

OP24 523-S HEALTH PROMOTION I

OP24 523-S-1 NATURE AS THE MOST IMPORTANT COPING STRATEGY AMONG CANCER PATIENTS - A SWEDISH SURVEY

Fereshteh AHMADI, Nader AHMADI (*Department of Social Work and Psychology, University of Gavle, Sweden*)

Introduction : The authors have conducted a quantitative survey to examine the extent to which the results obtained in a qualitative study among cancer patients in Sweden are applicable to a wider population of cancer patients in this country. In addition to questions relating to the former qualitative study, this survey also references the RCOPE questionnaire (designed by Kenneth I Pargament) in the design of the new quantitative study. Method : In this study, questionnaires were distributed among persons diagnosed with cancer; 2355 people responded. The majority of the responders (71%) were 59+. Results : The results show that nature has been the most important coping method among cancer patients in Sweden. The highest mean value (2.9) is the factor 'nature has been an important resource to you so that you could deal with your illnesses'. Two out of three respondents (68 percent) affirm that this method helped them feel significantly better during or after illness. The second highest average (2.8) is the factor 'listening to "natural music" (birdsong and the wind).' Two out of three respondents (66 percent) answered that this coping method significantly helped them feel better during illness. The third highest average (2.7) is the factor 'to walk or engage in any activity outdoors gives you a spiritual sense'. Conclusion : This survey concerning the role of nature as the most important coping method for cancer patients confirms the result obtained from the previous qualitative studies. Keywords : Religious coping, spirituality, nature as a coping method

OP24 523-S-2 EFFECTIVE POPULATION HEALTH INTERVENTIONS FOR THE PRIMARY PREVENTION OF MUSCULOSKELETAL CONDITIONS IN OLDER PEOPLE

Lynne PARKINSON¹, Melissa HARRIS² (*1. Health CRN, CQ University, Australia; 2. Research Centre for Gender, Health and Ageing, University Of Newcastle, Australia*)

Introduction : This rapid review asked the question: What types of health promotion and prevention programs for primary prevention of musculoskeletal conditions are most likely to be effective in preventing osteoarthritis and osteoporosis in older people, leading to a reduction in the associated burden of disease from these conditions? Method : Systematic reviews and meta-analyses were identified

through a series of systematic literature searches using databases relevant to health and medicine, reference lists of identified articles, and key web-based sources of information regarding the primary prevention of musculoskeletal conditions. Results : The key recommendations for older people were: Supplementation with vitamin D and/or calcium should be encouraged for all people over 45 years of age for primary prevention of OP. Dietary intervention programs for older people could involve tailored approaches which include face-to-face education or counselling, telephone contacts or computer-tailored information. Physical activity programs for primary prevention of OP and OA in older people could include aerobics, weight bearing and resistance exercises. Obesity prevention programs for older people might include intensive and long-term intervention implementation, including group sessions designed to promote behavioural changes. Conclusion : More high quality research is needed to: develop effective interventions that promote a 'healthy older lifestyle'; explore demographically appropriate prevention programs; and examine calcium and/or Vitamin D intakes of people in at-risk groups. The quantity and quality of evidence to support programs for primary prevention of OA and OP in at-risk groups is limited. Keywords : musculoskeletal, health promotion, prevention

OP24 523-S-3 INTERVENTION BY MILK INGESTION AND PHYSICAL ACTIVITIES FOR THE FRAIL ELDERLY IN COMMUNITY

Kuninori SHIWAKU, Rumi MANIWA, Masayuki YAMASAKI, Mamiko IWAMOTO, Toshimi YONEYAMA (*Environmental & Preventive Medicine, Shimane University, School of Medicine, Japan*)

Introduction : As the abilities of physical and daily life tend to fall by aging, and nutrition improvement is important in elderly. Effects of nutrition improvement for elderly has verified on the seriously malnutrition elderly in a hospital, but there is little evidence for elderly in community. We conducted the intervention by milk ingestion based on physical activities program for the frail elderly in community. Method : Subjects were 45 elderly people (73.7±5.7 years old) who participated in the preventive program for three months in Izumo City, and were divided into two groups of 22 milk intervention subjects and 23 control subjects. The milk intervention group was provided with milk (180 ml/day) by door-to-door delivery, and the parameters of nutrition and anthropometric were investigated before and after intervention. Results : BMI, HDL-cholesterol and hemoglobin were significantly improved in the milk intervention group, but no significant effects in the control. The intervention group had significant health-effects of BMI, albumin, HDL-cholesterol, hemoglobin, HbA1c and essential amino acids/nonessential-amino-acid ratio, compared with the control group. As physical activities in the control group before intervention was poorer than the intervention group, the control group improved significantly by the physical activities program. Conclusion : Daily milk ingestion based on physical activities program makes an improvement of nutrient state in frail elderly in community. Keywords : interventional study, milk ingestion, physical activities

OP24 523-S-4 PROMOTABLE, PERSON-CENTRED APPROACHES OF GERONTOLOGICAL REHABILITATION IN FINLAND

Aila PIKKARAINEN (*School of Health and Social Studies, The University of Applied Sciences Jyväskylä, Finland*)

Introduction : New concepts and approaches are needed to specify person-centred gerontological rehabilitation, that is worth promoting. The Development Project of Co-operative Rehabilitation for Aged

Rehabilitees (IKKU 2009-2013) for the Social Insurance Institution of Finland was launched in 2009. The aim was to maintain the functioning, independence and meaningful living of people aged 74+ in a home-centred lifestyle and to enhance their participation in society by developing gerontological rehabilitation services alongside five rehabilitation centres and eighteen municipalities. Method : Forty-eight outpatient or institutional courses were implemented, an average of eight aged rehabilitees with musculoskeletal symptoms were selected by a contact in municipalities. The main intervention promoted a person-centred approach in a group-based rehabilitation process, supported by peer group members. This study describes the perceived rehabilitation approaches witnessed by the older rehabilitees. The method was co-operative action research, in which the researcher observed selected parts of three courses in each centre in 2009-2012. Information was drawn from 101 observed rehabilitation days, focusing on themes of client-centred, goal-orientated and multi-actuator practice. Results : Based on the researcher's inductive analysis, four pre-constructed approaches were evaluated in focus-group discussions with multi-professional teams in the project's rehabilitation centres. Based on this two-step data analysis, gerontological rehabilitation approaches can be examined as a restarted, reformed, innovative, and abandoned approach. These phases may be individual, consecutive, overlapping or recurrent depending on the rehabilitee's individual situation. Conclusion : Effective, person-centred gerontological rehabilitation seeks to redesign each client's age-identity, and support cohort participation and individual life courses with the support of peer rehabilitees. Keywords : Gerontological rehabilitation, action research, health promotion

OP24 523-S-5

OLDER PERSONS UNDERSTANDING OF HIV INFECTION IN GARANKUWA COMMUNITY, SOUTH AFRICA

Eucebious LEKALAKALA-MOKGELE (*School of Health Care Sciences, University of Limpopo, South Africa*)

Introduction : Infections with human immunodeficiency virus (HIV) and its resultant acquired immunodeficiency syndrome (AIDS) is a worldwide problem affecting individuals of all ages. Evidence suggests that HIV infection among the older population is on the increase as more than 10% of HIV infections are found in adults aged 50 years and older. Reasons for the increase may be related to the older persons' level of understanding of the risks of infection. This study looks at understanding of the risk of HIV infection among the older persons of Garankuwa community in South Africa. Method : Methods: Six focus group interviews yielded qualitative data that were analysed for the study. Participants were purposively selected. Ethical consideration: Participation was voluntary, with options of withdrawing from the study at any time during the process of data collection. Participants were given assurance of confidentiality, and anonymity in reporting the findings. NVivo qualitative data analysis package was used to analyse the data. Results : Themes extracted from the findings were mainly categorised into knowledge of transmission, culture and age specific strategies, symptom recognition, "them-and-us" expression for HIV/AIDS. Conclusion : Older persons in the studied community showed limited understanding of HIV/AIDS risk of infection, and were of the belief that put them at a distance from HIV/AIDS infection and its effects. Recommendations were provided to include the older persons in HIV/AIDS prevention and treatment strategies. Keywords : older persons, HIV/AIDS risk factors

OP24 523-S-6

A STRATEGIC PLAN TO ENGAGE OLDER ADULTS IN

MORE PHYSICAL ACTIVITY: ADVANTAGES OF NORDIC WALKING

Elisaveta KACHAN (*Department of demography of aging, Saint Petersburg Institute of Bioregulation and Gerontology, Russia*)

Introduction : Regular and moderate exercise by older adults can help delay, or prevent, the onset of disabilities and many chronic diseases, reduce risk of falls and fractures, improve mood and relieve depression, increase mental acuity, and in a way increase life expectancy. However, many older adults are not as physically active as they could and should be. Method : Taking into account the experience of the northern countries we've launched a study to analyze the reasons to evade physical activity, search for education strategies to inform older adults about the personal benefits of active aging and teach them how to practice NW, as well as at designing guidelines for adoption of NW as physical activity for geriatric and day care centres. In our study participated 250 adults aged 65+, who came for 2 weeks course at the geriatric sanatorium. Each person was subjected to the interview on the onset of his/her course and after four weeks of practicing NW with an instructor. Results : The available results suggest that Nordic Walking is a natural and safe, yet intensive, form of physical activity that can be widely used by older adults as it is cheap and affordable, easy to practice and safe, it allows overcoming main reasons to sedentary lifestyles and is very promising from the point of view of motivation and involvement. Conclusion : Nordic walking, allowing being healthy and active even for an elderly person, due to its functionality, safety and availability, helps to involve elderly people into the process of health and social relationships maintenance. Keywords : Physical activity, moderate exercise, Nordic walking

Tuesday June 25th

OP25 101-S

PAIN, PHYSICAL SYMPTOMS & SOCIAL PARTICIPATION, HEALTH

OP25 101-S-1

OLDER WOMEN, LIVING ALONE, WITH PERSISTENT MUSCULOSKELETAL PAIN - A SURVEY STUDY

Sara CEDERBOM¹, Anne SODERLUND², Eva DENISON², Petra VON HEIDEKEN WAGERT² (*1. School of Health, Care and Social Welfare, Department of Neurobiology, Care Sciences and Society, Malardalens University, Karolinska Institutet, Sweden; 2. School of Health, Care and Social Welfare, Malardalens University, Sweden*)

Introduction : Pain is a common health problem among the older population. It is well-known that women are affected by pain to a greater extent than men in all age groups. Women who live with pain report more pain-related problems than men, and they also report lower quality of life compared to men who are living with pain. A specifically vulnerable group among elderly persons with pain are women who live alone. They often become dependent on others to manage their daily life. Research about older women in pain in general exists but knowledge about this particular group who is living alone is very scarce. Aim: The aim of this investigation was to study how older women who are living alone with support from home help services experience persistent musculoskeletal pain, how they manage their pain and rate their well-being (morale). Method : Method: The study had a cross-sectional, descriptive design and included 60 community-dwelling women age ≥ 65 years. Results : Results: The women reported using several pain management methods. They rated low self-efficacy in daily activities and they perceived themselves not as

physically active as they wanted to be. The women also reported low degree of well-being (morale) and high degree of disability. Conclusion : The results indicate that persistent musculoskeletal pain and pain-related problems may influence the women's daily life and well-being negatively. Further results and conclusions will be presented at the conference. Keywords : older women, living alone, pain

OP25 101-S-2

EFFECTS OF THE STANFORD CHRONIC PAIN SELF-MANAGEMENT PROGRAMME (CPSMP) IN OLDER ADULTS: A RANDOMIZED CONTROLLED TRIAL

Mimi MEHLSSEN¹, Lisbeth FROSTHOLM², Lea DUNKERLEY³, Per FINK²

(1. Department of Psychology, Aarhus University, Denmark; 2. Research Clinic for Functional Disorders and Psychosomatics, Aarhus University Hospital, Denmark; 3. The Danish Committee for Health Education, The Danish Committee for Health Education, Denmark)

Introduction : CPSMP is a patient education program consisting of six 2½ hour weekly sessions. Two instructors teach a group of 8-16 persons about managing pain. Instructors are chronic pain patients themselves. The program is highly structured and manualized. Beneficial effects of CPSMP, e.g. on pain, self-efficacy, and well being, have been reported but only in younger patients (<60 yrs). The study aimed to examine the effect of CPSMP in younger and older patients on pain, functional limitations, and psychological adaptation. Method : A total of 418 pain patients enrolled in the RCT (27% men). Of these 215 (51%) were randomized to intervention. Participants were divided into 146 older patients age 60+ (mean 68.4) and 272 younger patients (mean 46.9). Questionnaire data were collected before randomization and immediately after CPSMP. Self-reported pain, functional limitations, pain catastrophizing, somatic symptoms, anxiety, depression, and self efficacy were measured. Results : At baseline the intervention group did not differ from the control group on pain, functional limitation, distress or sociodemographic parameters. The old patients had lived more years with pain, had more somatic symptoms, and used medicine more frequently but were less depressed than the young (p<0.05). In the young patients a significant effect of CPSMP was found in functional limitations, pain-catastrophizing, somatic symptoms, and depression (F:4.52-8.31, p<0.05) but not on pain, anxiety, or self-efficacy. However there were no significant effects of CPSMP in older patients. Conclusion : Although the CPSMP appears to have a positive effect in younger adults, it may not be suited for older patients with chronic pain. Keywords : Chronic pain, self-management, patient education

OP25 101-S-3

DESCRIBING OLDER ADULTS' PSYCHOSOCIAL FACTORS, DRIVING HABITS, AND COMMUNITY PARTICIPATION

Bong-Keun JUNG¹, Carolyn Mary BAUM² (1. Occupational Therapy, Soon Chun Hyang University, Korea; 2. Occupational Therapy, Washington University in St. Louis, USA)

Introduction : The objective of this study were to a) characterize the older drivers' psychosocial factors related to the driving, b) identify the relationship between psychosocial factors and the older drivers' participation in daily activities, and c) compare older driver's self-awareness of driving situation and a third party observer's view of the older adult's quality of driving. Method : A new psychosocial assessment battery, initially called the Driving Performance Questionnaire (DPQ), was developed to identify characteristics of

older American driver's and caregivers' psychosocial factors. A pilot study was conducted on healthy older drivers and caregivers. Results : No significant differences were found between drivers' version and caregivers' version in healthy older adults. Female participants showed lower scores of self-efficacy and lower driven miles than male participants. Self-efficacy and impulsivity were associated with participants' driving habits. Conclusion : The Driving Performance Questionnaire appears to measure older drivers' psychosocial status and its effect on driving quality. Further work will establish its validity and its performance in a population who are at risk for driving problems. Keywords : Geriatric assessments of automobile driving, psychosocial influences on older adults' driving, Driving habits of elderly

OP25 104-S

ELDER ABUSE I

OP25 104-S-1

ADDRESSING ELDER ABUSE IN THE ISRAELI HEALTH CARE SYSTEM : A COMPREHENSIVE PROGRAM

Barbara LANG (Department of Social Services, Ministry of Health, Israel)

Introduction : In 2003 the Ministry of Health published policy guidelines regarding the treatment of elder abuse within the healthcare system. Since then a comprehensive plan has been implemented. The healthcare system is unique in its ability to identify and treat elder abuse. It is a system that sees 97% of the elderly, is not stigmatic, by its nature is multidisciplinary and is able to both perform physicals and question the elderly in an unobtrusive manner. Method : 1. Forming of elder abuse committees in: regional health departments, general hospitals, health funds, nursing homes and psychiatric hospitals. 2. Funding of social workers in hospitals and health funds to coordinate the identification and treatment of elder abuse. 3. Seven week training sessions for committee members. 4. One/two day training sessions for doctors, nurses, social workers, physiotherapists and occupational therapists. 5. Development of training manuals and a training film. 6. Establishing forums for coordinators to discuss in-house training, present case studies, address obstacles both within the healthcare system and with other agencies. Results : There is a heightened awareness of elder abuse within the healthcare system. Elder abuse committees have been established for in-house training as well as a framework to report to and consult with regarding cases of suspected abuse. During the last five years the identification of abused elderly by the healthcare system has doubled annually. Conclusion : Policy guidelines were established in 2003 while this program was implemented in 2005. Results show that while guidelines are essential, a comprehensive plan is necessary in order to implement them. Keywords : elder abuse, healthcare

OP25 104-S-2

MIND THE GAP: IMPROVING CRIMINAL JUSTICE AGENCIES AND SOCIAL SUPPORT AGENCIES RESPONSES TO INTIMATE PARTNER VIOLENCE AGAINST OLDER WOMEN

Bridget L. PENHALE (School of Nursing Sciences, Faculty of Medicine and Health Sciences, University of East Anglia, United Kingdom)

Introduction : This EU-funded (Daphne III programme) study on Intimate Partner Violence (IPV) and Older women includes partners from Austria, Germany, Great Britain, Hungary, Poland, and Portugal. The project is running for two years from March 2011 and addresses

the issue of how to improve responses by criminal justice and social support agencies to intimate partner violence against older women. Until now, comparatively little has been known about this issue and this project helps to address that knowledge deficit. This work builds on previous work in the area of intimate partner violence and older women, specifically a study undertaken between 2009-2011. Method : The first phase of the study consisted of analysis of case files held by the police and other criminal justice agencies in each country. Phase two consists of the development of guidance and training material for criminal justice agencies. The final phase consists of the development of guidance and PR and awareness raising material in conjunction with social support agencies. Results : The case file analysis was undertaken in 7 different police forces across England and Wales and 150 cases were analysed across a number of different fields. The workshops with criminal justice and social support agency representatives consisted of experts from both countries, who contributed to the development of guidance, training and PR materials concerning IPVoW. The results of the case file analysis will be presented and work undertaken in the subsequent phases of the project will be described and discussed. Conclusion : The presentation will discuss findings about this important but neglected topic. Keywords : elder abuse, intimate partner violence, older women

OP25 104-S-3

PREVALENCE AND PSYCHOLOGICAL IMPACTS OF CRIMINAL VICTIMIZATION EXPERIENCED BY OLDER CHINESE

Nan QIN, Elsie YAN (*Dept of Social Work and Social Administration, the University of Hong Kong, Hong Kong*)

Introduction : Victimization experience has severe impact on victims' psychological well-being, especially for older victims who may be vulnerable and susceptible to these detrimental consequences. This study examines the prevalence and psychological impact of victimization by common crime and domestic violence among older Chinese. Method : A representative sample of 453 older adults aged 60 or above was recruited from urban communities of Kunming city, Yunnan province using multistage sampling method. Participants were individually interviewed and provided information on their demographic characteristics, neighborhood disorder measured by the Perceived Neighborhood Disorder Scale, victimization by common crime (VCC) measured by a 7-item checklist, victimization by domestic violence (VDV) measured by the Potential Harmful Behavior scale and mental health measured by GHQ-12. Results : Results showed that 252 participants (55.6%) experienced one or more types of VCC in the past, with being stolen and being cheated/conned being the most common, and attack and rape/sexual assault the least common. Only 22 participants (4.9%) reported VDV, with caregiver's threatening to hit or hurt them and verbal aggression being the most prevalent, and threatening with nursing home placement and withholding food the least prevalent. Moreover, 17 participants (3.8%) experienced both VCC and VDV. Regression analyses indicated that VCC was significantly associated with poorer mental health ($\beta = .12, p < .01$) independent of gender, age, education, household finance, household size, living arrangement, physical health, social networks and neighborhood disorder. Contrary to our expectation, VDV was not significant in the model ($p = .397$). Conclusion : Research, practical and policy implications are discussed. Keywords : victimization, older Chinese, mental health

OP25 104-S-4

ADDRESSING ELDER ABUSE AND NEGLECT- LEADING SOCIETAL CHANGE IN ISRAEL

Sara ALON (*Eshel, JDC-ESHEL (Association for planning development of services for the aged), Israel*)

Introduction : Elder abuse and neglect have been recognized as a social problem in Israel in the last decade. Addressing elder abuse and neglect requires multi-dimensional, multi-system actions: formulating policy, raising awareness, developing social responses and constructing an array of services. JDC-ESHEL (Association for Planning and Development of Services for the Aged), in conjunction with the governmental ministries, municipalities and NGO's, developed and implemented multi-system actions to address elder abuse and neglect. Method : 1. Raising awareness: media campaign; conferences for professionals, for older adults, producing and disseminating materials and videotapes. 2. Research and Knowledge development : a. the national survey on elder abuse; b. developing risk assessment tool; c. evaluation study of a community model for intervention; d. producing manuals for intervention in cases of elder abuse. 3. Developing services: a. Establishment of specialized units within municipal social services; b. establishing multi-disciplinary teams; c. helpline ; d. legal counseling for victims of abuse. 4. Training professionals and volunteers 5. Policy: a. protocols for identifying and reporting elder abuse within health care system; b. policy changes concerning elder abuse within social services. Results : General public, older adults and professionals are aware of elder abuse; increase in numbers of identified cases; coordination between governmental ministries and organizations is enhanced. Conclusion : Since the revelation of the phenomenon, Israel has made a considerable progress in its attempts to confront elder abuse and neglect. Progress had been made in the scientific area, policies, legal and organizational spheres. Keywords : Elder abuse, policy, programs responding elder abuse

OP25 104-S-5

REGULATING CARE WORK: HOME, ELDERCARE, AND THE INVISIBLE WORKFORCE

Peggie SMITH (*Law, Washington University School of Law in St. Louis, USA*)

Introduction : A growing number of households are paying care givers to provide in-home care to aging family members with long-term care needs. The demand for home-care services is so strong that home care ranks among the top three industry sectors where employment is projected to grow the fastest in the United States. Despite this projection, however, a labor shortage exists that has left families and policymakers wondering who will care for an increasingly elderly population. Described as a "crisis" by experts, the shortage of workers is closely linked to low wages and demanding job conditions that not only disadvantage workers but also compromises the quality of services provided to elderly persons. As many as fifty percent of all workers quit their jobs every year. A worker's departure can have devastating consequences for elderly clients who must adjust to a new worker and who may experience service disruptions that can lead to hospitalization. Method : I investigate the "crisis" in the home-care industry and consider its implications for the provision quality care by examining the status of home-care workers in labor and employment law. Results : The research reveals that federal and state laws define home care as a form of domestic service. So defined, workers are denied fundamental labor relating to wages and hours, and health and safety, and collective bargaining rights. Conclusion : Providing workers with basic labor rights is essential to attracting and retaining qualified workers and improving the quality of care for elderly home-care recipients. Keywords : eldercare, homecare, employment

OP25 104-S-6

TAMING ELDER ABUSE IN KENYA - ENGAGING GOVERNMENT FOR LEGAL REDRESS

Erastus Maina ITUME¹, Theresa OBATH² (1. *Advocacy & HIV, HelpAge Kenya, Kenya*; 2. *Chairman, Board, HelpAge Kenya, Kenya*)

Introduction : The status of rights of older persons and their protection from violence and abuse in Kenya experienced a new dawn with the promulgation of a new constitution with aging-supportive Bill of Rights in August 2010. Such reality provoked HelpAge Kenya's to steer a much awaited process of seeking justice and retribution for victims of elder abuse. Method : To inform the process, HelpAge carried out a study on of elder abuse in Western and Coast Regions of Kenya rated most notorious. The study was done in May-June 2012 and was intended to inform on the ongoing processes of engaging government and legal stakeholders including the Chief Justice, Attorney General and Director of Public Prosecutions to expedite retributive justice for victims and enact an Elder Abuse Justice Act for Kenya. The study on status of Elder Abuse involved interviews with victims, relatives, government administrators, youth leaders, security personnel and community members. Results : 1. Older women are the most targeted due to vulnerability 2. Misconceptions among youth and society 3. Neglect of elderly 4. Lack of elder abuse legal frameworks. Conclusion : 1. Legal mitigation for victims, families and relative and rescue for victims 2. Security and rescue to all displaced older people. 3. Enhancing community policing and integrating ageing in the programme. 4. Civic and constitutional education on older people's rights. Empower older people to have a voice and protect their rights. 5. Develop programs which seek to strengthen family structures. Keywords : Elder Abuse Justice

OP25 105-S HEALTH PROMOTION II

OP25 105-S-1 SENIOR CENTERS - IMPROVING THE HEALTH AND WELL-BEING OF OLDER ADULTS

Manoj Pahlaj PARDASANI (*Graduate School of Social Service, Fordham University, USA*)

Introduction : Since their advent in 1943, a network of 11,000 senior centers in the United States have played a vital role in community-based services for older adults by providing opportunities for recreation, socializing, volunteering, advocating for their concerns, as well as access to information and referral services, education, and nutrition and health services (DFTA, 2002; NISC, 2005; Turner, 2004). As an integral component of the continuum of long term care, senior centers aim to promote healthy aging, enhance independence and self-reliance, reduce hospitalizations, and improve the well-being of our aging cohort (AoA, 2000; Krout, 1998; Leest, 1995; NISC, 2005; Pardasani, 2004). The purpose of this presentation is to report on a large study that evaluated the impact of participation in senior centers on the health and wellbeing of older adults - specifically social support, isolation, mental health, life satisfaction and quality of life. Method : The study followed 1,000 new participants at sixteen (16) senior centers in New York City over the course of one year to assess changes in their overall perception of health, life satisfaction and well-being as they engaged in senior center programs and services. The study utilized a quasi-experimental, longitudinal design divided into three phases of data collection. A combination of focus groups and in-depth, individual interviews were utilized for data collection. Results : Preliminary results demonstrate the positive impact of senior centers on the health and lives of older adults and their contribution to healthy aging. Conclusion : Practice and policy implications for communities

worldwide will be shared. Keywords : senior centers, health, quality of life

OP25 105-S-2 EFFECTIVENESS OF A NURSING CONSULTING INTERVENTION IN OLDER PEOPLE WITH MOBILITY IMPAIRMENT - A PROSPECTIVE LONGITUDINAL STUDY

Steve STRUPEIT¹, Arne BUSS¹, Karin WOLF-OSTERMANN² (1. *Life Sciences, HAW Hamburg - University of Applied Science, Germany*; 2. *Nursing Science, ASH Berlin, Germany*)

Introduction : Mobility impairment can lead to care dependency and institutionalization in elderly people. There is a need of special educational programs to obtain and facilitate mobility and quality of life in those affected. Method : Aim of this study was to examine the effect of nursing consulting on mobility and quality of life. A mono-centered, prospective longitudinal study, with a (non-equivalent) control group pretest-posttest design was conducted in a geriatric rehabilitation facility and living environments of the patients after discharge. Intervention consisted of consulting home visits including follow-up phone calls. Primary outcomes were quality of life and functional status. Secondary outcome was self-efficacy. Data were collected at admission, at discharge and at 6 months follow-up. Results: Participants in the intervention group showed a higher increase in functional status compared to the control group. The intervention did not have an effect on quality of life, except from social domain. Conclusion : Findings of this study suggest that nursing consulting seems to improve functional status whereas quality of life was almost not affected. Further studies are needed using rigorous research methods. Keywords : mobility, quality of life, nursing consultation

OP25 105-S-3 MENTAL HEALTH STATUS AND CANCER RISK: SIX YEARS FOLLOW-UP OF THE SINGAPORE LONGITUDINAL AGEING STUDIES COHORT

Min Jun JIANG¹, Ai Zhen JIN², Liang FENG¹, Ma Shwe Zin NYUNT¹, Lei FENG¹, Kuan Yew CHOW², Tze Pin NG¹ (1. *Department of Psychological Medicine, National University of Singapore, Singapore*; 2. *National Disease Registry Office, Ministry of Health, Singapore*)

Introduction : There is widespread perception but limited evidence that psychological factors play a role in the development of cancer. We investigated whether poor self-reported mental health status was associated with cancer incidence risk in a Singaporean elderly population. Method : In this prospective cohort study, 2620 cancer-free subjects aged 55 and above were followed up for 6 years. Poor mental health status at enrolment was determined by lowest tertile scores on SF-12 MCS and hazard ratio (HR) and 95% confidence interval (95%CI) of association with incident cancer was evaluated using Cox proportional hazards regression. Results : Participants with poor mental health status was associated with an elevated risk of overall cancer incidence (HR=1.42, 95%CI: 1.02, 1.97), controlling for age, gender, BMI, living condition and smoking. Conclusion : Poor mental health status in elderly population was associated with increased incidence of cancer. Psychological support intervention to improve mental status of elderly persons may possibly be protective against cancer risk. Keywords : Ageing, Cancer, Incidence

OP25 105-S-4 RESEARCH ON THE 18-WEEK LEARNING PROGRAM OF PROMOTING HOLISTIC HEALTH FOR THE ELDERLY IN

TAIWAN

Meilan CHEN¹, Yingsun HUNG² (1. Institute of Health Industry Management, Ching Kuo Institute of Management and Health, Taiwan; 2. Department of Senior Citizen Service in Management, Ching Kuo Institute of Management and Health, Taiwan)

Introduction : The elderly in Taiwan have several ways to participate in the lifelong education. In New Taipei city, there are more than 300 learning programs for the elderly to attend. This means that Taiwanese society and government pay more attention to help the elder to get the better living quality. This study examines the learning need and influence factors for promoting the holistic health of the elderly. **Method :** The 30 participants' age were over 58. These old people included middle-aged, young-old and middle-old individuals. The researcher, also the role of instructor of the learning program, created this program with multiple teaching materials. By means of participating in the 18-week learning program, the participants reach the goal of holistic health. In this study, we use observation and interview to probe the learning need and how the learning program influence factors for promoting the holistic health. **Results :** The quantitative studies analyses indicated: (1) For the physical aspect, by learning yoga, anti-ageing, dietary plan and food nutrition, these participants were conscious of the importance of their health promotion. (2) For the psychological and spiritual aspect, by learning basic computer skill to record their own life stories, reading and health promotion, these participants realized the meaning of life. (3) For the social aspect, by learning volunteering, environmental protection issue, retirement financial plan, these participants were more successful in ageing. **Conclusion :** The results reveal that the elderly emphasize health care of the body and then they can participate more in other to reach the goal of promoting holistic health. **Keywords :** holistic health, the elderly, learning program

OP25 105-S-5

GERIATRIC INCLUSIVE ART AND LENGTH OF STAY IN ACUTE CARE UNIT: A CASE-CONTROL PILOT STUDY

Olivier BEAUCHET¹, Samantha REMONDIERE², Laure DE DECKER³, Florence REPUSSARD², Frederique DECAVEL⁴, Cedric ANNWEILER¹ (1. Neuroscience and Geriatrics, Angers University Hospital, France; 2. Geriatrics, Angers University Hospital, France; 3. Geriatrics, Nantes University Hospital, France; 4. Nursing Department, Angers University Hospital, France)

Introduction : Although emotional well-being is known to improve health status amongst older community-dwellers, its effect in geriatric acute care units has not been examined yet. The Geriatric Inclusive Art (GIA) uses painting to make inpatients aware of their abilities through an improvement of emotional well-being. We performed a pilot case-control study to determine whether a GIA session performed amongst inpatients hospitalized in a geriatric acute care unit could reduce the length of hospital stay (LHS). **Method :** Between December 27th 2010 and December 14th 2011, 93 inpatients (mean age 83.9±6.2years, 53.8% women) who benefited from one session of GIA and 95 paired control inpatients (mean age 85.4±5.6years, 51.6% women) hospitalized in the geriatric acute care of Angers University Hospital (France) were prospectively included. The LHS was assessed using the administrative registry of Angers University Hospital. Participation at one GIA session was defined as painting a picture under the supervision of a moderator and a nurse. **Results :** There were no significant differences for the baseline characteristics between cases and matched controls. Multiple linear regression model showed that attending one GIA session (P=0.023) and a higher BMI (P=0.031) were associated with a shorter LHS, whereas hospitalisation during fall

was associated with a longer LHS (P=0.020). **Conclusion :** Participation in one GIA session was associated with shorter LHS in our study. We suggest that painting improved emotional well-being amongst inpatients. This positive affect might act as a starter of awareness of inpatients' abilities leading to better functioning and thus accelerating the discharge. **Keywords :** art therapy; Geriatric Inclusive Art; acute care unit; length of hospital stay; older inpatients

OP25 105-S-6

DETERMINANTS OF INTENTION TO UNDERTAKE PHYSICAL ACTIVITY AMONG COMMUNITY DWELLING SOUTH ASIANS AGED 60 AND OVER

Maria HORNE¹, Richard EMSLEY², Adrine WOODHAM¹, Colin COX³, Alison WEARDEN⁴ (1. School of Nursing, Midwifery & Social Work, The University of Manchester, United Kingdom; 2. School of Community Based-Medicine, The University of Manchester, United Kingdom; 3. Public Health Manchester, Manchester City Council, United Kingdom; 4. School of Psychological Sciences, The University of Manchester, United Kingdom)

Introduction : Regular physical activity (PA) reduces functional disability, improves mental health and reduces the risks of premature death from heart-disease, stroke and type-2 diabetes. However, PA levels decline with age with only 19% of people aged 65-74 and 6% of those aged 75+ achieving the recommended targets for PA in the UK. PA levels are even lower for ethnic minority groups. South Asian (SA) older people are less likely to exercise compared to their Caucasian peers. They also experience greater levels of heart-disease, stroke, type-2 diabetes and mental health problems, conditions that can be prevented or improved through taking regular PA. Evidence on effective interventions tailored to minority groups needs remains inadequate. Establishing the determinants of PA intention will help to develop culturally appropriate interventions to increase uptake and adherence of PA among SA older adults. **Method :** A cross-sectional survey, underpinned by the Theory of Planned Behavior (TPB), with 305 of community-dwelling SA aged ≥60 to determine the prevalence and relative strength of attitudes related to PA-uptake. Multiple regression analyses will be undertaken to identify factors (e.g. gender/ethnicity/co-morbidity) independently have an effect on behaviour. Analysis of TPB will also be based on structural equation modelling (SEM), using Mplus 6.1. **Results :** We are currently undertaking the survey. This will be complete by the end of February 2013. **Conclusion :** Using theoretical frameworks, such as the TPB, are a useful starting point to look at behavioral change mechanisms which can be used to develop culturally sensitive PA interventions to increase PA levels. **Keywords :** Healthy ageing; minority groups, physical activity

OP25 106-S

CROSS CULTURE AND CROSS NATION STUDIES

OP25 106-S-1

RESEARCH TRADITIONS INFORMING INQUIRY ON INDIGENOUS ELDERS

Kathryn L. BRAUN, Colette V. BROWNE, Lana Sue KAOPUA, Bum Jung KIM, Noreen MOKUAU (Ha Kupuna Center for Native Hawaiian Elders, University of Hawaii, USA)

Introduction : Although indigenous people (including Native American, Alaska Natives, Native Hawaiians, First Nations, Maori, and Aboriginal Australians) have lower life expectancies than dominant populations in their countries, increasing numbers of indigenous people are living longer. Research on indigenous elders is

increasing, albeit still limited, and is informed by a number of research traditions and assumptions. Method : This paper reviews the research traditions that inform inquiry on indigenous elders. Conceptual perspectives for framing indigenous gerontology also will be reviewed, including the life course perspective, cumulative advantage and disadvantage research, cultural/historical trauma, and cultural competence/safety. Results : Much of the early research drew on cultural anthropology and ethnography, using participant observation, interviews, and focus groups to learn about the world view and cultural values of elders in indigenous communities. Quantitative researchers have mined survey data to compare characteristics of indigenous populations to non-indigenous groups, and these findings have revealed the significant health, social, and economic disparities experienced by indigenous elders. Survey researchers have translated and psychometrically tested standardized instruments for use in indigenous populations, and findings have furthered our knowledge about indigenous elders, as well as about the “fit” (or lack thereof) of these tools with indigenous populations. More recently, efforts have extended to “decolonizing” research methods and engaging with indigenous elders as research partners. Conceptual perspectives for framing indigenous gerontology also will be reviewed, including the life course perspective, cumulative advantage and disadvantage research, cultural/historical trauma, and cultural competence/safety. Conclusion : The paper concludes with policy directions and recommendations for future research with indigenous elders. Keywords : international aging, native aging

OP25 106-S-2

PROTOTYPES OF OLDER CHARACTERS IN UK AND TAIWANESE TV ADVERTISEMENTS: A GROUNDED THEORY ANALYSIS

Chin-hui CHEN (*Department of Modern Languages, National Pingtung university, Taiwan*)

Introduction : This study was aimed to explore prototypes of older characters as represented in UK and Taiwanese TV advertisements so as to understand how stereotypes of older age are reproduced or challenged for marketing purposes and how different or similar portrayals of older people are in Eastern and Western media contexts. Method : The grounded theory method was employed to approach the data (including 1731 UK and 2318 Taiwanese TV adverts recorded over a year between January/2007- January/2008). All older characters deemed to be aged 50 and over (UK= 61; TW=124) were systematically compared and the identified differences were labelled. 9 main prototypes as well as their subtypes emerged as the results. Results : The 9 main prototypes (shared by the two corpuses of data) were coded as 'Competent', 'Conservative and Traditional', 'Engaged in Female-Male Relations', 'Golden Ager', 'Humorous', 'Unwell and Declining in Health', 'Incompetent', 'Engaged in Intergenerational Relations', and 'Vulnerable'. Conclusion : The constant comparisons revealed that there were certain character types (or the subcategories) rather unique to or primarily derived from either Taiwanese or UK TV adverts. For example, being engaged in intergenerational relations, showing vulnerability (including declining health), asexual marital life and being conservative or serious were features more likely observed in Taiwanese TV adverts. Certain counter-stereotypical portrayals, such as interests in pursuing romance could only be identified in the UK dataset. The research findings were transformed into a number of hypotheses for further verification in future research on media representations of older people, using quantitative approaches (e.g. content analysis). Keywords : media representations, age stereotypes, cross-cultural comparisons

OP25 106-S-3

THE IMPORTANCE OF COMMUNITY PARTNERSHIP IN CROSS CULTURAL RESEARCH

Shoba NAYAR¹, Valerie WRIGHT-ST.CLAIR², Hagnyun KIM³, Audrey CHUNG⁴, Hu CHONGBAU⁵, Jeet SUCHDEV⁶ (1. *Centre for Migrant and Refugee Research, AUT University, New Zealand;* 2. *Research Cluster for Active Ageing, AUT University, New Zealand;* 3. *Occupational Science and Therapy, AUT University, New Zealand;* 4. *Advisor of Ethnic Reference Group, Waitemata Police District, New Zealand;* 5. *Auckland Chinese Seniors Group, Chinese Community Organisation, New Zealand;* 6. *Chairperson, Bhartiya Samaj Charitable Trust, New Zealand*)

Introduction : Doing culturally sensitive cross-cultural research is fraught with ethical and methodological concerns; particularly when the investigating researchers are not members of the participating ethnic communities. This paper explores the challenges and benefits of engaging with Indian, Chinese and Korean elder migrant communities in a New Zealand study. Method : Guided by a key informant, the researchers presented their proposed plan to relevant community leaders. Next, meetings between individual community leaders and researchers took place within nominated community settings. Finally, in preparation for the study, research assistants from within each ethnic community were appointed to the research team. The actual study involved collecting data across focus groups and individual interviews in accordance with culturally appropriate frameworks, including choice of language, social etiquette and environmental setting. Results : Challenges to engaging in community partnership included the amount of time required to establish relationships and simultaneously manage the organisation of data collection across three different ethnic communities; working in unfamiliar languages; and preparing community leaders and research assistants to undertake research processes. Benefits were access and welcome into the participant communities, and the richness of data collected as a result of establishing a research framework in which participants felt comfortable to engage in and express themselves. Conclusion : Researchers do not necessarily need to belong to specific ethnic communities in order to engage in rigorous and respectful research. However, fundamental to cross cultural research, is ensuring that sound community partnerships are nurtured throughout the process, from engagement through to data collection, analysis and sharing of results. Keywords : Cross-cultural, Older immigrants, Partnership

OP25 106-S-4

COMPARISON OF ATTITUDES AND BELIEFS ABOUT DEMENTIA AND OTHER CHRONIC DISEASES IN AUSTRALIANS AND SOUTH KOREANS

Sarang KIM, Kerry A; SARGENT-COX, Kaarin J ;ANSTEY (*Centre for Research on Ageing, Health and Wellbeing, The Australian National University, Australia*)

Introduction : Dementia is the third leading cause of death in Australia (9th in Korean Women). However, it is not being treated and recognised as a chronic disease and is often seen as a part of normal ageing. The purpose of this study was to explore and compare people's understanding and beliefs on dementia in comparison with other chronic diseases in Australia and Korea. In addition, the study aimed to examine dementia stigma and literacy between the two cultures of Australia and Korea to increase understanding of cultural influences in how people define, perceive, and respond to dementia and chronic disease. Method : 244 participants aged 18 to 64 years (122 Australian and 122 Korean) completed the anonymous online survey. The dementia literacy questionnaire and the dementia stigma as well as

attitude on chronic diseases questionnaire were administered. Results : Results showed that Australians are both highly concerned about developing dementia and think that they are highly likely to develop it whereas Koreans are highly concerned but do not think they are likely to develop dementia when compared to other chronic diseases. There were no significant differences in ability to recognise dementia symptoms in a vignette and in levels of dementia stigma between Australians and Koreans. Conclusion : Previously research has shown that racial minority groups had poor dementia literacy in comparison to majority group. However, this racial difference was not present in this study when both groups were majority racial groups in their countries. However, attitudes towards dementia were different between Australians and Koreans. Keywords : Dementia, Literacy, Stigma

OP25 106-S-5

CULTURAL COMPETENCY AND CAREGIVER TRAININGS

Im Ja CHOI¹, Judy BERRY² (1. *Executive Director, Penn Asian Senior Services, USA*; 2. *Executive Director, Lakeview Ranch, Inc. and Dementia Care Foundation, USA*)

Introduction : "Cultural Competency and Caregiver Trainings" examines the cross cultural project between Penn Asian Senior Services (PASSi) and the Dementia Care Foundation to offer Asian immigrants caregiver trainings on Dementia. We will discuss the barriers in delivering care to Asian immigrants and how collaborative trainings can overcome these barriers, enhance health outcomes, and improve elderly immigrants' quality of life. Method : PASSi received funding from Independence Blue Cross Foundation in August 2012 to launch a cross-cultural Alzheimer caregiver training program based on the Lakeview Ranch Model of Specialized Dementia Care™. Judy Berry taught 141 home health aides and family caregivers in 5 Asian languages. PASSi's multilingual community coordinators and nurse educators were key to facilitating the cross cultural training. Founded in 2004, PASSi is a nonprofit home healthcare and vocational training agency in Pennsylvania focused on Asian immigrants. PASSi currently serves over 360 clients in 7 Asian languages. Judy Berry founded Lakeview Ranch Inc. in 1999 where she developed the Lakeview Ranch Model of Specialized Dementia Care™. This nationally recognized model restores dignity, choice and quality of life to Dementia/Alzheimer's patients, eliminates dementia related aggressive behavior, and reduces psychotropic drug use. Im Ja Choi, founder and Executive Director of PASSi, and Judy Berry, founder of Lakeview Ranch, Inc., are national winners of the Robert Wood Johnson Community Health Leader Award. Results : The trainings improved caregivers' understanding of Alzheimer/dementia symptoms and changed their initial approach and interaction with patients. Conclusion : We will discuss how the trainings enhanced overall health outcomes and reduced health care costs. Keywords : cross-culture, Alzheimer's, Asian

OP25 106-S-6

CRITICAL INVESTIGATION OF THE POLITICAL IDEOLOGY INHERENT IN THE SUCCESSFUL AGING MODEL OF JAPAN

Heekyoung KIM (*Department of Anthropology, Seoul National University, Korea*)

Introduction : In the 1990s, the Japanese government struggling with social problems caused by population aging adopted the traditional way of aging in Nagano as an aging-well model. In general western models, old people are often portrayed as active consumers who purchase anti-aging medicines to preserve their youth and enjoy their

later lives. In the case of Japan, however, the elderly carried the exact opposite image. The Japanese government portrayed the public image of Nagano elders as if they engaged in farming all their life and were reluctant to go to clinics because of their tendency toward frugality and hard work. This study critically examined the political backgrounds as to why the traditional way of life of Nagano elders was considered as a successful aging model by the Japanese government and the implications therefrom. Method : By analyzing government documents and statistical data, this study tried to evaluate the welfare policy for the elderly and carried out ethnographic fieldwork in the Nagano area to show the real life of its old people. Results : The Japanese government's strategy for coping with the population aging was to minimize social expenses particularly medical expenses of the elderly. The Nagano model was chosen because it met such political intention of the government, i.e., passing the weight of responsibility from the government to the individual families. Conclusion : It is important to note that successful aging is not just an academic theme, a consumer discourse or a popular image but rather a political ideology which compels old people to lead a certain way of life. Keywords : successful aging, Nagano, Population aging

OP25 107-S

LONG TERM CARE II

OP25 107-S-1

IS THERE REALLY ALZHEIMER? CAREGIVERS' PERCEPTIONS

Nutthita PETCHPRAPAI (*Institute of Nursing, Suranaree University of Technology, Thailand*)

Introduction : Alzheimer is a common disease among older adults that leads them totally depend on their caregivers. Method : This study was aimed to explore the extent of Alzheimer through perceptions of their caregivers. Data were collected by using the Symptoms of Alzheimer Checklist developed by the Deputy of Mental Health, Ministry of Public Health, Thailand. Data were collected by face to face interview caregivers from three setting; a tertiary hospital, nursing home and in community. Results : Participants were 133 older adults, 60-95 years of age (mean = 75.31, SD = 7.953), most were men (67.7%), married (51.9%) and suffering from at least one chronic disease (91%). The most frequently reported chronic diseases were hypertension (49.6%) and diabetes (32.1%). Caregivers reported that 65 older adults were at risk of Alzheimer whereas only 28 were normal. The extent of Alzheimer was significantly different among participants from those three settings ($F = 7.802, p < .05$). The highest risk was found in participants admitted in the hospital. Conclusion : Hospitalized older adults as well as those resided on Government nursing home were at higher risk of Alzheimer. It is recommended that brain training activities for those older adults should promote. Keywords : Alzheimer; Caregiver

OP25 107-S-2

FOREIGN DOMESTIC WORKERS CAN EASE THE BURDEN OF CAREGIVING: THE SINGAPORE SURVEY ON INFORMAL CAREGIVING

Truls ØSTBYE, Rahul MALHOTRA, Chetna MALHOTRA, Chandima ARAMBEPOLA, Angelique CHAN (*Program in Health Services and Systems Research, Duke-NUS Graduate Medical School, Singapore*)

Introduction : With an aging population, shrinking family size and high female workforce participation, many families in Singapore employ foreign domestic workers (FDWs) to help care for their

elderly. This study assesses the moderating effect of instrumental support by a FDW on the impact of four types of impairments (physical function, memory, behavior and mood) among older persons on their primary informal caregivers (CG). Method : Data from a national survey of 1,190 Singaporeans aged 75+ receiving human assistance for activity of daily living limitations and their CGs was used. A modified version of the Caregiver Reaction Assessment (CRA) assessed the impact of caregiving in four domains: schedule and health, finances, lack of family support and esteem. Linear regression models, one for each CRA domain, adjusting for older person and CG characteristics, with interaction terms of the four impairment severity scores with FDW support, were developed. Results : FDW instrumental support, reported for 50.0% of the older adults, reduced, or even reversed, the negative impact of physical impairment on schedule and health ($p=0.05$), of memory impairment on schedule and health ($p<0.0001$) and lack of family support ($p=0.03$), and of behavior impairment on lack of family support ($p=0.05$) and esteem ($p=0.008$). Conclusion : Provision of FDW support is beneficial for informal caregivers of older adults, the benefit increasing with an increase in older person impairment severity. Given its aging population, the number of FDWs in Singapore is likely to increase. This has policy implications for immigration patterns into Singapore, and training of and support networks for FDWs. Keywords: caregivers; frail elderly; activities of daily living

OP25 107-S-3

EXPLORING NURSING ASSISTANTS' ROLES IN THE PROCESS OF PAIN MANAGEMENT FOR COGNITIVELY IMPAIRED NURSING HOME RESIDENTS: A QUALITATIVE STUDY

Liu JUSTINA YAT WA (School of Nursing, The Hong Kong Polytechnic University, Hong Kong)

Introduction : Nursing assistants provide most of the direct care to residents and represent the major taskforce in nursing homes. They may develop specialized knowledge of residents' pain experience and be able to play both a pivotal role in pain assessment and possibly a supporting role in pain treatment. Currently, there is a lack of research into nursing assistants' functions in pain management. Method : This study aims to explore nursing assistants' roles during the actual process of pain management (assessment, reporting, implementation of pain-relieving interventions and re-assessment) for cognitively impaired home residents with pain. This study used a descriptive and exploratory qualitative approach. Semi-structured interviews were carried between May and September 2010 with 49 nursing assistants from 12 nursing homes in Hong Kong with various amounts of experience in caring for residents in pain. Results : Analysis of interview transcripts revealed four roles of nursing assistants in the pain management process: (1) pain assessor, (2) reporter, (3) subordinate implementing prescribed medications and (4) instigator implementing non-pharmacological interventions. Conclusion : This study highlighted the importance of nursing assistants in successful pain assessment and identified the possible supporting roles of them in other aspects of pain management. However, due to the scope of practice of nursing assistants, their functions in different processes of pain management were continually undervalued by other healthcare professionals. Therefore, adequate training was suggested to ensure that nursing assistants have sufficient knowledge and skills to execute their duties in pain assessment and other aspects of pain management for residents. Keywords : nursing assistants, nursing homes, pain management.

OP25 107-S-4

NEW MODEL OF EMPOWERMENT COMMUNITY CARE FOR THE HIGH-RISK FRAIL ELDERLY: THE EMPOWERMENT COMMUNITY CARE PROGRAM

Leung SIU HUNG¹, Yau PIK SU¹, Chan PUI FONG², Chin CHUEN FUN², Chiu LING TAI², Chau YEUK SZE², Karn KIN YI², Lam SHUK YIN², Tsang SUK YEE², Yu LAI CHUN², Wong YUK YING² (1. Nursing Service Division, Kowloon East Cluster, United Christian Hospital, Hong Kong; 2. Community Nursing Service, Kowloon East Cluster, United Christian Hospital, Hong Kong)

Introduction : Nearly 30% of patients aged over 65 having 3 or more hospital admissions are common in Hong Kong. The Empowerment Community Care Program was an intensive nursing community care under protocol driven, Case Management model and "Level of Care Triage model" for empowerment of frail elders and caregivers' self efficacy and prevention of the unplanned readmission. Method : This was retrospective review study. Patient under this program were recruited from 1st October, 2011 to 31st March, 2012. Descriptive data of patients' demographics, disease and care categories, nursing care time, Empowerment score (a set of Key Performance Indicators for evaluating the effectiveness of community nurses in chronic disease home care management), hospital readmission rate were analyzed. Results : Three hundred and nine cases were recruited. Mean age was 74.7 years old. Majority were suffering from DM, cardiovascular, respiratory disease provided protocol driven specific nursing care by designated community case managers under the "Level of Care Triage model". Mean home care intervention was 7.4 and more than 50 minutes tailor-made care were provided on each care. The overall empowerment score was improved by 96%. For comparison with ordinary care, the unplanned readmission was by reduced 8.2% and the satisfactory recovery rate increased by 12.4%. Conclusion : This program demonstrated the crucial role of community nurses in enhancing patient self chronic disease empowerment and reducing unplanned readmission in post discharged frail elderly. Keywords : Self care empowerment, community nurse

OP25 107-S-5

PHYSICAL RESTRAINTS (PR) AND THEIR AVAILABILITY IN LONG-TERM-GERIATRIC-CARE-HOMES

Uwe BRUCKER (Deputy Manager, Institute for The Improvement of The Living Conditions of Persons with Impairment of DLS(PEA e.V.), Germany)

Introduction : Physical restraints (bedrails, belts, fixed-tables, braked wheelchairs near a table) are commonly used in long-term-care-geriatric-facilities. The reasons given by the carers are internationally comparable: safety-measure like prevention from falls; fear of liabilities, controlling disruptive behaviour. The ratio of the daily restraint-ratio presents considerable variation among facilities both between and within countries. Main target-groups of physical restraints are persons suffering from dementia. With the available evidence it is disputable whether PR use can be legitimated in reference of challenging behaviour, reducing the risk of falling or fall-related injuries. Observational studies have suggested that PR go along with serious side effects from severe injuries to mortality. Method : Clinical controlled trials almost include interventions like different educational programs for the staff; organizational interventions or the provision of potential (Technical) alternatives for preventing and reducing physical restraints (PR) in long-term geriatric care. The burden of educational programs both in terms of training and time seem to be high compared with the results of the reduction. In Germany a combination of different approaches seem to be successful: educational programs, a conventional management approach

complemented by the judge who must legalize the PR in LTC-facilities (in Germany) can lead to a change of attitudes towards PR. Results : A pronounced reduction of PR in educational/technical interventions of 20 percent maximum in the intervention group; and a considerable increased reduction up to 80-90 percent with the management approach and the judge. Conclusion : Better quality of life for the residents and their families and increased staff satisfaction. Keywords: Physical Restraints; Long-Term-Geriatric-Care; Avoiding approaches

OP25 107-S-6

HEMOCARE FOR OLDER PEOPLE IN 10 ASEAN COUNTRIES

Hyunse CHO (President, HelpAge Korea, Korea)

Introduction : It is estimated that the proportion of older persons in South-East Asia will triple between 2000 and 2050. This causes a growing need for welfare and health services for older persons. However, the responsibilities for the care of older persons by family are getting weaker due to trends of nuclear families, prevailing migration, and participation of women in the work while coverage of the care services is limited by governments. Homecare is one of the community based programs to reduce the above risks. Method : HelpAge Korea firstly initiated Homecare Programme in 1987 and took a lead role for its institutionalization in 1993. Based on the Korean experience, HelpAge Korea and HelpAge International shared the Korean model with 10 ASEAN countries under the project of 'Homecare for Older People in ASEAN countries' supported by ASEAN-ROK Special Cooperation Fund from April 2003 to May 2012. Results : As a result of the project, in Phase 1, under its objective of Model Development, 9 countries developed their adapted Homecare model successfully. In Phase 2, under its objective of Model Expansion, Homecare was expanded into other areas by replicating the model in 5 countries. In Phase 3, for the Institutionalization of Homecare Program, the national guideline of Homecare was successfully accepted in 4 countries. Conclusion : In this presentation, the result and impact of Homecare project will be shared to raise awareness of ageing issue and importance of supporting older persons with community-based service in developing countries. Keywords : Homecare, Community Based Care, Volunteer

OP25 117-B

IMMUNE-RELATED AGING

OP25 117-B-1

THE EFFECT OF AGEING ON INFLAMMATION AND DEATH ASSOCIATED PROTEINS IN PARACETAMOL INDUCED HEPATOTOXICITY IN FISCHER 344 RATS

John MACH¹, Aniko HUIZER- PAJKOS², Alice KANE¹, Brett JONES³, Victoria C. COGGER⁴, Catriona MCKENZIE³, David G. LE COUTEUR⁴, Sarah N. HILMER¹ (1. Laboratory of Ageing and Pharmacology, Kolling Institute of Medical Research, Royal North Shore Hospital and University of Sydney, Australia; 2. Laboratory of Ageing and Pharmacology, Kolling Institute of Medical Research and Royal North Shore Hospital, Australia; 3. Laboratory of Liver and Digestive Diseases and Gastroenterology, Kolling Institute of Medical Research, Royal North Shore Hospital and University of Sydney, Australia; 4. Centre for Education and Research on Ageing and Anzac Research Institute, Concord Hospital and University of Sydney, Australia; 5. Dept of Tissue Pathology and Diagnostic Oncology, Royal Prince Alfred Hospital, Australia)

Introduction : Paracetamol (APAP) induced hepatotoxicity is associated with inflammation and opening of mitochondrial membrane

permeability transition pores through the intrinsic cell death pathway. We assessed the effects of old age on these processes. Method : Young adult (6±1 months) and old (26±2 months) male Fisher 344 rats were injected intraperitoneally with 800mg/kg APAP (Young n=9, Old n=9) or saline (Young n=8, Old n=5) four hours prior to euthanasia. Serum alanine aminotransferase (ALT) and liver histology indicated the degree of hepatotoxicity. Serum inflammatory markers (RANTES, IL-10, TNF-alpha, GRO-KC, INF-gamma, IL-1b, IL-6, IL-4) were measured via Multiplex assays. Kupffer cells were counted on liver sections, and phagocytic activity assessed by recovery of 500nm microspheres after single pass hepatic perfusion. Hepatic expression of proteins involved in the intrinsic cell death pathway (cytosolic and mitochondrial BAX, BID) were assessed by immunoblot. Results : Serum ALT was less elevated in APAP treated old rats than young (p<0.05). In APAP treated old rats, IL-10 was higher than other groups (p<0.005). Kupffer cell numbers were higher in old than young controls (p<0.05), but did not differ significantly with treatment. No difference in phagocytic function was observed with age or treatment. Cytosolic BAX and BID were >2 times lower in old than young rats regardless of treatment (p<0.05). No significant difference was observed in mitochondrial BAX and BID between age and treatment groups. Conclusion : Our preliminary results suggest reduced inflammatory response in old rats may provide a mechanism for protection against APAP toxicity and old rats have lowered reserve for the intrinsic death pathway. Keywords : Paracetamol, Hepatotoxicity, Inflammation.

OP25 117-B-2

AGEING-ASSOCIATED MODIFICATION OF EXPRESSION OF CALPAINS AND CALPASTATINS IN HUMAN LYMPHOCYTES - PRELIMINARY RESULTS FROM THE POLISH - ITALIAN "CALPACENT" PROJECT

Jacek M. WITKOWSKI¹, Anna MIKOSIK¹, Ewa BRYL¹, Jerzy FOERSTER², Calogero CARUSO³, Giuseppina COLONNA-ROMANO³ (1. Pathophysiology, Medical University of Gdansk, Poland; 2. Clinical and Social Gerontology, Medical University of Gdansk, Poland; 3. Pathobiology and Medical and Forensic Biotechnologies, University of Palermo, Italy)

Introduction : The calpain-calpastatin system (CCS) of limited, regulatory, strongly Ca²⁺-dependent intracellular proteolysis consists of two ubiquitous cysteine proteases: μ - and m-calpains as well as of their endogenous intracellular inhibitors - calpastatins. The activity of CCS is implicated in various functions of activated cells, including notably control over apoptosis. We were the first to show that hyperactivity of μ -calpain lies behind escape from apoptosis exhibited by human chronic B-cell leukemia (B-CLL) cells, that total μ -calpain activity increases in the non-leukemic T cells of old mice and later, that the endogenous activity of the enzyme (but not its expression) is elevated in the CD4+ lymphocytes of elderly humans. Method : In the current international CALPACENT project, we aim at comparison of expression and activities of the members of the CCS system in various populations of human peripheral blood lymphocytes in Polish and Italian (Sicilian) centenarians, elderly and young cohorts. Results : Our preliminary results suggest the existence of differences in the expression of CCS members between the different lymphocyte populations (including the CD4+, CD8+, CD19+ and chosen subpopulations of these) both within and between the age groups. As a surprising finding we report here that m-calpain (nominally requiring millimolar concentrations of Ca²⁺ for its activity and considered to be expressed predominantly in the muscle) is also relatively strongly and variably expressed in various types of human blood lymphocytes derived from healthy people of different age. Conclusion : Concluding, the calpain-calpastatin system seems to be disturbed in the

lymphocytes of elderly and centenarians, possibly impacting on their immune performance. Keywords : calpains, calpastatins, lymphocytes

**OP25 117-B-3
INDUCTION OF CELL DIFFERENTIATION AS
GEROPROTECTIVE MECHANISM OF PEPTIDES IN
NEURO-IMMUNE-ENDOCRINE ORGANS**

Vladimir KHAVINSON, Natalia LINKOVA, Svetlana TARNOVSKAYA, Valeriia PRONYAEVA, Svetlana TROFIMOVA (Biogerontology, Saint Petersburg Institute of Bioregulation and Gerontology, Russia)

Introduction : Cell differentiation is the most important process in ontogenesis. During aging a cell loses its capability to differentiate. This process is accompanied by decreasing functional activity of immune, nervous and endocrine system. Method : Peptide Lys-Glu has been identified to stimulate the differentiation of CD34+ human embryonic stem cells into CD14+ cells (myelocyte), CD3+cells (T-lymphocytes progenitors) CD4+cells (T-helpers) and CD8+ cells (cytotoxic T lymphocytes). Results : The ability to differentiate into different types of tissues depending on injected peptides was found in the culture of pluripotent *Xenopus laevis* cells. Peptide Ala-Glu-Asp-Gly stimulates the origin of nervous tissue, peptide Lys-Glu-Asp-Pro stimulates the origin of epidermis, mesenchymal tissue and somites. In elder cultures of human pancreatic cells peptide Lys-Glu-Asp-Trp normalizes the expression of differential factors Rtf1a, Rpbjl, Pdx1, Pax6 in β -cells, Foxa2, NKx2.2 in α -cells, Pax4 in pancreatic cells up to the expression observed in younger cultures. In retinal cells peptide Lys(H-Glu-OH) induces the expression of differential factors in different types of neurons: Brn3, Marth5, Chx10, Vsx1, Pax6, Math1, Prox1. Conclusion : Thus, the peptides induce cell differentiation in thymus, pancreas and retina depending on their structures, this can be one of the major mechanisms of their geroprotective effects in the neuro-immune-endocrine system. Keywords : geroprotective peptides, cell differentiation, thymus, pancreas, retina

**OP25 117-B-4
AGING-ASSOCIATED INFLAMMATION IN HEALTHY
INDIVIDUALS AND WERNER SYNDROME**

Makoto GOTO¹, Masanobu SUGIMOTO², Yasuhiro FURUICHI², Masaaki MATSUURA³, Yuichi ISHIKAWA⁴, Sachiko IWAKI-EGAWA⁵, Yasuhiro WATANABE⁵ (1. Rheumatology, Tokyo Women's Medical University, Japan; 2. Molecular Biology, GeneCare Institute, Japan; 3. Cancer Genomics, Cancer Institute, Japan; 4. Pathology, Cancer Institute, Japan; 5. Life Sciences, Hokkaido Pharmaceutical University, Japan)

Introduction : Although the fundamental mechanism(s) of human aging remains unclear, the significant contribution of minor, low-grade, systemic inflammation mainly monitored by highly sensitive CRP (hsCRP) to aging has been proposed as inflammaging. Werner syndrome (WS; MIM#27770): the representative progeroid syndrome without apparent systemic inflammation has been extensively studied as the natural model of human aging. Method : To study the inflammatory condition associated with human aging, both hsCRP and matrix metalloproteinase-9 (MMP-9) were examined in the sera collected from 217 healthy Japanese individuals (ages between 1 and 100 y.o.) and 41 mutation-proven Japanese WS patients (ages between 32 and 70 y.o.). Both hsCRP and MMP9 were assayed by ELISA. Results : Both serum levels of hsCRP and MMP-9 increased significantly ($p<0.001$, $p=0.003$, respectively) with normal aging from both sexes. The serum hsCRP significantly elevated in WS compared with age-matched normal population ($p<0.001$) and normal elderly

population (ages between 71 and 100 y.o.) ($p<0.001$). The serum MMP-9 level in WS did not change significantly compared either with age-matched normal population nor normal elderly population. Conclusion : Although both normal aging and WS were associated with minor inflammation:inflammaging, the inflammatory parameters such as serum hsCRP and MMP-9 changed differently between normal aging and WS. Keywords : CRP, inflammaging, Werner syndrome

**OP25 119-B
AGING AND DISEASES**

**OP25 119-B-1
CRITICAL SLOWING DOWN OF RECOVERY RATE
FOLLOWING A PERTURBATION IS AN EARLY WARNING
SIGN FOR CLOSENESS TO CRITICAL TRANSITIONS IN
AGE-RELATED, CHRONIC DISEASES**

Joep LAGRO¹, Jurgen CLAASSEN¹, Rene MELIS¹, Vasilis DAKOS², Bernard FIKKERS³, Marten SCHEFFER⁴, Marcel OLDE RIKKERT¹ (1. Geriatrics, Radboud University Nijmegen, Medical Centre, Netherlands; 2. Integrative Ecology Group, Estacion Biologica de Donana, Spain; 3. Intensive Care Medicine, Radboud University Nijmegen, Medical Centre, Netherlands; 4. Department of Aquatic Ecology and Water Quality Management, Wageningen University, Netherlands)

Introduction : Recently solid evidence was delivered in systems biology and ecology that validated Critical Slowing Down (CSD) of recovery following a light perturbation of complex systems as early warning signal of being near to a critical transition or tipping point. Here we present evidence and examples of CSD as early warnings of critical transitions in the geriatric context. Method : 1. We analyzed mortality data of 238 consecutive patients after a visit to our falls clinic, at which we measured bloodpressure(BP) recovery rate following a supine-standing maneuver. 2. Additionally, a focus group was organized of 11 internationally reknowned experts from medicine/psychology ($n=5$), ecology/mathematical biology ($n=6$), a systematic and a realist literature review were carried out to collect other empirical data and examples of CSD. Results : ad 1. First minute CSD in systolic BP recovery, resulting in BPs less than 80% from baseline was a powerful independent predictor of mortality: hazard ratio:3.00 (95% confidence interval:1.17-7.68). Ad 2. Similarly, increased recovery time of: fluid depletion by thirsting, dysbalance by pull-test, cardiac depolarization by electrocardiac pacing, minute-ventilation during weaning, immobility by hospitalizing frail elderly, are early warning signs for: recurrent dehydration, falling, atrial/ventricular tachycardia, recurrent tube-dependency, and mortality. Conclusion : Critical slowing down of recovery rate may be used to scale complex organ-systems from robust to fragile, and may be used as early warning signs for closeness to a critical transition in multiple, age related, chronic diseases. These early warnings may be used more frequently in geriatrics by applying recent innovations in digitalized monitoring systems that greatly facilitate time-series-analyses. Keywords : Critical slowing down, tipping points

**OP25 119-B-2
ACCELERATED IN VIVO AND IN VITRO TELOMERE LOSS
IN WERNER SYNDROME**

Naoshi ISHIKAWA¹, Ken-ichi NAKAMURA¹, Naotaka SHIMOMURA¹, Junko AIDA¹, Makoto GOTO², Yuichi ISHIKAWA³, Masaaki MATSUURA⁴, Atsushi HATAMOCHI⁵, Kaiyo TAKUBO¹ (1. Research Team for Geriatric Pathology, Tokyo Metropolitan Institute of Gerontology, Japan; 2. Department Medical Technology, Faculty of Medical Engineering, Toin University of Yokohama, Japan

3. Department of Pathology, Cancer Institute, The Japanese Foundation for Cancer Research, Japan; 4. Bioinformatics Group, Genome Center, The Japanese Foundation for Cancer Research, Japan; 5. Department of Dermatology, Dokkyo University School of Medicine, Japan)

Introduction : Werner syndrome (WS) is an autosomal recessive disorder characterized by premature onset of major geriatric diseases. Many data pertaining to the accelerated telomere loss in cultured cells derived from WS have been accumulated. However, there have been few definitive data on in vivo telomere shortening in WS. Furthermore, only limited numbers of WS cell strains have been analyzed in vitro experiments. Method : 1) We measured terminal restriction fragment (TRF) lengths of 10 skin samples collected from surgically amputated extremities of 8 WS patients aged between 30 and 61 years because of skin ulceration. 2) 11 fibroblast strains were established from WS patients skin aged between 38 and 57. We measured telomere lengths of these samples, and determined maximum population doubling level (PDL). Results : 1) Regression analyses indicated that the TRF length of epidermis in WS patients was significantly shorter (corresponding to 26 years older) than that in controls ($p < 0.001$). We also found that TRF lengths in muscle adjacent to the examined epidermis were significantly shorter than those of controls ($p = 0.047$). 2) The maximum PDLs in WS fibroblasts were significantly smaller than those in controls ($p < 0.0001$), and showed remarkable individual difference among the strains. Conclusion : These data demonstrate accelerated in vivo telomere loss in WS patients for the first time, and considerable individual variance of telomere lengths among the WS patients and WS derived cell strains; suggesting that abnormal telomere erosion is one of the major causes of early but variable onset time of age-related symptoms and malignancies in WS. Keywords : telomere; Werner syndrome; segmental progeroid syndrome

OP25 119-B-3

THE THERAPEUTIC EFFECTS OF ICARRIN ON AMYLOID- β BURDEN IN A MOUSE MODEL OF ALZHEIMER'S DISEASE

Lan ZHANG, Lin LI (Pharmacology, Xuan-Wu Hospital of Capital Medical University, China)

Introduction : To investigate the effect and pharmacological mechanism of Icarrin(ICA), which is the main component extracted from a traditional Chinese Epimedium herb, on A β production in AD-like APP transgenic mice. Method : PDAPPV7171 transgenic (Tg) mice were randomly divided into model group and ICA treated (at doses 30 and 100 $\mu\text{mol/kg/d}$) groups. ICA was orally administered to Tg mice with an age range 4-10 months. The burden of A β was measured by ELISA and immunohistochemistry. The amyloid senile plaques were detected by Congo red staining and Bielschowsky silver staining. The expression of APP and BACE-1 were measured by immunohistochemistry and Western blot. The co-expression of A β with amyloid fibers was detected by applying double labeled immunofluorescence. Results : Orally administered ICA decreased the number of amyloid senile plaques in hippocampus of Tg mice. The immunohistochemical examination of brain sections stained with polyclonal anti-A β antibody showed reduced A β burden, and A β levels were also decreased in the insoluble fractions of brain homogenates, as determined by ELISA. The expression of APP and BACE-1 in hippocampus was significantly decreased in ICA treated groups. Conclusion : ICA could reduced the A β burden and plaque deposits in the hippocampus of APP transgenic mice through depressing the expression of APP and BACE-1. Icarrin may have a

promising application prospect in treatment of AD. Keywords : Alzheimer's disease (AD), β -amyloid, Icarrin

OP25 119-B-4

THE QUALITY OF REPORTS OF PHYSIOTHERAPY RANDOMISED CONTROLLED TRIALS IN GERONTOLOGY

Catherine SHERRINGTON¹, Anne MOSELEY¹, Mark ELKINS², Lee JANER³, Julia HUSH⁴ (1. Musculoskeletal Division, The George Institute for Global Health, Australia; 2. Department of Respiratory Medicine, Royal Prince Alfred Hospital, Australia; 3. Physiotherapy Student, Faculty of Health Sciences, The University of Sydney, Australia; 4. Discipline of Physiotherapy, Department of Health Professions, Macquarie University, Australia)

Introduction : The Physiotherapy Evidence Database (PEDro, www.pedro.org.au) is a free, online evidence resource which indexes reports of randomised controlled trials, systematic reviews and clinical practice guidelines in physiotherapy. The quality of reports of trials in gerontology compared to other areas of physiotherapy is not known. This study aims to assess the quality of trial reports in gerontology as compared to other areas of physiotherapy. Method : All reports of randomised controlled trials indexed on PEDro on 9 November 2011 were extracted. Data included citation details, language of publication, codes for area of physiotherapy and the PEDro scale. Multiple linear and logistic regressions were used to determine which factors were associated with the total PEDro score and individual PEDro scale items. Results : A total of 14,910 trial reports were included in the analysis. Gerontology was the third most common subdiscipline (2426 trials, 16%) and had the third highest mean total PEDro score (4.97 out of 10, SD 1.53). Multivariate linear regression showed trials in gerontology and a number of other subdisciplines were associated with higher total PEDro scores but explained little of the variance (R^2 of full model = 0.11, $p < 0.001$). Multiple logistic regression showed trials in gerontology were associated with reports of achieving the following PEDro scale items: eligibility criteria and source specified (OR 1.45), random allocation (1.49), baseline comparability (1.55), blinding of subjects (0.58), blinding of assessors (1.18), intention-to-treat analysis (1.24). Conclusion : There is potential to improve the quality of reports of randomised controlled trials in gerontology physiotherapy. Keywords : evidence based practice, physiotherapy, randomised controlled trials

OP25 119-B-5

CONSENSUS OF GERIATRIC SYNDROMES IN ASIAN-PACIFIC GERIATRICS SOCIETIES

Chang Won WON¹, Hyung Joon YOO², Chang Oh KIM³, Sung Hoon YU⁴, Jong Lull YOON⁵, Geriatric Syndrome Committee, Korean Geriatric Society (1. Dept. of Family Medicine, College of Medicine, Kyung Hee University, Korea; 2. Division of Endocrinology and Metabolism, Hallym University College of Medicine, Korea; 3. Division of Geriatrics, Department of Internal Medicine, Severance hospital, Yonsei University College of Medicine, Korea; 4. Division of Endocrinology and Metabolism, Hallym University College of Medicine, Korea; 5. Dept. of Family Medicine and Geriatrics, College of Medicine, Hallym University, Korea)

Introduction : Geriatric syndrome is a complex clinical conditions that are common in older persons and do not fit into discrete disease or syndrome categories. It seems to be a result of the accumulation of impairments in multiple systems and share common predisposing factors with other geriatric syndromes. Geriatric syndrome is important in elderly as it is associated with multiple comorbidities and poor outcomes such as increased disabilities and decreased quality of

life. However the geriatric syndrome is not universally defined yet. Method : We made a survey of definition and diagnostic criteria for some geriatric syndromes in Asian-Pacific geriatrics societies; Geriatrics societies of Korea, Japan, Taiwan, China, Hong Kong, Indonesia, India, Singapor, Philiphine, Australia were surveyed. The questionnaire asked about the components of geriatric syndromes. Results : Dementia, incontinence, delirium, falls were accepted as geriatric syndromes in all those 10 countries. Depression, hearing impairment, visual impairment, immobility, gait disturbance, pressure ulcer, sarcopenia, malnutrition were accepted as geriatric syndromes in 9 of the 10 countries. Conclusion : The resulting informations from the questionnaire help us better understand the consensus in concepts of geriatric syndromes in Asian-Pacific geriatric societies. Keywords : geriatric syndrome, Asian-Pacific

OP25 120-S ADAPTATION AND SUCCESSFUL AGEING

OP25 120-S-1 EVOLUTION OF A RESOURCE GROUP FOR HEALTHY AGING: THE PHILIPPINE EXPERIENCE

Lydia Tolentino MANAHAN (*College of Nursing, University of the Philippines Manila, Philippines*)

Introduction : The increasing number of older persons has been seen as a threat to the resources of the individual, the family, and the community. The purpose of this study was to explore the factors that will motivate a social group of older persons into becoming a resource group for healthy aging. Method : This study is explorative in nature. The investigator participated and observed in the socialization of a group of ten older persons who were mostly nurses and whose age ranges from 69 to 86. Results : Similarities of their previous career experience draw them together. Learning and mobility incorporated to the socialization made the group more cohesive and participative in the activities. Initially, their social support function is directed toward satisfying individual needs and maintaining solidarity. As the months went on, their social support function is gearing towards fulfillment of the task of becoming a resource to one another. Their togetherness has developed in them communication of positive effect, sense of belonging or social integration, and elements of reciprocity. Lastly, having a place that will allow them to socialize freely was also essential. Conclusion : This study is still ongoing, however, several constructs can explain the motivation in this group of older persons. A socialization group can be a good venue in helping them to become more healthy and productive in their old age. They themselves can become resources not only for themselves but also for others. The socialization group approach might be a better way in deriving culturally appropriate interventions for older persons.

Keywords : resource group, healthy aging, motivation

OP25 120-S-2 TRANSITIONING THROUGH LIFE STAGES: SIMILARITIES & DIFFERENCES IN SELF-PERCEPTIONS OF AGEING BETWEEN YOUNG & OLD IN TWO DIFFERING CULTURES

Natasha GINNIVAN (*Centre for Research on Ageing Health & Wellbeing, Australian National University, Australia*)

Introduction : This qualitative study examined cultural differences in perceptions of ageing between a predominantly Western and individualist culture (Australia), and a culture which is predominantly collectivist in its social organisation (The Philippines). Intergenerational contact, older role models, media portrayal of older people, self-efficacy and the importance of faith in later life were

discussed. Method : Focus groups were carried out on older (60-95, n=23) and younger people (20-35, n = 25) in both Australia and The Philippines. Nvivo 9 software with a grounded theory framework for analysis was used to extract the emergent themes from the transcripts. Results : Results showed that younger participants in both cultures viewed older people as potential role models in their ability to stay engaged through family and volunteer roles. Older individuals in the Philippines were more invested in their family roles as grandparents than in Australia. Overall, the younger and older participants in both cultures agreed that older people are less represented in the media, with the older Filipinos more inclined to report more positive representation of elders in their media than the Australians did. Both younger & older participants in the Philippines felt that faith was very important in the later stages of life whereas both younger & older participants in Australia acknowledged that it was important for some, but not as prevalent in Australian culture. Conclusion : The findings suggest that a collectivist culture may provide a more cohesive frame of reference for the social role of an older person than does an individualist culture. Keywords : Culture, Ageing, Collectivist

OP25 120-S-3 LIVING LONG VS LIVING ADAPTED: THE SITUATION OF POST RETIREMENT ADAPTATION OF ELDERLY IN KERALA, INDIA

Jacob John KATTAKAYAM (*Dept of Sociology, University of Kerala, Centre for Gerontological Studies, India*)

Introduction : The proportion of those above 60 years in Kerala is increasing and is much above the all-India figure of 8.2 percent. Though Kerala has advanced in education, healthcare, mortality, living standard, health, literacy and education, comparable to many developed nations, it is yet to evolve a social welfare strategy sensitive to the predicaments of its aged. The present study captures the situation of social adaptation of the elderly who have retired from active economic life in Kerala. Method : Both qualitative (in-depth interviews and observation) and quantitative (covering 300 elderly at random) data were used. A conceptual framework has been developed for analysis. Results : The post retirement adaptation of the elderly depends on various factors such as position after the retirement, age, gender, educational level, and marital status. Besides, health condition, type of family, income after retirement, length of life after retirement, preparation for retirement, participation in social activities and attitudes towards retirement too have a bearing on their adaptation. The increasing longevity in the state has intensified the problem. High percentage of lifestyle diseases, low mental health status, lack of social security and welfare measures for the elderly are major issues of concern. Conclusion : The elderly have problems of adaptation in their post retirement life, both within and outside their family. The changing social structural and cultural matrix and changed social statuses affect their adaptation. Economic factors are at the root of almost all other adaptation problems. Adaptation problems are visible in different age groups but in varying degrees. Keywords : longevity, retirement, adaptation

OP25 120-S-5 THE GLOBAL AND DIMENSIONAL RATINGS OF SUCCESSFUL AGEING

Xinyi GWEE¹, Shwe Zin NYUNT¹, Ee Heok KUA¹, Dilip V JESTE², Rajeev KUMAR³, Tze Pin NG¹ (*1. Department of Psychological Medicine, National University of Singapore, Singapore; 2. Department of Psychiatry, University of California, San Diego, USA; 3. Academic Unit of Psychological Medicine, Australian National University Medical School, Australia*)

Introduction : Dimension-specific formulations of successful ageing objectively defined by researchers have been criticized for failing to incorporate subjective perspectives of older adults themselves. More older adults tend to rate themselves as 'successful agers' from subjective appraisal, whereas fewer were rated as successful agers when objectively-defined criteria were applied. The objective of this study was to examine the construct validity of a self-rated analogue scale of successful ageing (SA) in an elderly Singaporean population. **Method :** Using a cross-sectional study design, data was collected from 500 community-dwelling Singaporeans aged 65 and over. Self-rated SA on an analogue scale from one to 10 (1=least successful to 10=most successful) was correlated to measures of 5 criterion-based specific dimensions of successful ageing (physical health and function, mental well-being, social engagement, psychological well-being and spirituality/religiosity), as well as outcome measures (life satisfaction and quality of life). **Results :** The constructed validity of a self-rated analogue scale of successful ageing in an elderly Singaporean population was supported. The 5 dimension-specific measures SA accounted for 16.7% of the variance in self-rated SA. Self-rated SA best predicted life satisfaction ($R^2=0.26$) than any of the dimension-specific measures of SA (R^2 range from 0.05 to 0.17). Self-reported SA was also independent of age, gender and medical comorbidity. **Conclusion :** A self-rated successful ageing analogue scale is a more comprehensive and sensitive measure of successful ageing, encompassing the spectrum of underlying dimensions of successful ageing. **Keywords :** successful ageing; self-rated analogue scale

OP25 120-S-6

MEDIATING ROLE OF SOCIAL SUPPORT IN THE RELATIONSHIP BETWEEN ACCULTURATIVE STRESS AND MENTAL PROBLEM AMONG AGED IMMIGRANTS

Jae Eun LEE¹, Jung Hye SUNG², Ji-young LEE³, James PERKINS¹
(1. *RTRN DCC, Jackson State University, USA*; 2. *Epidemiology and Biostatistics, Jackson State University, USA*; 3. *Psychology, University of Pittsburgh, USA*)

Introduction : Despite some evidences of an association of acculturative stress with mental problems, limited attempt has been made to investigate the role of social support in the relationship between acculturative stress and mental problems. Using data of 501 immigrants aged 60+ from the National Latino and Asian Study, this study aimed to determine both the association between mental problem and acculturative stress, and the role of social support in the association of mental problem with acculturative stress. **Method :** Acculturative Stress was defined by the sum of 9 items designed to measure the stress felt as a result of adapting one's own culture with a host culture. Family cohesion (FC) was measured by asking about the extent of agreement for each 15 statements describing emotional support, belongings, loyalty, respect etc. A dichotomized mental problem (no vs. 1 or more) was used for the analysis. Mediating role of social support was determined by the change of statistical significance in the relation between mental problem and acculturative stress within the hierarchical regression models controlling for potential covariates. **Results :** The hierarchical regression analyses demonstrated that mental problem was significantly associated with acculturative stress ($p=0.0477$) but the significant relationship disappeared after controlling for family cohesion and social network ($p=3266$). This pattern persisted only among Latino aged immigrants. **Conclusion :** The findings suggested the acculturative stress was indirectly associated with mental problem through family cohesion and social network. One implication of these findings is that social programs enhancing social support may reduce mental problem among Latino immigrants experiencing high acculturative stress. **Keywords :**

mental problem, acculturative stress, social support, immigrants

OP25 121-S

HEALTH PROMOTION III

OP25 121-S-1

THE ASSOCIATION BETWEEN AVERAGE DAILY STEPS AND LIFE-SPACE MOBILITY AMONG OLDER PEOPLE

Li-Tang TSAI, Erja PORTEGIJS, Merja RANTAKOKKO, Anne VILJANEN, Johanna ERONEN, Milla SAAJANAHO, Taina RANTANEN (*Gerontology Research Center and Department of Health Sciences, University of Jyväskylä, Finland*)

Introduction : Life-space mobility refers to the size of the spatial area (bedroom, home, outside home, neighbourhood, town, distant locations) a person purposely moves through in daily life, taking into account the frequency and need of assistance for that travel. We examined the association between average daily steps and life-space mobility among older people. **Method :** The analyses are based on cross-sectional data of 176 community dwelling men and women aged 75-90 who took part in the substudy of Life-Space Mobility in Old Age (LISPE) project in Jyväskylä, Finland. Participants wore an accelerometer (Hookie "AM20 Activity Meter") for 7 days. For this study, the average daily step count was used. Life-space mobility was assessed with Life-Space Assessment (LSA) questionnaire. Composite score was calculated, reflecting distance, frequency and independence of movement. It ranges from 0 to 120 with higher scores indicating larger life-space. **Results :** Men ($n=64$) walked on average 2958 steps (Standard Deviation, SD 3198) and women ($n=112$) 2673 steps (SD 2421) daily. Life-space composite score was significantly higher for men (Mean 78, SD 18) than for women (Mean 67, SD 18, $p<.001$). Spearman correlation analysis showed that average daily steps accounted for about 25% of the variation in Life-Space composite score for women, while among men the corresponding proportion was 7%. **Conclusion :** Women, who walk more, have larger life-space, while the life-space of men may depend more on other modes of transportation. **Keywords :** Life-space mobility, habitual walking

OP25 121-S-2

MINIMISING THE IMPACT OF CHRONIC PAIN IN LATER LIFE: A MIXED METHODS STUDY

Jane RICHARDSON¹, Andrew MOORE¹, Kelvin JORDAN¹, Julius SIM¹, Miriam BERNARD² (1. *Arthritis Research UK Primary Care Centre, Keele University, United Kingdom*; 2. *School of Public Policy and Professional Practice, Keele University, United Kingdom*)

Introduction : Chronic musculoskeletal pain impacts on older people's health and well-being, and is associated with increased use of healthcare and a decline in quality of life. However, many older people with chronic conditions describe themselves as healthy. This research adopted a salutogenic perspective - looking at factors that support health - to examine how older people can be helped to age well with pain, by exploring why some older people remain painfree, others experience interference from pain, and others have pain but no interference. **Method :** A mixed methods study integrated quantitative analysis of a longitudinal survey with semi-structured interviews. Responses to survey questions were used to create three groups: 'No pain', 'Pain with no interference', and 'Pain with interference'. Sixty interviews were carried out, stratified by pain group, age and gender. **Results :** Participants in the 'No pain' and the 'Pain with no interference' groups talked more about the role of social and physical activity, and 'involvement', in comparison to those in the 'Pain with interference' group. Comparison of expected to reported interference

suggested that these factors were important for participants who reported minimal interference from their pain. Conclusion : For older people with pain, social activity, physical activity and involvement are not simply outcomes of living with minimal interference from pain. They are lifestyle factors that contribute to living well and are also factors that give meaning to participants' lives. Through a more nuanced understanding and appreciation of the importance of these dimensions, clinicians can better support older people to live well with musculoskeletal pain. Keywords : chronic pain, salutogenesis, activity

OP25 121-S-3

NATIONAL STUDY OF CHRONIC DISEASE SELF-MANAGEMENT AMONG OLDER ADULTS: SIX-MONTH OUTCOME FINDINGS

Marcia ORY¹, Sangnam AHN², Matthew SMITH³, Luohua JIANG⁴, Kate LORIG⁵, Nancy WHITELAW⁶ (1. Department of Health Promotion & Community Health Sciences, Texas A&M University Health Science Center, School of Rural Public Health, USA; 2. Division of Health Systems Management and Policy, University of Memphis School of Public Health, USA; 3. Department of Health Promotion and Behavior, University of Georgia, School of Public Health, USA; 4. Department of Epidemiology and Biostatistics, Texas A&M University Health Science Center, School of Rural Public Health, USA; 5. Department of Medicine, Stanford University, USA; 6. National Council on Aging, USA)

Introduction : Concomitant with the aging of America, the older adult population is increasingly suffering from one or more chronic illnesses and living with such conditions for longer periods of time. The Chronic Disease Self-Management Program (CDSMP) helps older adults better cope with chronic disease-related symptomatology and improve their lifestyle behaviors and related health outcomes. Nevertheless, the long-term effectiveness of this evidence-based program has not been examined in a large-scale national dissemination. Method : We identified the baseline characteristics of CDSMP participants aged 65 years or older (n=687, mean age=74.8) who were part of a national study associated with a major U.S. initiative sponsored by the Administration on Aging from 2010 to 2012. Assessments were conducted 6 months (n=572) after enrollment in the program. Linear and generalized linear mixed models were performed to assess changes in primary and secondary outcomes, controlling the key socio-demographics and chronic conditions. Results : All primary outcomes (i.e., social/role activities limitation, depression, communication with doctors) significantly improved from baseline to 6-month assessments. Additionally, study participants reported improvements in self-assessed health status, fatigue, pain, shortness of breath, sleep problem, and unhealthy physical days. Conclusion : The current study showed the national delivery of CDSMP improved health outcomes and lifestyle behaviors among older adults. While further studies are warranted to investigate the effectiveness of CDSMP to save healthcare costs, primary care physicians including geriatricians should consider referral to CDSMP to improve patients' health and lifestyle behaviors. Keywords : Chronic Disease Self-Management Programs, Evidence-Based Programs, Lifestyle Behaviors

OP25 121-S-4

NUTRITIONAL ASSESSMENT OF ELDERLY INDIAN DIABETICS : A BIOCHEMICAL AND SOCIO-BEHAVIORAL ANALYSIS

Rishi Kumar NIGAM¹, Parul RISHI² (1. Pathology & Clinical Biochemistry, Rajeev Gandhi College, India; 2. Management, NITTR, India)

Introduction : Prevalence of Diabetes mellitus has reached epidemic proportions globally of which developing Countries are likely to bear maximum burnt in 21st century. Along with this, elderly population is also gaining very sizable proportion and is going to increase in future. Aging causes physical, physiological, and psychological changes which leads to changed needs and require constant and regular health supervision and the diabetes, a metabolic disorder in conjunction adds to various health problems. Looking at their specialized nutritional and psychosocial needs, the study of elderly diabetics was done to assess their nutritional status and psychosocial behavior. Method : For a case controlled study, 45 diabetic elderly (age < 60 years) of both the genders was selected from various areas through geriatric health camps held in Bhopal city of India along with control group of 45 non-diabetic elderly. To compare nutritional status and health assessment, mini nutritional assessment chart and anthropometrics measures like BMI, and waist circumference were used. Biochemical parameters like serum protein, cholesterol and HbA1c were assessed and correlated with anthropometric and behavioral measures (Geriatric Depression Scale) in both the groups. Results : Results analyzed in line with Indian lifestyle and dietary habits shows that 77% of diabetic elderly have high waist circumference and 63% are overweight or obese, 82% suffers from hypercholesterolemia quite higher to control group. A positive correlation with HbA1c and depression score (r = -0.988) was found. Conclusion : Elderly Indian diabetics are having central obesity with higher cholesterol levels and are likely to be more prone to depression. Keywords : Elderly Indian, Diabetics, Nutritional status, Behavioral analysis

OP25 121-S-5

DEPRESSION CARE MANAGEMENT PROGRAMME IN PRIMARY CARE SETTING: A PILOT STUDY

Angela Yee Man LEUNG¹, Daniel Wai Sing CHU², Alison YUNG³, Josephine WONG⁴, Andrew C K LAW⁴ (1. School of Nursing, The University of Hong Kong, China; 2. Family Medicine and Primary Health Care, Hong Kong East Cluster, Hospital Authority, China; 3. Continuing Care, St. James' Settlement, China; 4. Department of Psychiatry, The University of Hong Kong, China)

Introduction : Older adults with chronic illness were reported with depressive symptoms but many of them did not receive essential treatment and care. Depression care management programme was piloted in a primary care clinic from March 2010 to October 2010 in Hong Kong. This study reported the effects of this DCM programme on patients' health-related quality of life, mental health and social network. Method : A quasi-experimental design, using SF-12 Health Survey, Depression, Anxiety, Stress Scale (DASS) and Lubben Social Network Scale (C-LSNS). T-test was used to measure the difference between pre-intervention and post-intervention tests. Results : A total of 34 subjects completed the pre-intervention and post-intervention questionnaires. Majority (79.4%) of the subjects was female and mean age (SD) was 63.26 (10.73). 24% had diabetes and 59% had hypertension. Mental health component of SF-12 changed significantly after the intervention (mean difference (m.d.) = 13.42, p < 0.001). Depression was reduced significantly after the intervention (m.d. = -9.59, p < 0.001). Similar pattern occurred in anxiety and stress. Social network was also improved after the intervention (m.d. = 4.06, p < 0.05). Conclusion : DCM programme seemed to improve participants' mental health and social network. Study with larger sample is warranted to show the actual effects of this programme. Keywords : depression, care management, mental health, primary care

OP25 121-S-6

WALKING EXERCISE RCT FOR OLDER KOREAN-

AMERICAN IMMIGRANTS: EFFECTS ON WALKING, DEPRESSIVE SYMPTOMS, STRESS, AND CARDIOVASCULAR BIOMARKERS

Mo-Kyung SIN¹, Brandon IBARRA², Thomas TAE³, Kelly BIETTE⁴, Patrick MURPHY³ (1. *Psychosocial and Community Health, Seattle University, USA*; 2. *Nursing, Harborview Medical Center, USA*; 3. *Nursing, Seattle University, USA*; 4. *Science and Engineering, Seattle University, USA*)

Introduction : Cardiovascular risk factors such as physical inactivity and depression are highly prevalent among older Korean American immigrants (KAIs). Despite well-known benefits of walking to cardiovascular health, no structured walking exercise program has been formally tested in this group. Our pilot RCT assessed the effects of a Walking Exercise Program (WEP) for older KAIs on walking behavior (steps count) via pedometer, self-reported depressive symptoms (CESD-10), stress (serum cortisol) and CVD biomarkers (serum hs-CRP and fibrinogen). **Method :** Seventy older KAIs recruited from a Korean senior center and a Korean church were randomly assigned to a 12-week WEP or usual activity control group in a 3:2 ratio. The WEP included daily pedometer use, buddy system, monthly coffee card, weekly call for goal setting, and physical activity consultation. **Results :** The dominant participants (mean age: 73 (60-87) were female, married and exercising ≥ 3 /wk in the past week. WEP KAIs maintained the CDC recommended exercise guidelines and good mental health status over 12 weeks. There were no significant differences between and within groups in measures at baseline or 12 weeks. **Conclusion :** All KAIs in this study were regular participants of a Korean senior center and a Korean Catholic church (Silver College for seniors) and thus were functionally independent and motivated. Further, social networking among Koreans in the Senior Center and church within a well-established Korean community may have been protective for their mental health. Future studies should incorporate longer-term follow-up, strength exercise, daily step measures in both groups, and recruitment of participants with a broader baseline status range. **Keywords :** depression, serum biomarkers, walking.

OP25 122-S HEALTH PROMOTION IV

OP25 122-S-1 THE POSSIBILITIES FOR ENSURING OVERALL RESIDUAL CAPACITY THE ELDERLY PEOPLE IN THE INFORMATION WORLD

Olena Sergiivna TOMAREVSKA, Oleksandr Anatoliyovych POLIAKOV (*Laboratory of Occupational-Labour Rehabilitation, Institute of Gerontology of Ukraine, Ukraine*)

Introduction : The rapid development information technologies have coincided remarkably with increasing percentage of elderly people. However, these two trends are contradictory to each other. Meanwhile the increasing number of elderly people mainly cannot fully use the advantages information technology. **Method :** The purpose of study was determination the physiological possibilities to ensure overall residual capacity elderly people. We had analyze of physical and mental performance, cognitive and psycho-physiological functions, the parameters physiological and ergonomic possibilities 120 people aged 60 - 89 years. It was established physiological value of functional and reliability performance. The comparison group was young, healthy people under 30 years. **Results :** It was found that people after 60 years, have got the residual working capacity at 47.54% compared to young people. The overall residual capacity was dependent also on the professional labor component 17.04%, social component 15.31%, age-

related diseases 12.74%, physical activity 12.73%, dietary intake and habits 10.53%. The best indicators of the overall residual capacity in people aged after 60 years were identified with the values body mass index above 25 kg/m². The state psycho-physiological and cognitive functions were significant relationship associated with parameters physical activity and external respiration. In people over 60 years found an increasing the time of the visual-motor reaction, which is by 50% more than the people under 30 years and depending from the level of ergonomic equipment. **Conclusion :** The results has being show the feasibility of gerontechnology improvement of working and living conditions in according with the typological characteristics for implementing residual capacity of elderly subjects. **Keywords :** capacity , elderly people

OP25 122-S-2 AGING AND PHYSIOLOGICAL ASPECTS OF THE PEOPLE LABOR ACTIVITY

Oleksandr Anatoliyovych POLIAKOV (*Laboratory of Occupational-Labour Rehabilitation, Institute of Gerontology of Ukraine, Ukraine*)

Introduction : Aging of labor resources an increase in life expectancy after retirement, and biomedical feasibility of manageable labor for elderly have all made the problem of increasing the retirement age rather urgent. The aim of the investigation is dedicated to clarifying of physiological aspects of labor activity in subjects of a different gender and age with the purpose of a theoretical background of rational usage of human professional working capacity. **Method :** We have examined the physical, mental and professional capacity to work, functional age of men and women (994 persons) aged 20-79 years with occupational experience of 5 to 44 years. **Results :** It was found that the age decrease of working performance of the person takes place owing to a cumulative effect of aging of separate elements of functional systems of human organism. Thus the decrease of integrated indexes of professional working capacity has non-linear nature. So, for persons who are engaged of an intellectual labor activity the indexes of physical working capacity are reliably slashed on boundary 40, and psychomotor performance on boundary 50 years. In case of workers (of physical work) psychomotor indexes are degraded after 40 years, and physical working capacity indexes after 50 years. **Conclusion :** The factors limiting capacity for work of the workers of high age are established. In experiment the age differences in dynamics of mental work capacity: namely low speed, low reliability and high fatigability of elderly subjects are detected. The method of application of an estimation of working capacity of the elderly subjects is proposed. **Keywords :** the elderly workers, working activity, evaluation of working capacity

OP25 122-S-3 PREDICTING CANCER LITERACY AMONG KOREAN AMERICAN IMMIGRANTS USING ANDERSEN'S HEALTH BEHAVIOR MODEL

Hee Yun LEE, Jihye PARK (*School of Social Work, University of Minnesota, Twin Cities, USA*)

Introduction : Poor cancer literacy is associated with poor adherence to recommended cancer screening practice and increased hospitalization. Low cancer literacy is specifically observed among immigrant populations with low economic and educational status. However, research investigating what factors are associated with cancer literacy among immigrant populations is sparse. To address this knowledge gap, this study investigates the level of cancer literacy and influential predictors of cancer literacy among Korean immigrants. **Method :** Using a quota sampling strategy, 407 Korean American immigrants

were recruited in the New York metropolitan area. Participants were 202 females and 205 males and age ranged from 50 to 92 (mean=57.2). Stein et al.'s 12-item cancer risk statements were employed to measure cancer literacy and the Anderson's Health Behavior Model guided the study. As for data analyses, ordinary least squares (OLS) regression analyses were used. Results : Cancer literacy level of Korean American immigrants was much lower than that reported in the study of non-Latino whites and other racial/ethnic minorities. The mean score of cancer literacy in the current sample was 3.91 (SD=2.28), indicating that on average, these Korean American participants answered four out of twelve items correctly. The results from the multiple regression models indicated that age, having a primary physician, and education were predictors of cancer literacy among predisposing factors. predictors. Conclusion : It is critical that public health education and community interventions should focus on Korean American immigrants. Furthermore, public health interventions should target particular effort at equipping health professionals to improve cancer literacy among racial/ethnic minorities and immigrants. Keywords : Cancer literacy, Korean immigrants, and health disparity

OP25 122-S-4 FIT AS A FIDDLE: IMPACTS ON HEALTH AND WELLBEING

Bernadette BARTLAM¹, Julius SIM¹, Mo RAY², Nicola SMITH³
(1. Primary Care & Health Sciences, Keele University, United Kingdom; 2. Center for Social Gerontology, Keele University, United Kingdom; 3. Policy & Research, Ecorys UK, United Kingdom)

Introduction : This paper presents findings from the evaluation of the Fit as a Fiddle programme examining the impacts on the health and wellbeing of the older people taking part. It focuses specifically on outcomes around three strands: physical activity, healthy eating and mental wellbeing. It draws on data from a self-completion survey covering a variety of domains, including sociodemographic details, general health and wellbeing, limiting long-standing illness, daily activities and participation in the programme, together with a number of in-depth case studies. Method : The analysis focuses on changes in the survey results between the start and end of involvement in fit as a fiddle ('timepoint 1' and 'timepoint 2', respectively), and during follow-up surveys conducted three months later ('timepoint 3'). A low cut off for significance of $p \leq .01$ was chosen to restrict the probability of Type 1 error. Results : There were 2189 responses to the survey from a sample of 881: 859 responses were at the start of involvement in fit as a fiddle, 816 were at the end, and 514 were responses at least three months after last involvement. Conclusion : Fit as a Fiddle has had clear positive impacts on the physical health and the mental wellbeing of the older people taking part. These improvements span all three of the programme strands and were statistically significant. These findings are particularly important in light of the fact that almost half of the older people taking part reported a limiting long-standing illness, and the majority were living alone. Keywords : Active ageing, participation, health and wellbeing

OP25 122-S-5 SELF-REPORTED HYPOGLYCEMIA AND IMPACT ON QUALITY OF LIFE AMONG OLDER PATIENTS WITH TYPE 2 DIABETES MELLITUS IN COMMUNITY

Weibo LU (Health Training Center, Pudong Institutes for Health Development, China)

Introduction : This study evaluated the rate of self-reported hypoglycemia, level of quality of life, and examined the association of

hypoglycemia and the quality of life. Method : Methods: Totally 203 older type 2 diabetes patients from May 2012 to November 2012 were included in the study. The Diabetes Patients' Quality of Life in China (DSQL) and self-designed questionnaire was used to examine the rate of self-reported hypoglycemia and the quality of life. Results : Results: The rate of self-reported hypoglycemia in the past one year was 22.2% and past one month was 12.8%; the score of DSQL was 41.9±8.6 and the rates of hypoglycemia was closely correlated with patient quality of life. Conclusion : Conclusion: Overall, the quality of life of older patients with type 2 diabetes was in a medium level, there was a correlation between the rates of hypoglycemia and the quality of life. Keywords : hypoglycemia; QOL; diabetes

OP25 122-S-6 PERCEPTIONS OF HEALTH CARE AND CROSS-BORDER MEDICINE AMONG ELDERLY TURKISH MIGRANTS IN DENMARK

Anne Leonora BLAAKILDE¹, Suzan YAZICI², Signe Gronwald PETERSEN³ (1. Center for Healthy Aging, Dept. of Ethnology, University of Copenhagen, Denmark; 2. Gerontology, Akdeniz University, Turkey; 3. Dept. of Ethnology, University of Copenhagen, Center for Healthy Aging, Denmark)

Introduction : Epidemiological studies have shown a large proportion of cross-border health care practises among Turkish migrants living in Denmark, and this has been a cause of worry regarding their compliance to the Danish health care provisions. The Turkish population in Denmark represents more illness than ethnic Danes. The objective of this study is to qualitatively investigate the cross-border use of health care services and medicine used by Turkish migrants living in Denmark. Method : 30 Turkish migrants both sexes aged 54-80 were interviewed in their own homes applying ethnographic methodology. The interviews were conducted primarily in Turkish and simultaneously translated to both English and Danish dependent on the linguistic capacities of the interviewees. Results : The interviewees indicated that while in Turkey they hardly buy medicine prescribed in Denmark, even though it might be cheaper in Turkey. They are aware not to mix medical products or use medical variations, and they seem to be rather authoritative not only towards the Danish doctors, but towards the Western medicalization regime. Conclusion : The qualitative study revealed that the Turkish informants in Denmark are more authoritative towards the Danish (and Western) medicalization regime than expected, which means that they do not mix health care practises, neither regarding health service visits nor medicine consume. In this group, cross-border health care practises do not seem to be a problem concerning compliance to the Danish health care system. Keywords : Migration, Ethnicity, Health Care Practices, Medicine Use

OP25 218-S WORKSHOP ON "BALANCED LIFE PLANNING FOR KOREANS"

OP25 218-S-1 THE LEVEL AND THE EFFECT ON THE INEQUALITY OF THE RETIREMENT PREPAREDNESS

Kyungha PARK (Korea Labor Force Development Institute for the aged, Korea)

The research attempts to explain the inequality of the retirement preparedness. This research focuses on the inequality level of retirement readiness among people and factors influencing retirement readiness. In viewpoint of life course perspective, this study examines

how the factors related to income inequality affects retirement preparedness in Korea. Finally, this study will discuss the necessary alternatives of the life planning policy based on life course perspective.

OP25 218-S-2

THE NEED FOR AGE-SEGMENTED LIFE PLANNING EDUCATION PROGRAMS

Kyoung Young JANG (*Retirement Research Center, Samsung Life Insurance, Korea*)

This presentation examines why age-segmented “life planning” financial education programs are needed in South Korea, the one of the most rapidly aging countries in the world. We will introduce the growing need for life planning education programs, and offer suggestions about how best to develop and deliver an age-specific curriculum. The presentation also includes examples of “life planning” and financial education programs in other countries.

OP25 219-B

AGING IN THE ELDERLY

OP25 219-B-1

AGE RELATED SKIN DETERIORATION, INTERNAL ORGANS AGING AND POSSIBILITY OF AGE REVERSAL

Valery CHUPRIN¹, William Alexander MIHAJLOVIC² (*1. Age Reversal, Aging Away, USA; 2. CS, New York Institute of Technology, USA*)

Introduction : Age associated morphological changes of the skin are an early and apparent manifestation of aging. Our work pays particular attention to the skin-environment interactions and positive or negative influence of such interactions on acceleration or deceleration of the overall aging process. Our work investigates the relationship between the three processes of the organism: i. The progressive observable age caused skin breakdown, ii. The decay of internal organs functional capacity manifested through an array of well documented diseases, and iii. The terminal process of stoppage of all physiological processes known as death. One of the aims of our work is to establish the direct link between the above three phenomena and recommend age reversal human skin treatment. Method : We approach the aging problem by devoting particular attention to the dissipative energy nature of living matter, the substance of human body, the thermodynamics and energy dissipation processes at the body-environment interface skin level. Results : We demonstrate that human organism may build up reinforced capability of self-restoration and rejuvenation. Conclusion : Protecting the integument of the human body and proper maintenance of the same, from the outside an inside, is the essential component of anti aging and aging reversal. Keywords : Anti aging, age reversal, dissipative structure, longevity, skin, entegument, thermodynamics

OP25 219-B-2

THE NUTRITIONAL PROFILE OF OLDER MEN LIVING IN SYDNEY, AUSTRALIA: A PRELIMINARY ANALYSIS OF DATA FROM THE CONCORD HEALTH AND AGEING IN MEN PROJECT (CHAMP)

Rosilene Ventura Ribeiro WAERN¹, Robert G. CUMMING², Vasikaran NAGANATHAN¹, Fiona BLYTH¹, Margaret ALLMAN-FARINELLI³, Jean REID¹, Vasant HIRANI¹ (*1. University of Sydney, Centre for Education and Research on Ageing, Australia; 2. University of Sydney, School of Public Health, Australia; 3. University of Sydney, School of Molecular Sciences, Australia*)

Introduction : Nutrition is important for older adults' health, yet research on the nutritional status of older men is limited. This study aims to describe nutrient intakes and determine whether men aged ≥ 75 participating in the CHAMP cohort study are meeting their dietary requirements. Method : Sociodemographic and nutritional data (detailed diet histories) of 220 men were obtained by interviews. Nutritional analysis was conducted using FoodWorksPro software. Individual nutrients (protein, calcium, iron, zinc, vitamins A, C and D) were compared to Australian Nutrient Reference Values (NRV). Results : Participants' mean age was 81.4 (SD 4.3). Mean energy intake was 9603 KJ (SD 3101), which was distributed as: protein 19.0% (SD 4.1), carbohydrate 37.8% (SD 8.5), total fat 36.8% (SD 9.4) and alcohol 2.7% (SD 4.6), which unlike saturated fat 12.9% (SD 4.0), is in line with the NRV. Nearly all men met the NRVs for iron, vitamin C and zinc (96%, 98%, 68% respectively) but for dietary fibre, vitamin D, vitamin A and calcium only 40%, 2%, 29%, and 23%, respectively met the NRVs. The main food sources for nutrients of importance were: beef (protein, zinc); milk (calcium, vitamin D, vitamin A); breakfast cereals (iron); and vegetables (dietary fibre, vitamin C). Men aged ≥ 85 years showed higher protein, calcium, iron and zinc intakes compared to those aged 75-79. There were no significant associations between country of birth, occupation and education status and any macro- or micronutrients. Conclusion : These preliminary results provide a snapshot of the nutritional status of men aged ≥ 75 years in Australia. Diet-disease relationships will be explored in detail once data collection is complete. Keywords : Nutrition profile, Older men, Nutritional status

OP25 219-B-3

BODY COMPOSITION AND SEX CONTRIBUTE TO INSULIN RESISTANCE IN THE NUAGE COHORT OF ELDERLY PEOPLE

Joane MATTA¹, Nancy MAYO², Isabelle J. DIONNE³, Helene PAYETTE⁴, Pierrette GAUDREAU⁵, Tamas FULOP⁶, Daniel TESSIER⁶, Katherine GRAY-DONALD⁷, Bryna SHATENSTEIN⁸, Jose A. MORAIS⁹ (*1. McGill Nutrition and Food Science Centre, McGill University, Canada; 2. Clinical Epidemiology, McGill University, Canada; 3. Kinesiology, Sherbrooke University, Canada; 4. Nutrition, Sherbrooke University, Canada; 5. Endocrinology, University of Montreal, Canada; 6. Division of Geriatric Medicine, Sherbrooke University, Canada; 7. School of Dietetics and Human Nutrition, McGill University, Canada; 8. Nutrition, University of Montreal, Canada; 9. Geriatric Medicine, McGill University, Canada*)

Introduction : Aging is associated with increased fat and reduced lean masses, mainly muscle. The reduced muscle mass has been implicated in the risk of developing insulin resistance (IR), which is a challenge to ascertain due to the lack of cut-off scores. The objective was to identify subjects with IR over a 3-year period and compare them to controls in regard to body composition and several baseline characteristics. Method : Participants: 649 non-diabetic participants of the Quebec Longitudinal Study on Nutrition and Successful Aging (NuAge) Study with the complete dataset. Muscle mass index (MMI; kg/height in m²) and % body fat were derived from DXA and bio-impedance analysis. IR was estimated based on the HOMA-IR score. Physical activity was assessed by the PASE questionnaire. Protein intakes and sources were obtained from three 24h-food recalls and analyzed with the CANDAT software. Developmental trajectories were used to determine insulin sensitivity status. Logistic regression analyses served to determine baseline predictors. Results : Seven group-based trajectories were identified and good posterior probabilities were obtained for determination of insulin sensitive versus subjects with IR. The logistic regression identified 3

independent significant predictors of IR: MMI= [OR (95% CI): 1.72 (1.26-2.3)]; %body fat [OR (95%CI): 1.18 (1.12-1.25)]; sex [OR for women versus men (95%CI): 0.145 (0.04-0.45)]. Conclusion : Higher muscle mass and % body fat contribute to higher odds of IR with aging, whereas being female decreases this risk. Our determination of IR status remains a probabilistic approach but addresses one of the challenges in determining IR subjects in epidemiological studies. Keywords : Determining insulin resistance; body composition; predictors of insulin resistance

OP25 219-B-4

ACCELEROMETER DETERMINED PHYSICAL ACTIVITY, LEAN MASS, AND LEG STRENGTH IN COMMUNITY-DWELLING OLDER ADULTS

Nabil CHHERAWALA¹, Dawn DORE¹, David SCOTT², Tania WINZENBERG¹, Graeme JONES¹ (1. *Musculo-skeletal, Menzies Research Institute of Tasmania, Australia*; 2. *Musculo-skeletal, University of Melbourne, Australia*)

Introduction : Conflicting associations have been reported for objectively-assessed physical activity (PA) with muscle mass and strength in older adults. We aimed to examine the association between accelerometer-determined PA, lean mass and leg strength in community dwelling older adults. Method : 636 community-dwelling volunteers aged 53 - 84 (mean: 66yr ± 7.1, 49% male) were randomly recruited to participate in this cross-sectional study. Body composition was assessed using dual-energy x-ray absorptiometry. Leg strength was measured by dynamometer. PA was measured using Actigraph GT1M accelerometers worn for 7 consecutive days. Total time was calculated for sedentary, light, moderate, and vigorous PA, using the Freedson equation. Results : Sedentary minutes were negatively associated with lean mass percentage (B=-0.07%, 95% CI -0.1 to -0.03). This association was stronger in men (B= -0.1%, 95%CI -0.2 to -0.05). There was a dose-response positive relationship between activity intensity with lean mass and leg strength, after adjustment for age and sex. For every 10 minute increase in activity, lean mass percentage increased by 0.2% (CI 95% 0.1 to 0.2), 0.7% (CI 95% 0.5 to 0.8), and 1.9% (CI 95% 0.9 to 2.9) for light, moderate, and vigorous intensity, respectively. For every 10 minutes increase in activity, leg strength increased by 0.42kg (CI 95% 0.06 to 0.80), 1.6kg (CI 95% 0.6 to 2.7), and 7.5kg (CI 95% 0.9 to 14.1). Conclusion : Accelerometer-determined PA-intensity is positively associated with lean mass and leg strength in a dose-response fashion suggesting it is intensity and not simply the amount of activity that is important for the prevention of sarcopenia. Keywords : Accelerometer, strength, lean mass

OP25 219-B-5

USE OF SELENIUM AGAINST TOTAL KNEE ARTHROPLASTY SURGERY TO MAINTAIN LOW LEVEL OF FREE RADICALS

Irma RUSLINA¹, Marina MOELIONO², Satomi KAMEO³, Kenji KOBAYASHI³, Kenji SHIRAKURA⁴, Hiroshi KOYAMA³ (1. *Physical Medicine and Rehabilitation Department, Faculty of Medicine, Padjadjaran University, Indonesia*; 2. *Physical Medicine and Rehabilitation Dept, Hasan Sadikin General Hospital, Faculty of Medicine, Padjadjaran University, Indonesia*; 3. *Dept of Public Health, Grad. School of Med., Gunma Univ., Japan*; 4. *Dept of Rehabilitation Medicine, Grad. School of Med., Gunma Univ., Japan*)

Introduction : Selenium is essential trace element, and circulating in the plasma in the form of albumin, selenoprotein P and glutathione peroxidase (GPx). Major surgeries produce reactive oxygen species which induce inflammatory the anti-inflammatory reactions, such as

induction of a series of antioxidant proteins including GPx. Method : Venous blood was taken to measure for total plasma Se concentration, plasma GPx activity and albumin concentration before and at one week after the surgery. Se speciation by using High-Performance Liquid Chromatography paired with Inductively Coupled Plasma-Mass Spectrometry (HPLC/ICP-MS) with DRC (dynamic reaction cell) Mode and western blot analysis. Results : albumin and total plasma Se concentrations significantly decreased, and plasma GPx activity significantly increased. Increasing GPx distribution area in Se speciation and western blot analysis shows higher expression of GPx after surgery. Conclusion : Selenium might be used in acute phase response of Total Knee arthroplasty surgery. It was showed by redistribution of Selenium to GPx form. The source of Selenium could be from albumin, selenoprotein P, or both. Keywords : Selenium, Glutathione peroxidase (GPx), surgery

OP25 219-B-6

EXAMINING THE RELATIONSHIP BETWEEN THERAPEUTIC SELF-CARE AND ADVERSE EVENTS FOR HOME CARE CLIENTS IN CANADA

Winnie SUN, Diane DORAN (*Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, Canada*)

Introduction : In an era of a rapidly increasing number of older people who require home care services, clients must possess or develop self-care ability in order to manage their health safety in their homes. The purpose of this research study is to investigate the relationship between therapeutic self-care and adverse outcomes, and the role of self-care in supporting home care safety. Method : This research study is a retrospective cohort design and utilized secondary data to test the hypotheses about the causal relationship between therapeutic self-care ability, and the frequency and types of adverse events experienced by home care clients using secondary data sources housed at the Institute of Clinical and Evaluative Sciences in Ontario, Canada. Results : Using logistic regression analysis, the relationship between home care clients' therapeutic self-care ability was examined in relation to two types of adverse events: (1) use of health care resources, including emergency room visits and unplanned hospital readmissions; (2) safety outcomes, including client falls; unintended weight loss; urinary tract infection; decline in activities of daily living; new pressure ulcer or ulcer deterioration; compliance/adherence with medication; and decline in caregiver conditions. The study results provided a better understanding of the nature of relationships between therapeutic self-care ability, and the prevalence and incidence of safety outcomes for the older home care clients. Conclusion : This study provides implications to health professionals about the need to focus on improving client self-care functioning, as well as providing evidence for policy formulation related to the importance of home care services in supporting chronic disease management. Keywords : Home care safety

OP25 220-S

PERSONALITY AND AGEING

OP25 220-S-1

TASKS PERFORMED BY MIGRANT CARE WORKERS WHEN CARE RECIPIENTS ARE HOSPITALIZED

Esther IECOVICH (*Sociology of Health & Gerontology, Ben Gurion University of the Negev, Israel*)

Introduction : Advanced age is connected with more hospitalizations and bed days. There is an increasing shortage in nursing manpower to meet the intensive and extensive needs of frail older persons in

hospitals. In addition, family members are less available to spend many hours to provide personal care and surveillance to their hospitalized family members. Therefore, there is a growing trend to hire paid care workers who are supposed to perform these tasks. Method : The study was conducted in two general hospitals; one governmental and one non-governmental in Israel and included patients who were hospitalized in internal and geriatric wards. 535 dyads of primary caregivers whose family older patients were hospitalized and their migrant care workers were recruited and were face-to face interviewed. Results : The majority of the patients were disabled women, unmarried who lived alone. Most paid care workers were female Filipinos and most primary caregivers were adult children. A moderate level of congruence was found between the two caregivers with regard to the perceived roles of the care workers in the hospitals. The more there was congruence the more involved were the paid care workers in providing care to the older patients. More involvement was found in the non-governmental hospital and in the geriatric wards. The tasks performed by the paid workers included: personal care, surveillance, companion and cooperation with the nursing staff. Conclusion : Paid care workers are becoming a significant factor in assuring quality of care to frail older people in hospitals. There is need for policies and guidelines with this regard. Keywords : Hospital departments, frails, care provision

OP25 220-S-2

PARADOXICAL IDENTIFICATIONS AND CONTESTED REPRESENTATIONS OF A FAMILY RESPONSIBILITY LAW: THE CASE OF SINGAPORE'S MAINTENANCE OF PARENTS ACT OF 1995

Philip A. ROZARIO, Lorin KAY (*School of Social Work, Adelphi University, USA*)

Introduction : The duty to look after one's parents in their old age stems from the cultural notion that filial responsibility is virtuous. Societal responses to the increasing demands of an aging population are predicated upon a number of factors including the political, economic and cultural contexts of a specific society. Singapore's Maintenance of Parents Act (MPA) stipulates that parents over the age of 60 years who are unable to adequately provide for themselves financially may apply to the Tribunal for an order that their children pay a monthly allowance. Method : In this paper, we consider a number of key issues using paradox as a sensitizing concept to uncover conflicting tensions that are often inherent in development of family responsibility law. Our data comprise parliamentary debates and government reports regarding the enactment of the MPA in Singapore in 1995. Following that, we seek to interrogate five themes that emerged from our codes. Results : In doing so, we address and examine certain underlying assumptions regarding the nature of older parent-adult children relationships, the notion of accountability, and whether family responsibility law can be a safety net. Conclusion : Despite the cultural rhetorics of filial piety, we highlight the political economic underpinnings of the development of family responsibility law in Singapore. Although parliamentarians unanimously agreed that children should be morally responsible for their aging parents, they disagreed on society's role in ensuring the fulfillment of this obligation. Indeed, the moral groundings of filial duties remain incredibly controversial. Keywords : Singapore, paradox, filial responsibility laws

OP25 220-S-3

OLDER ADULTS' SELF-ESTEEM AND PERSON-CENTERED THERAPY: A LONGITUDINAL STUDY WITH FOLLOW-UP

Sofia VON HUMBOLDT, Isabel LEAL (*Research Unit in Psychology*

and Health, R&D, ISPA-Instituto Universitario, Portugal)

Objectives: A higher SE is suggested by a reduced difference between ideal and real self. The present pilot study was designed to investigate if a brief eight-session individual person-centered therapy (PCT) intervention on older adults can promote their self-esteem (SE), as compared with a control group (waiting list). We hypothesized that participants randomized to PCT would report improvements in SE from pre- to post-intervention compared to those not attending PCT sessions. Method: We recruited 81 persons aged between 65-82 years (M=71.9 SD=4.77) and randomized 40 to PCT and 41 to control group. Measures were completed, including demographics and the Self-esteem Scale (SES) at the baseline, post-treatment and at the 12-month follow-up. Results: Findings indicated that individual PCT with older adults may improve their SE. The difference between ideal self and real self, evidenced at follow-up (M=1.251, SD=.524) by the participants who had undergone PCT, was significantly lower (41.3%) in comparison to the baseline score (M=2.131, SD=.799). Significant differences between the intervention group and the control group were found in the post- intervention (F(1) = 34.939, p < 0.01) and follow-up (F(1) = 34.595, p < 0.01). During these three assessments there were no significant differences in the waiting list participants and results revealed no significant between group differences in any socio-demographic variable (P's>.05). Conclusions: Results suggest that PCT is beneficial for improving SE. Clinical practice and program development in health care context may benefit from including PCT for reducing health disparities and for aging well. Keywords : Person-centered therapy, control group, follow-up, older adults, self-esteem.

OP25 220-S-4

ATTENTION FROM VOLUNTEERS AND PROFESSIONAL CARE PROVIDERS FOR LIFE QUESTIONS IN THE ELDERLY

Els Daniella MESSELIS (*Elderly Studies, Tax and Social College - HUB, Belgium*)

Introduction : During group meetings (Spring 2011), volunteers as well as professional care providers reflected on life questions. These meetings were conducted by students of the Training for Senior Consultants (Hogere Leergangen voor Fiscale en Sociale Wetenschappen HUB, Brussel). They used two letters (concerning the topic 'attention' or 'loss of sense') from the book 'Met Ouderen in gesprek over Levensvragen' from the 'Expertisenetwerk Levensvragen en Ouderen'. These meetings were afterwards evaluated by the participants. Method : 25 group meetings, mainly in older people's homes, took place. In total, 174 respondents participated. The participants filled in a self developed, short written questionnaire. The questionnaire has been proven to be reliable and valid. She is consisting of 10 judgments in which they had to give their opinion by means of a 5 point schedule (entirely agree- agree - I don't know - disagree- completely disagree). Results : Some results: 'I find it really important to discuss life questions of the elderly' (95%) 'I feel myself competent to cope with life questions of the elderly' (69%) 'I get sufficient space (65%) and time (53%) from my organization to discuss life questions of the elderly'. Conclusion : Having attention for life questions in the elderly has become important. Sticking points however are: the lack of time and space to do so and feeling insufficiently competent. Education, super- en intervisie could be the solution. Keywords : life questions elderly

OP25 220-S-5

CHANGING CULTURE AFFILIATION AND IDENTITY IN A LONGITUDINAL STUDY OF OLDER NEW ZEALANDERS

Brendan Stewart STEVENSON (*Psychology, Massey University, New Zealand*)

Introduction : The use of ethnicity and culture to divide national populations into sub-groups and comparing outcome measures (particularly socioeconomic status and health) is widespread. The use of ethnicity in this way presupposes ethnic categories that are mutually exclusive, stable, and have differing physical, behavioral or historical characteristics. **Method :** The Health, Work, & Retirement Study and the Independence, Contribution, and Connection Study (comprising four waves of longitudinal data collected in 2006, 2008, 2010, and 2012, with around 1900 individuals present in all four waves) is well placed to examine this issue being nationally representative of older New Zealanders and over-sampling the Maori indigenous population. Using measures of ethnic identity (allowing multiple categories), engagement (MEIM-R), and Maori Cultural Identity, an examination of how individuals moved between ethnic categories and how measures of health, wellbeing and SES were related to participants ethnicity and cultural identity will be undertaken. **Results :** Preliminary findings indicate a small but significant group moving between ethnic groups, and the likelihood of shifting ethnic groups is different for Maori compared to non-Maori. Differences in health, SES, and wellbeing between Maori and non-Maori and between stable and dynamic cultural affiliations will be presented and discussed. **Conclusion :** It is important for researchers and policy makers to understand the dynamics of individual ethnic/cultural affiliation when ascribing measured characteristics to these groups. This work will more clearly highlight how outcome measures are related to a construct as fluid as ethnicity and culture. **Keywords :** Maori Longitudinal Identity Health

OP25 221-S
HEALTH PROMOTION V

OP25 221-S-1
THE DISTRIBUTION OF HEALTH LITERACY IN THE SOCIAL NETWORKS OF OLDER PEOPLE

Michelle EDWARDS, Aelwyn WILLIAMS (*Centre for Innovative Ageing, Swansea University, United Kingdom*)

Introduction : Health literacy involves abilities in finding, understanding, appraising and communicating health information in order to engage with the demands of different health contexts. Older people tend to have poorer health literacy and consequently they experience more adverse health outcomes in terms of physical and mental health functioning. Health literacy is part-cognitive skill and part-social skill and can be distributed amongst family, friendship and other social networks. This study aims to explain the 'distributed' nature of health literacy and identify how older people living with a long term condition draw on their social network for support with health literacy related tasks. **Method :** A longitudinal qualitative interview study including 80 participants (aged 65+) with a long-term health condition (diabetes or depression) recruited from a large population study of the health and well-being of older people in Wales, UK (CFAS Wales II). The transcripts and were analysed using the 'Framework' approach. **Results :** The results from phase one interviews explain how older people draw on health literacy mediators within their social network to self-manage their condition and engage with health/social care service support. Differences are identified in levels of social support for health literacy based on different types of social networks. **Conclusion :** Social support is essential for older people to engage with health literacy tasks that promote and manage health. Identifying differences in health literacy support in different

social network types may help in designing and targeting appropriate community level health literacy interventions. **Keywords :** Health literacy, social support, Social networks

OP25 221-S-2
PERSPECTIVES ON HEALTHY AGING AMONG THAI ELDERLY: A QUALITATIVE STUDY

Kattika THANAKWANG (*Institute of Nursing, Suranaree University of Technology, Thailand*)

Introduction : As culture influences individuals' thinking, belief, and behaviors, how people conceptualize healthy aging and its components may differ markedly from one culture to another. Most prior research on healthy aging has typically focused on Western populations; however, there is a lack of consensus and no single well-accepted definition of healthy aging. The purpose of this qualitative study was to provide in-depth understanding of the views of healthy aging among Thai elderly and to explore the ways that contribute to healthy aging. **Method :** Data were collected using focus groups and in-depth interviews in four selected provinces of Thailand. Potential participants were persons aged 60 years and over, dwelling in the community selected. The sample of potential participants was purposively drawn to include the elderly on the basis of a maximum variation approach. A total of 160 healthy elders participated in this study. Data were analyzed using content analysis. **Results :** The results revealed that Thai elderly described being healthy as the result of multiple components involving physical, mental, and social well-being. Healthy aging was viewed as an absence of serious diseases, having functional independence, a positive psycho-emotional outlook, and making a social contribution. The factors considered to contribute to healthy aging included activities promoting physical and psychological health as well as active engagement in social activities. **Conclusion :** Understanding how the elderly define healthy aging and identifying its most important components and factors that contribute to being healthy provides insight into possible policy implications and interventions to promote health and well-being among Thai elderly. **Keywords :** healthy aging, health promotion, elderly perspective, Thailand

OP25 221-S-3
ADJUSTMENT TO AGING: A CROSS-NATIONAL VALIDATION STUDY FOR ADJUSTMENT TO AGING SCALE

Sofia VON HUMBOLDT, Isabel LEAL (*Research Unit in Psychology and Health, R&D, ISPA-Instituto Universitario, Portugal*)

Aims: Adjustment to aging (AtA), is a multifactor adjustment process with implications on quality of life and well-being of aging adults. This study aims to develop and validate a scale to assess the factors that older adults recognized as determinant for their AtA, adding a cross-cultural comparative perspective towards aging well. **Methods:** Measures were completed, including demographics and the proposed original set of 127 items. Complete data was available for 709 older adults aged between 74-102 years (M=82.4 SD=6.45). Factor exploratory and confirmatory factor analyses were run for dimension reduction and for exploring the factorial structure. **Results:** The 33-items AtA 8-factor scale showed overall good psychometric properties (in terms of factorial, convergent, discriminant and criterion validity, as well as reliability and sensitivity). The sampling adequacy was confirmed (KMO=0.789) and the total variance explained by this eight-factor structure was 74.55%. Eight factors resulted from ATAS-33: (a) Accomplishment, creativity and challenges; (b) body and health; (c) stability and comfort; (d) interpersonal attachment and

intimacy; (e) autonomy, mobility and safety; (f) spirituality, existential and personal beliefs; (g) zest and humour; and (h) simplification and relaxation. All factorial weights were statistically significant ($p < .05$). Conclusions: We present a valid and reliable 33-items/eight factor scale for estimation of AtA in a multicultural elderly population. Results emphasize that communication approaches in clinical practice and program development may benefit from clearly understanding AtA as an important component for reducing health disparities and for aging well, across cultures. Keywords : Adjustment to aging, aging well, older adults, validation

OP25 221-S-4

PREVENTIVE BEHAVIOR AND SOCIAL INEQUALITIES IN GERMANY: A COHORT-BASED STUDY OF MIDDLE-AGED PEOPLE

Peter ENSTE, Sebastian MERKEL (*Institute for Work and Technology, Westfaelische Hochschule, Germany*)

Introduction : Several studies show a link between the social status and the state of health. The aim of our research was the question, if this coherence can be transferred to the preventive behavior. Therefore we suggest the hypothesis that social inequalities are mirrored in the individual preventive behavior of middle-aged people. Method : We developed a questionnaire and did a pre-test with 50 respondents. The questionnaire consists of 25 items and two open questions. For six items we used a six-point Likert-scale, for the remaining 19 a two-point scale. We conducted a telephone survey with randomly chosen respondents. Our control-sample size was $n=1.093$. Results : The results show that the preventive behavior can be distinguished in five types differing in the degree of the various measures and activities. The factors income and personal responsibility play a major role and have effects on the preventive measures. Furthermore we proved cohesion between subjective state of health and the preventive behavior. Conclusion : Social inequalities exist in terms of preventive measures and are closely linked a persons' income. Without a doubt it has been proven that physical activities affect the state of health. To dispose inequalities in terms of health, people have to be stimulated to perform activities. Because of the fact that inactive persons often have only few monetary resources available, new target group-specific offers and alternative financing models (e.g. voluntarism) have to be developed. Keywords : Prevention, Social inequalities

OP25 221-S-5

OLDER CANCER PATIENTS' NEEDS OF INFORMATION

Berit Kjaerside NIELSEN¹, Mimi MEHLSSEN¹, Anders Bonde JENSEN², Robert ZACHARIAE¹ (*1. Psychology, Unit for Psychooncology and Health Psychology, Aarhus University Hospital, Aarhus University, Denmark; 2. Oncology Department, Aarhus University Hospital, Denmark*)

Introduction : Quality of physician-patient communication seems to decline with increasing patient-age. Possibly older patients demand less information, but physicians may also pay less attention to older patients' needs for information. Studies have shown that older patients want information, but are less likely to participate in treatment decisions. To prevent older patients from being underserved, knowledge about older patients' preferences for information about treatment and care is needed. The aim was to describe older cancer patients' information needs and satisfaction with information. Method: Participants were 106 older cancer patients (66-91 yrs.). They were compared to 166 younger patients (18-65 yrs.). Participants' completed questionnaires about information-seeking and the EORTC-information questionnaire. Results : Old and young patients did not

differ in wishes for amount of information and decision involvement ($\chi^2=1.15$, ns). Among older patients, 48% were passive information-seekers compared to 33% of the young ($p=0.01$). Fewer older patients had searched for information about their disease, treatment, life style, and psychological issues but they were as interested in rehabilitation, home care or legal questions as young. Among older patients 18% were dissatisfied with amount of information and 20% did not evaluate it helpful. Dissatisfied patients also reported receiving less information about disease, medical tests and treatment ($p < 0.05$) and they tended to be active information-seekers ($p=0.058$). Conclusion : Many older cancer patients may not search for information but they are interested in equal amounts of information as young in areas relevant to their life situation. A potentially dissatisfied subgroup could be active information-seekers who have not received sufficient information. Keywords : Cancer, Information, Agedifferences

OP25 221-S-6

"WE ARE DIFFERENT" CULTURAL LITERACY: CERVICAL CANCER SCREENING AND OLDER WOMEN OF MEXICAN-AMERICAN ANCESTRY LIVING IN THE U.S.

Bertha Eloisa FLORES¹, Lyda AREVALO-FLECHAS², Sara GILL³, Gayle ACTON⁴, Heather BECKER⁴, Sharon BROWN⁴, Michael MACKERT⁵ (*1. Family and community Health, University of Texas Health Science Center San Antonio, USA; 2. St. David's School of Nursing, Texas State University, USA; 3. Family and Community, University of Texas Health Science Center San Antonio, USA; 4. School of Nursing, The University of Texas at Austin, USA; 5. College of Communication, Advertising and Public Relations, The University of Texas at Austin, USA*)

Introduction : Approximately 90 million people in the U.S. lack basic literacy skills, which affect health behaviors and underutilization of preventive care services. Cancer is now the leading cause of death among Hispanics in the U.S. Cervical cancer is a preventable and treatable disease yet few older Hispanic women seek screening and continue to be a high-risk group for cervical cancer with a 50% higher mortality rate than non-Hispanic whites. Method : Thirty women participated in focus group and/or individual interviews conducted in English and/or Spanish. Women 50 years and older were recruited from purposeful convenience. Audio taped, semi-structured interviews were conducted following a moderator guide based on major headings from Zarcadoolas et al. (2005) health literacy model. Transcripts were analyzed using qualitative content analysis and matrices developed. A major theme elucidated under the heading of cultural literacy was: "We are different". Results : All participants reported that Mexican-American core values can be deterrants to cervicla cancer screening. Familismo or family first leaves little time for self-care. Furthermore, cultural literacy was interwoven across all health literacy domains. Conclusion : Hispanics in the U.S. represent 50 million people. Few studies have explored the association between cervical cancer screening and health literacy among older women of Mexican-American ancestry. Hispanic core values of marianismo (Hispanic female characteristics), machismo (Hispanic male characteristics), and familismo (family first) are woven throughout all aspects of health literacy. Culture must be addressed in education efforts aimed at improving cervical cancer screening, decreasing mortality rates and improving quality of life for this population of older women. Keywords : Cultural Literacy, Mexican-American, Cervical Cancer Screening

OP25 222-C

MUSCULOSKELETAL SYSTEM(OTHERS)

OP25 222-C-1

SARCOPENIA IN RESIDENTIAL AGED CARE: PREVALENCE AND RISK FACTORS

Timothy Robert HENWOOD¹, Justin W1 KEOGH², Hugh SENIOR³, William JORDON² (1. School of Nursing and Midwifery, University of Queensland, Australia; 2. Faculty of Health Sciences and Medicine, Bond University, Australia; 3. Discipline of General Practice, University of Queensland, Australia)

Introduction : The loss of muscle mass and function (muscle strength and/or physical performance) with normal ageing, referred to as sarcopenia, has significant negative health outcomes for older adults. This study will be the first to investigate the prevalence and risk factors to sarcopenia among older Australians residing in residential aged care. Method : This project is underway and data will be finalised for presentation at the June Congress. Two hundred and seventy three older adults residing in residential aged care facilities in Queensland, Australia have been randomised to the study. Facility residents were identified as eligible, or ineligible if with a pacemaker, behavioural problems or medical/other barrier to participation, or if terminal. To inform prevalence of sarcopenia, muscle mass, strength and physical performance will be measured. To inform risk factors to sarcopenia, a number of demographic, functional, clinical and biochemical variables will be collected. Sarcopenia prevalence will be reported overall and within subgroups defined by level of care. Regression modelling will be used to determine sarcopenic risk factors. Results : Of the 709 residents, 328 were deemed ineligible (pacemaker 3%, behavioural 31%, medical/other 58% and terminal 8%) the remaining 381 were randomised to participating or not. Of these 29% are low care, 58% high care and 13% in a secure dementia ward. Conclusion : It is hypothesised all participants will be sarcopenic with the level of sarcopenia increasing in line with the level of care. In addition, it is hypothesised risk factors will include age, physical activity levels, morbidity and time since admission. Keywords : Sarcopenia, Muscle mass, Residential aged care, Frailty

OP25 222-C-2

ALTERATION OF SKELETAL MUSCLE VISCOELASTICITY WITH AGING AND CANCER USING ARFI IMAGING. CAPARFI STUDY

Isabelle BOURDEL-MARCHASSON¹, Sophie C REGUEME¹, Nora FRULIO², Florent MAIRE², Jessica DURRIEU¹, Herve TRILLAUD² (1. Geriatrics, CHU Bordeaux, France; 2. Pole d'imagerie Medicale, CHU Bordeaux, France)

Introduction : Exacerbated by cancer and treatments, sarcopenia impairs muscle function is likely impaired. Viscoelastic muscle properties can be quantified by ARFI (Acoustic Radiation Force Impulse) imaging. This study aimed to investigate whether ARFI measurements could be helpful for sarcopenia screening. Method : To evaluate the reproducibility of the ARFI measurements, fifty healthy volunteers, all independent and healthy: 20 young adults (18-30yr) and 30 older adults (≥ 70yr). These volunteers were compared to patients aged 70 and older with cancer undergoing curative treatments (n=3 until now). ARFI measurements consisted in measure the shear wave velocity (m.s-1) on the Rectus Femoris (RF), Tibialis anterior (TA), and Soleus (SOL) muscles in both relaxed and contracted conditions. The contracted condition corresponded to 20-30% of the maximal isometric voluntary contraction. Among additional assessments clinical examination and physical capacities (e.g. Short Physical Performance Battery) were evaluated. Results : Results demonstrate a high reproducibility of shear wave velocity measures in both relaxed and contracted conditions. As compared to young adults, older

volunteers presented lower shear wave velocities in both relaxed and contracted conditions but only for RF muscle (p<.05). This was consistent with the lower maximal voluntary force for RF muscle in healthy older volunteers (p<.025). It is interesting to note that older patients with cancer presented lower ARFI and force values as compared to older volunteers. Conclusion : From these results, ARFI method appears highly reliable within skeletal muscle tissue and may be helpful for sarcopenia screening. Sponsor: University hospital of Bordeaux. Financial support: PHRC 2010, InCA; NCT n°001484821. Keywords : cancer, muscle, echography

OP25 222-C-3

PREVALENCE, SEVERITY AND DETERMINANTS OF FUNCTIONAL LIMITATIONS IN OLDER ADULTS WITH JOINT PAIN AND COMORBIDITY: RESULTS OF A CROSS-SECTIONAL STUDY

Lotte A.H. HERMSEN¹, Stephanie S. LEONE¹, Martin SMALBRUGGE¹, Henriette E VAN DER HORST¹, Joost DEKKER² (1. General Practice and Elderly Care Medicine and the EMGO Institute for Health and Care Research, VU University Medical Center, Netherlands; 2. Rehabilitation Medicine and the EMGO Institute for Health and Care Research, VU University Medical Center, Netherlands)

Introduction : Older adults with joint pain and comorbidity may be especially at risk of becoming functionally impaired. Therefore, the purpose of this study was to gain more insight into the scope of functional limitations and potentially amenable determinants that negatively influence functioning in this defined group. Method : This cross-sectional study included older adults (≥65) with joint pain and comorbidity (n=407). According to the ICF model, we studied the prevalence and severity of limitations in (i) Physical Functioning (PF), (ii) Activities of Daily Living (ADL), (iii) Instrumental Activities of Daily Living (IADL) and (iv) Participation. Also, potentially amenable determinants (i.e. several physical and psychosocial determinants) were identified in these four measures, by using multivariate regression analyses. Results : Prevalence rates of limitations in PF, ADL, IADL and participation were 66%, 31%, 61% and 64% respectively. Of the physical determinants, frailty was consistently related to all four functional measures, whereas other determinants contributed specifically to poor PF (i.e. pain in spine/lower-extremity, higher BMI), IADL limitations (i.e. higher pain severity, history of falls) and participation restrictions (i.e. pain in spine). The psychosocial determinants were especially related to poor PF (i.e. passive coping, lower self-efficacy, poor general health perception) and participation restrictions (i.e. depression, lower self-efficacy, less social support). More specific relations were found between depression and ADL limitations and passive coping and IADL limitations. Conclusion : Older adults with joint pain and comorbidity reported substantial functional limitations. Despite some variation in related determinants across the functional measures, especially frailty and the psychosocial determinants seemed importantly related to functional limitations. Keywords : Joint pain, comorbidity, functioning, disability, general practice

OP25 222-C-4

A HIGH-PROTEIN DIET, SUPPLIED THROUGH LEAN RED MEAT, COMBINED WITH RESISTANCE TRAINING, ENHANCES MUSCLE MASS AND STRENGTH AND REDUCES INFLAMMATION IN ELDERLY WOMEN

Robin M. DALY¹, Stella O'CONNELL¹, Niamh L. MUNDELL¹, Carley A. GRIMES¹, David W. DUNSTAN², Caryl A. NOWSON¹ (1. School of Exercise and Nutrition Sciences, Deakin University,

Australia; 2. *Physical Activity and Behavioural Epidemiology, Baker IDI Heart and Diabetes Institute, Australia)*

Introduction : Physical inactivity, poor nutrition and low-grade systemic inflammation all contribute to age-related muscle loss, impaired function and disability. In this 4-month RCT, we investigated whether increasing dietary protein could enhance the effects of progressive resistance training (PRT) on muscle mass and function and reduce inflammation in the elderly. **Method :** Women (n=100) aged 60-90 years residing in retirement villages were randomised to: PRT plus red meat or PRT alone (RT). The RT+Meat group were supplied with 220g/d (raw weight) of lean red meat to be consumed 6 days/week, to achieve a protein intake of 1.3 g/kg/d. The RT group received pasta/rice. All women undertook PRT twice weekly and received 1000 IU/d vitamin D3. **Results :** Ninety-one percent completed the study and compliance with the red meat and carbohydrate foods averaged 81% and 100%, respectively. Mean dietary protein intakes were greater in the RT+Meat versus RT group (1.3 vs 1.1 g/kg/d. P<0.01). After 4 months, the RT+Meat group had greater gains in lean mass (net benefit 0.45 kg) and muscle strength (net benefit 14%) (both P<0.05). The RT+Meat also had a 10% greater increase in serum IGF-1 (P<0.05) and a 16% greater reduction in the pro-inflammatory marker IL-6 (P<0.05). **Conclusion :** A dietary protein intake of 1.3 g/kg/d achieved by increasing lean red meat was safe and effective for enhancing the effects of PRT on muscle mass and strength and reducing inflammation in elderly women. These findings indicate that older women require a higher dietary protein intake to maximise the anabolic response to resistance training. **Keywords :** dietary protein, exercise, sarcopenia, inflammation, elderly, randomised controlled trial

OP25 222-C-5

OBJECTIVE ASSESSMENT OF SPASTIC HYPERTONIA IN HAND DEXTERITY USING A NOVEL DIGITAL DEVICE

Sunghoon Ivan LEE¹, Hassan GHASEMZADEH¹, Andrew YEW², Ruth GETACHEW², Jon KIMBALL², Nima GHALEHSARI², Brian H. PAAK², Jordan Hayward GARST³, Mehrdad RAZAGHY², Marie ESPINAL², Daniel C. LU³, Majid SARRAFZADEH¹ (1. *Computer Science Department, UCLA, USA*; 2. *Department of Neurosurgery, UCLA, USA*; 3. *Department of Neurosurgery and Department of Orthopedic Surgery, UCLA, USA*)

Introduction : Spastic hypertonia (SH) is a motor disorder characterized by exaggerated tendon jerk reflexes, and is a common symptom associated with spinal cord injuries. Current assessment methods for SH rely on subjective examination. We utilize an inexpensive and lightweight handgrip device, previously designed by the authors, to objectively quantify SH in patients with cervical spondylotic myelopathy. We aim to verify that (i) the introduced handgrip can accurately assess the degree of SH, and that (ii) the assessment correlates to changes in motor function following surgical decompression. **Method :** This is a pilot study with 10 patients (mean age 58.2 ± 13.5). Patients were tasked to adjust their handgrip force to trace a sinusoidal target curve. The test was performed preoperatively and postoperatively following surgical decompression. Spastic reflexes were investigated when patients increase their grip strength. First, the signals were examined for SH using a machine learning algorithm. If SH is noted, a dynamic time warping was performed to further analyze the signals. The results were compared against patient's reported Oswestry Disability Index (ODI), a validated functional questionnaire. **Results :** The mean accuracy of detecting the appearance of SH was 99.56%. Among many parameters generated by the analysis, the velocity of muscle recovery from a spastic motor movement showed a

strong linear correlation to the patient's postoperative ODI (p-value = 0.029). **Conclusion :** Our preliminary results show that the handgrip can accurately quantify the level of SH. Such knowledge may be useful in an outpatient setting to assess the need for surgical intervention and evaluate postoperative results. **Keywords :** Spastic hypertonia, Handgrip device, Cervical Spondylotic Myelopathy

OP25 222-C-6

FALL REDUCTION IN AN ACE UNIT - A MODEL FOR QUALITY IMPROVEMENT

Theodore T. SUH (*Family & Community Medicine, UT Health Science Center in San Antonio, USA*)

Introduction : Falls are a common problem in hospitalized older adults, with one-third of hospital falls resulting in injuries such as fractures, head/ soft tissue trauma, increased comorbidity, loss of independence and greater hospital costs. Risk factors for falls in the hospital include gait instability, confusion, urinary incontinence/ frequency, previous falls and use of certain medications. **Method :** At the beginning of this study, the 10-bed ACE Unit at Christus Santa Rosa Hospital-City Centre in San Antonio had the highest fall rate in the hospital at just over 10/ 1000 bed days. The ACE Team goal was to lower the fall rate using a multi-component intervention, consisting of differentiating very high from high fall risk patients, hourly rounding and mobile computer terminals for nurses, mandatory use of bed alarms for very high fall risk patients and a free lunch incentive for ACE Unit nurses at the end of a month without falls. **Results :** This intervention began on March 1, 2011. For over 4 consecutive months (March-June), there were no falls in the ACE Unit. After a few falls in the last few months of 2011, there was a 6 month stretch where there were no falls in the ACE Unit. The estimated cost to implement this change was \$850, plus \$100 monthly to maintain it. Projected savings from each prevented fall were \$12,800, with total annual cost savings >\$300,000. **Conclusion :** Differentiating those at highest risk for falls is essential. There are potentially large cost savings to hospitals from the prevention of falls and resulting injuries. **Keywords :** falls, ACE Unit, multi-component intervention, cost savings

OP25 225-R

TECHNOLOGY & SOCIAL POLICY

OP25 225-R-1

SEARCH FILTERS: FACILITATING ACCESS TO THE EVIDENCE

Jennifer TIEMAN¹, Raechel DAMARELL², Sarah HAYMAN¹ (1. *Palliative and Supportive Services, Flinders University, Australia*; 2. *Flinders Filters, Flinders University, Australia*)

Introduction : Ensuring the use of what is known to be effective in practice remains a challenging problem for health and social systems. A fundamental pre-requisite to the use of evidence in gerontology and geriatrics is the ability to find the relevant literature. However, individuals are challenged by the complexities of bibliographic databases and of search formulation. Search filters represent an innovative solution to the problem of literature retrieval by enabling brokered access to the underlying evidence base for rapid utilisation. A search filter is an experimentally developed search strategy with a known retrieval effectiveness. **Method :** The methodology for search filter construction comprises four phases: 1. Selection and construction of a gold standard set of references of known relevance to the topic of interest 2. Term identification 3. Filter development through individual and combined term testing, and 4. Filter translation and validation for open use in PubMed. **Results :** A palliative care search filter and a

residential aged care search filter have been developed and the findings published. The development of a dementia search filter is currently in process. PubMed translations for the palliative care and aged care search filters mean that automated searches for this literature can be run through the CareSearch website at www.caresearch.com.au. Conclusion : Specialist search filters that automatically retrieve relevant literature for a number of core gerontology issues including palliative care, residential aged care and dementia are available. Clinicians, researchers and academics can utilize these search filters to access the underlying evidence base. Keywords : search filters; evidence based practice; knowledge translation

OP25 225-R-2

GUIDELINES FOR THE IMPLEMENTATION OF ASSISTIVE TECHNOLOGIES FOR AUTONOMY

Juliette SABLIER¹, Lionel BEN-AHMED¹, Bertrand BOUDIN¹, Catherine BRIAND², Filippo FABRI³, Nicolas FRANCK⁴, Sylvain GIROUX⁵, Mark HEPWORTH⁶, Wendy OLPHERT⁶, Helene PIGOT⁵, Emmanuel STIP⁷, Vincent RIALLE¹ (*1. AGIM Laboratory, University Joseph Fourier, France; 2. Psychiatry, Center for Studies on rehabilitation, recovery and social inclusion (CERRIS) Fernand Seguin Research Center Mental Health Institute University of Montreal, Canada; 3. Fondamental Electronics Institute, University of Paris Orsay, France; 4. Psychiatry, Psychiatric Hospital 'Le Vinatier' University of Lyon, France; 5. Computer Science, DOMUS Laboratory Science Faculty of University of Sherbrooke, Canada; 6. Information Science, Loughborough University, United Kingdom; 7. Psychiatry, Fernand Seguin Research Center Mental Health Institute University of Montreal, Canada*)

Introduction : Most of studies about the implementation of New Technology of Information and Communication (NTIC) for autonomy leads to conclusion that human support is a core feature of acceptance. Nevertheless, this recommendation is not widely followed by emerging projects involving elderly, nor people with cognitive disabilities. No clear nor easy-to-implement guidelines have been proposed yet. Method : We compared the results of five international studies (HOST, ESTIMA, BEA, ReadApps, Mobus-DoPill) involving elderly and patients with dementia and schizophrenia and caregivers. Devices tested were as various as GPS-based tracking system, daily activities manager, smart pills dispenser, social network, implemented in smartphones or tactile tablets. All participants share comparable characteristics regarding acceptance of NTIC as they are not the customers targeted by the designers of these devices. Furthermore, schizophrenia and dementia groups share comparable cognitive disabilities regarding executive functioning impacting their autonomy. Results : Despite the differences between the participants and the materials of these studies, all lead to the conclusion that NTIC are unusable if strong follow-up is not provided to help the persons to take advantage of the device. Conclusion : Framed by seven basic principles, including reliability and collaboration with a caregiver, eight stages are proposed, from defining needs by co-design process, to reinforcements of acquired skills. These guidelines should be replicated in order to be enhanced and validated. This will be tested in HOST-phase 2. In accordance with ethical principles, these guidelines should help to make NTIC more accessible to people segregated because of particular -better than impaired- cognitive skills. Keywords: Cognitive disabilities, New Technology for Information and Communication, Assistive Technology for Autonomy

OP25 225-R-3

AN EXPLORATORY STUDY ON THE CHARACTERISTICS OF THE ELDERLY INTERNET ADDICTION

Jeonghyeun KO (*Digital Inclusion Policy Division, National Information Society Agency, Korea*)

Introduction : As more seniors use the internet, so the issue of the internet addiction among seniors will be surfacing shortly, even though it is not yet. Elderly people could be more drawn to the internet and more vulnerable to internet addiction because of their physical, mental, financial, social conditions. But there are rarely studies on this issue so far. So this study is aimed at investigating the characteristics of the elderly people's internet addiction and helping them not be addicted to the internet and make good use of it as their leisure activities. Method : The researcher used Korea Internet Addiction Proneness Scale for Adults(KS-A) which was developed by National Information Society Agency. Data for this study were obtained by senior internet users who learn and teach how to use the internet in the senior community centers by way of online survey. Results : The results of this study are as following: First, the internet addiction rate in the elderly is 7.7%, which is same as overall Korean internet addiction rate in 2011. Second, low income, single and couple elderly households are more prone to the internet addiction. Third, seniors who feel more satisfaction in relationship with family and others and less stress and loneliness are less vulnerable to internet addiction. Conclusion : The researcher is able to confirm that the elderly could be as addicted to the internet as the young and they have plausible conditions vulnerable to the internet addiction. So it is required we pay new attention to senior internet addiction problem in advance. Keywords : senior internet addiction

OP25 225-R-4

STRATEGIES OF INDIVIDUAL PENSION INSURANCE BEHAVIOR: THE CASE OF RUSSIA

Yulia LEZHNINA (*Department of Applied Economics, National Research University Higher School of Economics, Russia*)

Introduction : Over the last decade the Russian pension system has undergone significant changes, including the transition from the distribution principles (PAYG) to the mixed ones (PAYG notional account with fully funded pillar). This transition requires not only adjustment of pension insurance institutions that is implemented by the state, but also population adapting to the new conditions. Its success depends on the willingness of the population and business to play by the newly created 'rules of the game': to save, create corporate funds, etc. In these circumstances it is important to understand what resources are expected to be available after reaching the retirement age by today's working age Russians. Method : Content of the report is based on the results of the empirical analysis carried out on representative survey "Russian Longitudinal Monitoring Survey, RLMS (2010 and 2011). Results : Despite the fundamental change in the institutional environment almost all Russians (89%) continue to rely on state pensions and employment (69%). So they do not plan to adjust their individual strategies to the new reality (they plan to behave as current retirees and response to problem areas in case of need). Not more than a third part of Russians addresses to 'insurance' instruments in the form of savings, private pension schemes, corporate foundations. Traditional mechanisms such as children's support (15%) and auxiliary facilities (17%) do not become an obsolete arrangement. Conclusion : In this case, the strategies of the population can be classified and underlie the evaluation of state social policies implementation, as it is shown in the report. Keywords : pension insurance behavior

OP25 225-R-5

R&D POLICY OF THE KOREAN GOVERNMENT FOR THE

AGEING SOCIETY

Jiyoung SUH (*Policy for the Public Research, Science & Technology Policy Institute, Korea*)

Introduction : Korean Government established “The 2nd Plan for Ageing Society and Population 2011-2015” at 2010. It pursues the paradigm change in political direction. While the former has stressed on the QoL of the ‘Senior’ and support the disadvantaged class, the later on the QoL of Ageing ‘Society’ and enhance the social sustainability. Although the extension of the political spectrum from the individual senior to the social structure, the interest of the Science and Technology Policy stays at the level of the R&D for the devices for the seniors, which contribute to compensate their physical and mental vulnerability. This research reviews the R&D activities of the Korean Government, which accomplish under the aim of preparing of the Ageing Society, and examine whether it reflects the paradigm change of the national policy. **Method :** The relevant R&D projects for the Ageing Society in the period 2004~2011, financially supported by Korean Government, were analyzed. The search engine of the National Science & Technology Information System was used as a search tool. **Results :** Its representative research projects are the diagnosis and control of the senile diseases. The projects are oriented towards the expansion of the accessibility through the using the assistive technology. On the other hand the macroscopic design for the new society construction is very limited, for example the work conditions or traffic system. **Conclusion :** The S&T policy should extend the R&D spectrum from the improvement the physical capability of the seniors to the building the future society. **Keywords :** Ageing Society, S&T Policy, R&D

OP25 227-C

WORKSHOP: CRITICAL EVALUATION AND OFFICE MANAGEMENT OF AGING FOOT AND RELATED MUSCULOSKELETAL DISORDERS

OP25 227-C-1

ANATOMICAL AND BIOMECHANICAL CHANGES ASSOCIATED WITH AGING AND THEIR CONTRIBUTION TO FOOT PAIN

Mooyeon OH-PARK (*Physical Medicine & Rehabilitation, Kessler Foundation, USA*)

Introduction : Foot pain is highly prevalent among the elderly and is associated with disability in instrumental activities of daily living undermining the independence of the population. Older individuals have multiple co-existing pathologies and identifying the causal pathologies responsible for the patient’s pain is a challenging task. **Method :** Considering the basic principle of foot pain that the location of pathology coincides with the location of the pain and tenderness, detailed knowledge of anatomy and its change with aging is prerequisite to make an accurate diagnosis. **Results :** Biomechanical deficit often serves as an exacerbating factor for foot pain. Developing an ability to recognize potential abnormal biomechanics will allow clinicians to address the fundamental issues of foot pain in older adults with satisfactory outcomes. With aging, number of structural and functional changes of foot occur; widening of forefoot relative to hindfoot, atrophy of plantar heel and metatarsal fat pad, toe deformities from intrinsic foot muscle weakness, and inflexible heel cord. **Conclusion :** This session intends to discuss 1) how each of the above mentioned changes contributes to painful conditions of the foot in older adults, and to attain and 2) abnormal biomechanics that can exacerbate the foot pain. **Keywords :** Rehabilitation, foot pain, biomechanics

OP25 227-C-2

FOOTWEAR AND FOOT ORTHOSIS IN AGING FOOT

Heui Je BANG (*Physical Medicine and Rehabilitation, Medical College, Chungbuk National University, Korea*)

Footwear and foot orthosis are widely utilized as non operative management for foot pain in elderly. However, there are limited practice guidelines for the footwear and the foot orthosis for aging population. This workshop intends to provide the helpful tip to choose the proper footwear and understand the designs of the foot orthosis specific to foot pathologies in the elderly. Foot pain is commonly associated with and often aggravated by faulty footwear. The design of the outsole is often attributed to the forefoot pain and can affect the balance in elderly. Understanding basic principles of orthotics increase the compliance and decrease the failure of the orthosis in this population. The temporary orthosis can be tried in office prior to prescribe the definitive one. The basic biomechanics of different types of foot and foot ankle orthosis will be reviewed for the specific foot disorder during this session. The participants will practice in office tryout, recognize the common pitfalls related to the foot orthosis and learn trouble shooting with case examples. **Keywords :** Aging Foot

OP25 227-C-3

FOCUSED HISTORY AND SYSTEMATIC APPROACH TO PHYSICAL EXAMINATION FOR FOOT PAIN IN THE ELDERLY

Jungsoo LEE (*Department of Rehabilitation Medicine, Uijeonbu St. Mary's Hospital, The Catholic University of Korea, Korea*)

Multiple foot pathologies may coexist in many older adults. Therefore, they may complain of the constellation of symptoms and signs. It imposes a diagnostic challenge to the clinicians teasing out the condition responsible for foot pain. Therefore, history and physical examination are even more emphasized than the imaging studies, which need to be interpreted carefully in relevance to history of the patients. The characteristics and nature of the pain can allude to the etiologies of foot pain, such as neuropathic versus musculoskeletal causes. Association with the footwear or previous orthosis should be always explored not just to identify the pathologies but to manage it successfully by changing the footwear or modifying the foot orthosis. Systemic approach to physical examination includes inspection (foot posture, the callus pattern and footwear etc.), palpation on the different anatomic landmark by region, neurovascular examination (including tapping the peripheral nerve for local pathology), range of motion of the different joints (including ankle and subtalar joints), and trying temporary insoles in shoe for diagnostic purpose. In this session, the participants will practice systematic physical examination, in association with the knowledge of focused history taking and biomechanical characteristics of aging foot, for foot pain in aging population. **Keywords :** foot pain

OP25 227-C-4

CRITICAL EVALUATION AND OFFICE MANAGEMENT OF AGING FOOT AND RELATED MUSCULOSKELETAL DISORDERS

Mooyeon OH-PARK¹, Heui Je BANG², Jung Soo LEE³, Se Won LEE⁴
(1. *Department of Physical Medicine and Rehabilitation, Kessler Institute of Rehabilitation/Kessler Foundation Research, USA*; 2. *Department of Physical Medicine and Rehabilitation, Medical College, Chungbuk National University, Korea*; 3. *Department of Physical Medicine and Rehabilitation, Medical College, Catholic University of Korea, Korea*; 4. *Physical Medicine and Rehabilitation, Montefiore Medical Center/Albert Einstein College of Medicine, USA*)

Introduction : Foot pain is highly prevalent among the elderly and is associated with disability in instrumental activities of daily living, which undermines the population's independence in the community. It has been reported that the elderly often demonstrate multiple foot disorders, all of which may or may not be associated with pain. In order to successfully treat foot pain, it is crucial for practitioners to accurately identify the precise pathologies accountable for the pain. This diagnostic process requires an understanding of how age-related anatomic and biomechanical changes contribute to foot pain, skills in physical examination, and knowledge of the interaction between footwear/foot orthosis and the aging foot. As a non-operative treatment, foot orthosis (FO) and footwear has been widely utilized for foot pain in elderly. However, there have been limited practice guidelines helpful for clinicians' decision-making with regard to type (customized versus prefabricated), materials, and designs for FO and footwear specific to foot pathologies in the elderly. This workshop intends to provide an educational opportunity to attain knowledge of age related changes in the foot, to refine diagnostic skills for foot pain, and to improve knowledge of orthotic/pedorthic management specific to this population. **Conclusion :** This workshop will be a hands-on small group session supervised by workshop faculty where participants will practice physical examination skills, evaluate unsuccessful orthoses (using samples of 'failed' orthoses), and apply simple, in-office accessible orthotic/pedorthic modifications. **Keywords :** aging foot, pain, orthoses

OP25 320-S

INTERNET & COMPUTER UTILIZATION

OP25 320-S-1

THE USE OF THE THEORY OF PLANNED BEHAVIOR TO STUDY THE FACTORS AFFECTING THE INTENTIONS OF USING THE INTERNET BY ELDERLY PEOPLE

Lili XIE (*The School of Sociology and Population Studies, Renmin University of China, China*)

Introduction : I hope to explore factors that affect the elderly's use of the internet from attitudes, subjective norm and perceived behavioral control, through framework of the theory of planned behavior. By doing so, I want to know more about the problems of older adults' using of the internet, and give some suggestion based on the discoveries. **Method :** I choose 10 older adults as main study object and 10 for supplementary information, and use case interview, participative observation and internet research to collect information of attitudes, subjective norms, perceived behavioral control and difficulties in using internet. This study investigates the process of changing of intention, focusing on what has directed their changing mind. **Results :** As the study suggests, older adults' intention to use the internet is influenced by attitudes, subjective norms and perceived behavioral control, however, at different degrees owing to unique personality, past experience and environment. Attitude towards using the internet is influenced by perceived ease of learning, perceived usefulness, trust and fear of the internet; subjective norms mainly comes from children, grandchildren and peer groups; perceived behavioral control results from self-efficacy, perceived controllability, past experience, social support and internet design. **Conclusion :** In the study, I discover that if children, institutions and living community provide the related hardware and technology support, older adults are able to be trained to use computer and enjoy surfing the internet. Net forum is a good place to cultivate the interest, and it's a new source of social support. **Keywords :** the theory of planned behavior ; internet using ; influences; elderly

OP25 320-S-2

INTERGENERATIONAL POTENTIAL FOR INCREASING E-LITERACY OF THE POPULATION 50 + IN SLOVENIA

Ksenija RAMOVŠ¹, Joze RAMOVŠ², Mateja ZABUKOVEC², Maja RANT² (*1. Social Gerontology, Anton Trstenjak Institute of Gerontology, Slovenia; 2. Social Gerontology, Anton Trstenjak Institute for Gerontology and Intergenerational Relations, Slovenia*)

Introduction : Slovenia is by the use of internet in EU and globally in the best fourth, by e-literacy of people over 50 years lags far behind: 72 % of people does not use computer. With the transition to e-commerce (banking, government, etc.) there is a risk that more than quarter of total population will be deprived from active participation due to ICT illiteracy. In the national survey of needs, abilities and attitudes of the population 50 +, was found that 20% wished to learn how to use ICT. Others should still be motivated and the most effective example is when knowing somebody, who successfully became ICT literate. **Method :** Based on these facts and on own 20-year experience with introducing of intergenerational volunteering, at national gerontological Institute we developed an effective model of mass ICT literacy, by the principle that an adolescent, from 15 to 18, in organized way become companion with an older person when learning the use of computer. For successfully intergenerational knowing, socializing and communicating, a short training course (three two-hour) for participants of young and older generations is provided. Companionship couples are monitored by the programme supervisor in a remote way. **Results :** The model was developed using the method of action research and has proven to be quite realistic and effective: students in one year successfully taught the older 'students' the use of computer, internet and e-mail. **Conclusion :** At the end for students and the elderly the best gain is the knowledge about the distant generation positively and successful intergenerational communication. **Keywords:** intergenerational potential, e-literacy

OP25 320-S-3

"I DO NOT USE, DO NOT TRUST INTERNET" MEDIA LITERACY: CERVICAL CANCER SCREENING AND OLDER WOMEN OF MEXICAN-AMERICAN ANCESTRY

Bertha Eloisa FLORES¹, Gayle ACTON², Lyda AREVALO-FLECHAS², Sara GILL³, Heather BECKER², Sharon BROWN², Michael MACKERT⁴ (*1. Family and community Health, University of Texas Health Science Center San Antonio, USA; 2. School of Nursing, The University of Texas at Austin, USA; 3. School of Nursing, University of Texas Health Science Center San Antonio, USA; 4. College of Communication, Advertising and Public Relations, The University of Texas at Austin, USA*)

Introduction : People in the U.S. lack basic literacy skills, including navigating the Internet. Cancer is now the leading cause of death among Hispanics. Cervical cancer is a preventable disease through screening yet few older Hispanic women seek screening and continue to be a high-risk group for cervical cancer with a 50% higher mortality rate than non-Hispanic whites. **Method :** Thirty women participated in focus group and/or individual interviews conducted in English and/or Spanish. During discussion, participants were presented two internet brochures. Women 50 years and older were recruited from purposeful convenience. Audio taped, semi-structured interviews were conducted following a moderator guide based on major headings from Zarcadoolas et al. (2005) health literacy model. Transcripts were analyzed using qualitative content analysis and matrices developed. A major theme elucidated under the heading of media literacy was: learning from Internet brochures. **Results :** Women in the study did not use the Internet. Participants reported that they did not [trust or like the

Internet]. Participants were not willing to learn how use the computer. Women reported preference for platicas or small group discussion. Conclusion : Current research reports that 53% of older Americans use the Internet (Pew Report, 2010). These research findings differ from the present research in which none of the participants used the Internet to obtain information. Best practices to reach all populations may include a variety of strategies, which are culturally and linguistically congruent. The Internet does not fit all. Keywords : Media Literacy, Internet, Mexican-American

OP25 320-S-4

IMPACTS OF TECHNOLOGICAL CHANGES, FROM 1980 TO 1990, ON AN ELDERLY GROUP OF JOURNALISTS IN BRAZIL

Maria Ligia PAGENOTTO¹, Sonia Amps FUENTES², Flaminia LUDOVICI¹, Ilza Maria T. De Almeida FERRAZ¹, Elisabeth F. MERCADANTE¹ (1. Gerontology, Pontificia Universidade Catolica de Sao Paulo, Brazil; 2. Psicologia Clinica, Pontificia Universidade Catolica de Sao Paulo, Brazil)

Introduction : With the availability and expansion of computer use in the 80's, journalists from the typing era were required to start using computers. This obliged them to learn new skills, and to work with programs of increasing complexity, with multiple images and sounds to better capture data. Method : This study investigates the impacts that these technological advances had on journalists from this period, that now are sixty years and older. To address this, six elderly journalists were interviewed with semi structured surveys. Results : Respondents indicated that they feel excluded from current editorial activities as they are stereotyped as old; however they can immerse themselves in journalism as free lancers. Regardless, respondents recognize the benefits of online journalism, especially when they are aware of the latest software and navigational tools, which favors immediate contact with peers. Conclusion : Technological advances have changed the way journalism is conducted, requiring new skills and abilities, where one needs to be up to date on new technologies for faster processing of data and materials online, which requires effective production and efficient analysis and communication. Articulation of these results will provide important insights for professional to happily age in a professional environment. Keywords : technological impacts, elderly group journalists

OP25 320-S-5

DIGITALIZED LIFE AND HEALTHY AGING: CONFLICTS AND CHALLENGES IN DEVELOPING WORLD PERSPECTIVE

Dilek ASLAN (Public Health, Hacettepe University, Faculty of Medicine and Turkish Geriatrics Society, Turkey)

Introduction : Demographic change globally has many health/disease outcomes which countries should overcome for a healthy community. As expected, disease prevention and health promotion facilities will play crucial role in maintaining well being of the individuals including elderly people from birth to death. However, the precautions vary between countries by their economic and social development status. Not only in developed countries, but in transition countries population aging has been a significant case since decades as well. The needs of trained personnel at all level include all those who work with older persons namely: health professionals, formal care givers, volunteers, family members as well as the older persons themselves. This need has been highlighted both in the Vienna and the Madrid International Plans of Action on Ageing. This presentation aims to evaluate the concept of "Digitalized Life and Healthy Aging" with Conflicts and Challenges in

Developing World Perspective. Method : Scientific databases were reviewed in the aim of the presentation. Results : The main headings will be "Health and digitalization: where do they cross over?", Conflicts and challenges; does globalization have influences?" and also "Recommended solutions for healthy aging" to review and analyze some national and international attempts. Various aspects of digitalization including research needs from the elderly perspective will be discussed in this regard. Conclusion : Digitalization should be used to improve elderly health. Scientific research is needed for this category for future work. Keywords : Aged, Digitalization, Global Health

OP25 320-S-6

WEB BASED QUALITY IMPROVEMENT SYSTEM DEVELOPMENT OF HOME HEALTH CARE FOR THE OLDER ADULTS

Hyun-sook CHANG (Department of Elderly Welfare, NAMSEOUL UNIVERSITY, Korea)

Introduction : In 2008 new introduced Korea public long-term care insurance system. New qualification system of long-term care workers about 1 million. There was not computerized management system so more than 16,000 home based long-term care institutions' caregivers are having note down their service record. Method : 1. Research equipments as server and accessory and DB management s/w by Internet Data Center placed on outsourcing, terminal units (small notebook personal computers) with wireless Internet for home care workers to input data, education equipment as portable beam projector and movie camera, personal computers built up completion 2. Construction and operation of server and clients network as homepage(www.qlongtermcare.or.kr) , System module development of homecare beneficiary services and safety management for the elderly (fall down prevention, safely bathing etc.) 3. Based on internet server-client network, input service data into up-load representative modules via terminal units by homecare workers. Results : Research on actual condition survey for homecare needed the elderly(302 elderly people nationwide), Average age 80.3 years, Female elderly 76.5%, illiteracy 24.5%, Care level: Grade I(severe case): 6.0%, Grade II: 8.3%, Grade III: 76.2%, Cognitive level: decision making<defects of short term memory<forget date, ADL function level: bathing<out of the room<dressing<meal assistance2. Research on actual condition survey for homecare workers' field education needs level (169 homecare workers nationwide): Access Internet 57%, Average age 52years, Female workers 98%. Conclusion : Web based quality management system for the beneficiary older adults could be effective management system at the home based long-term care institutions in Korea. Keywords : Web Based quality improvement system, Older adults, Home health care

OP25 321-S

LEISURE

OP25 321-S-1

A STUDY ON POSITIVE AND NEGATIVE FACTORS FOR ADOPTING OUTDOOR RECREATIONAL SPORTS ACTIVITY OF THE MIDDLE-AGED AND OLDER ADULTS

Yuki MATSUMURA¹, Makoto CHOGAHARA², Megumi TANI¹, Kei HIKOJI³, Daichi SONODA¹ (1. Graduate School of Human Development, Kobe University, Japan; 2. Faculty of Human Development, Kobe University, Japan; 3. Faculty of Education, Wakayama University, Japan)

Introduction : In recent years, outdoor recreational sports (ORS)

activities have occupied an important position in sports at home and abroad. And, the percentage rate of action of intention in ORS activity was high. However, the percentage rate of action in ORS activity was only 4%. The rate was lower than other sports. It's necessary to clarify the factor to enable ORS activity. The purpose of this study was to explore positive and negative factors for applicants for adopting ORS activity of the middle-aged and older adults. Method : A questionnaire survey was conducted in 2009 on 1,316 middle-aged and older adults who were chosen by random sampling in Japan. The number of respondents who intended to play ORS was 266 (marine sports, 40. Outdoor sports, 204. Winter sports, 22.). Then, in the series of phrase extraction and themes analysis, the 266 linguistic data were categorized into 24 categories on positive factors and 19 categories on negative factors. Afterwards, we conducted correspondence analysis, with sport status, positive and negative factors as variables. Results : As a result of the correspondence analysis, respondents who intended to play outdoor sports showed a tendency to respond "Family" and "Traffic & Access" in positive factors. And, respondents who intended to play marine sports showed a tendency to respond "Work" and "Child-care & Care" in negative factors. Conclusion : The study showed to clarify characteristics of the positive factor and negative factor for applicants for stating ORS activity in each outdoor recreational sports. Keywords : outdoor recreational sports, positive and negative factors, middle-aged and older adults

OP25 321-S-2

THE MULTIDIMENSIONAL BENEFITS OF PARTICIPATION IN MASTERS SPORTS: A CASE STUDY OF THE 'MASTERS KOSHIEEN'

Kei HIKOJI¹, Makoto CHOGAHARA², Megumi TANI³, Daichi SONODA³, Yuki MATSUMURA³, Akira OKADA⁴, Yoshihiro TAKADA², Nobuhiro ISHIZAWA⁵ (1. Faculty of Education, Wakayama University, Japan; 2. Faculty of Human Development, Kobe University, Japan; 3. Faculty of Human Development, Graduate School, Kobe University, Japan; 4. Department of Human Life Environments, Konan Women's University, Japan; 5. Department of Sport Education, Hokkaido University of Education, Japan)

Introduction : The purpose of this study is to explore the multidimensional benefits experienced by Masters Sports participants from a case of the Masters Koshien. This study focused on the Masters Koshien to collect qualitative data regarding detailed description of subjective benefits of the event participants and investigated what kind of benefits do the masters sports participants obtain substantially. Method : Survey interviews were conducted and 1,878 linguistic data items were collected from 304 participants of the 2008 Masters Koshien, our action research program. And the thematic analysis model was used for data analysis. Results : In the series of thematic analysis, 21 benefits of masters sports were extracted and divided into 4 different dimensions of benefits: individual benefits, community benefits, social benefits, and educational benefits. It was suggested that this study could reveal three additional benefits that previous studies have not been explored such as community benefits, social benefits, and educational benefits of masters sports. Conclusion : The Masters Koshien is different from open masters sport events in which adults enjoy competing in sports, and which have been a major style of masters sport event. The Masters Koshien brings about benefits unique to mecca-like masters sport events. In addition, the Masters Koshien is an alumni membership sport event, which means that it is not an open masters sport event. Keywords : Masters Sports, Benefits of Sports and Physical Activities, Masters Sports Promotion

OP25 321-S-3

COMPARING CANADIAN AND KOREAN OLDER ADULTS' LEISURE TIME USE AND MEANING OF LIFE

David KAUFMAN¹, Mi Ok CHANG² (1. Education, Simon Fraser University, Canada; 2. Education, Tongmyong University, Korea)

Introduction : The quality of life for older adults has become critically important and is related to how they spend their leisure time in daily life. The purpose of this study was to compare the leisure time use and meaning of life of older adults in Canadian and Korean urban settings. Method : Participants in the study consisted of over 300 volunteers in both Canada and Korea, aged 55 and over, and already retired or only working part-time. A questionnaire was developed consisting of three parts: personal background, measurement of leisure time activities, and meaning of life. The questionnaire was distributed to older adults in both countries with a cover letter and consent form. Data were collected by undergraduate students as well as at community and seniors' centers. A stamped self-addressed envelope also was included for ease of return of the completed questionnaire. The duration of the data collection was about three months in both countries. Results : In Canada, the study found that older adults spent more time overall in active leisure rather than passive leisure. However, more time was spent in particular passive leisure time activities. Age and work status were factors related to leisure time use in both active and passive leisure time activities. Income was found to be related to active leisure time use while education was related to passive leisure. The Korean results are currently being analyzed and will be reported at the conference as well as a comparison between the two countries. Conclusion : Conclusions will be reported at the conference. Keywords : seniors, older adults, leisure time

OP25 321-S-4

RESEARCH ON THE RELATIONSHIP BETWEEN SPIRITUAL HEALTH AND ENVIRONMENTAL LITERACY FOR THE ELDERLY

Ying-Tsun HUNG¹, Mei-Lan CHEN², Hsiu-Lan CHEN³ (1. Department of Senior Citizen Service Management, Ching Kuo Institute of Management and Health, Taiwan; 2. Institute of Health Industry Management, Ching Kuo Institute of Management and Health, Taiwan; 3. Department of Elderly Welfare & Social Work, Toko University, Taiwan)

Introduction : This study focuses on the spiritual health and environmental literacy of elderly, and dimensions of spiritual health can be divided into four aspects: individuals and self, communities, environment and transcendence. According to the research of Hung(2009), it discovered that many old people didn't know how to express their environmental sense and love of nature. Therefore, it's important to find out the relationship of environmental literacy and spiritual health for the elderly. Method : The research uses the questionnaire survey procedure. It will conduct in the Senior Learning University in Taiwan. The available sample for the study is over 500 copies. Results : Spirituality integrates critical factors of individuals' other dimensions, such as physical, psychological, emotional and social aspects. From the theory of deep ecology and eco-psychology, they emphasis the humankind and environment are interdependent. From nature and environment, elderly connect themselves from higher power and get spiritual growth. The environmental literacy were included cognition, affection, skill and behavior. From this study, we will know the learning needs of old people and their living style. Secondly, There were significant correlations between spiritual health and environmental literacy. Elderly should learn more environmental knowledge and do more effort to protect our nature. it is important to

guide old people to combine the spirituality, ecology, environmental literacy and environmental protection. Conclusion : It is important to enhance the old adults' environmental literacy and spiritual health. Some suggestions are given to the senior learning organizations. Keywords : elderly, environmental literacy, spiritual health

OP25 321-S-5

THE DEVELOPMENT OF QUALITY OF SPORT FOR LIFE (QOSL) INDEX FOR ASSESSING THE MULTIDIMENSIONAL PHYSICAL ACTIVITY INVOLVEMENT IN JAPANESE OLDER ADULTS

Makoto CHOGAHARA¹, Kei HIKOJI², Megumi TANI³, Daichi SONODA³, Yuki MATSUMURA³ (1. Faculty of Human Development, Kobe University, Japan; 2. Faculty of Education, Wakayama University, Japan; 3. Graduate School of Human Development, Kobe University, Japan)

Introduction : As the proportion of elderly in the population continues to increase, the needs and potential of physical activity involvement have diversified. The purpose of this study was to develop the Quality of Sport for Life (QOSL) Index specific to the physical activity contexts of Japanese older adults. Method : After the content validity was tested, a series of confirmatory factor analyses was conducted to test a hypothesized multidimensional model using 1073 survey response from community-dwelling adults aged 50 and older in 2008 and 2009. Results : Three separate analyses of age groups (i.e., fifties, sixties, and seventies and older) demonstrated that three dimension of sport orientation: health, leisure and competition were independent domains, and factor subscales revealed adequate internal consistency. Moreover, the criterion validity tests indicated that impacts of these three dimensions on sport-related dependent variables changed according to the age groups. Conclusion : In the past, physical activity programs for the elderly were designed to primarily maintain health, and as a result, the frequency, duration, intensity and continuity of activities were emphasized, but there was not much interest in the qualitative dimensions such as level of specialization, skill and achievement within these activities. The study findings supported the importance of a multidimensional conceptualization and assessment that takes into account not only health orientation but also the leisure pursuit and mastery orientation, in order to comprehend the physical activity world of older adults and to assist the enrichment of active ageing in the future. Keywords : Sport, Scale Development, Japanese Elderly

OP25 321-S-6

“LEARNING” IS THE WAY OUT: EXPERIENCES IN THE JOURNEY OF AGING

Chun-Ting YEH, Yahui LEE, Ching-Yi LU (Department of Adult and Continuing Education, National Chung-Cheng University, Taiwan)

Introduction : Aging is considered to be an inevitable journey. To understand what people do as they face the aging problems. Method : We adopt a qualitative research and conduct semi-structured interviews with 16 adults. The interviewees are from 52 to 74 years old and 61.75 years old on average. Results : We find the interviewees use the strategy of “learning” in the journey of aging. They gain the experiences and knowledge to deal with aging through learning, such as from books, intergenerational learning programs, peer sharing, etc. The interviewees indicate that they are transformed and have more positive perspectives for later life through learning with other generations. Conclusion : We find that for some interviewees, “learning” itself is not the main purpose, but to have fun through the participation. Keywords : aging, learning strategy

OP25 322-S

LIFE COURSE CHANGE

OP25 322-S-1

HOW DO EARLIER LIFE EXPERIENCES IMPACT ON THE DEVELOPMENT OF RESILIENCE?

Gill WINDLE, Gill WINDLE (Dementia Services Development Centre, Bangor University, United Kingdom)

Introduction : This research explores the development of resilience, and how it affects the interpretation of ill-health in later life. It examines how new vulnerabilities or strengths emerge over the life course. Understanding the influence of life course experiences is important and rarely addressed. Method : In-depth interviews are undertaken with 15 people aged 65+, who are sampled from an existing longitudinal cohort study. Their quantitative data suggests that they demonstrate resilience (i.e. high subjective well-being despite a physical health problem and associated functional limitations). Data is transcribed and analysed in NIVO 9 using interpretive phenomenological analysis. Results : Taking a life course perspective, qualitative exploration addresses life histories; the meaning and impact of life experiences, the extent to which these experiences may have enabled a positive adaptation to ill-health in later life, or which experiences may be a barrier to adaptation, and how these experiences may shape the development of resilience. It explores within a life course perspective whether ‘steeling effects’ can be identified. Conclusion : This research contributes new knowledge on the development of resilience across the life course, and how earlier life experiences facilitate understandings of a prolonged and significant exposure to an adversity, such as chronic illness. Keywords : Resilience; qualitative; life-course

OP25 322-S-2

DEMOGRAPHIC CHANGES IN CHINA AND SWEDEN. LIFE HISTORY PERSPECTIVE ON CARING

Stina Mariana JOHANSSON¹, Shengli CHENG² (1. Department of Social Work, Umea University, Sweden; 2. Department of Social Work, Shandong University, China)

Introduction : The one-child policy in China and economic growth, improved the standard of living. Rapid migrations into urban areas change the deep traditions of intergenerational care. It is still unknown for researchers how the Chinese demographic transition into an ageing society, has affected the citizen's personal lives. In Sweden this transformation and the building of a supporting welfare structure has preceded extremely slow. Method : Life histories collected in China and Sweden describing the variety of factors on the elderly whose lives are affected by this transformation, passages and liminalities, events, linked lives, continuity and adaptation. Results : Old rural Swedish women's life stories make it clear that caring is multifaceted and complex and the entrance into labor market was a central theme in their stories (Snellman 2010). This transition was passed in last century with a shift in women's caring role from being a family obligation to a partly public concern. With the nuclearizing of family and the young population migrating to urban areas in China, the traditional mode of elderly support and care faces increasing challenges. Conclusion : In the paper the results from Sweden and China will be compared. Life stories of elderly will show us how social structure factors and personal factors interact in people's lives and how their needs of social services are expressed at a personal level, and how social policy responded to this impact. Keywords : life histories, demographic transition, caregiving, China, Sweden

OP25 322-S-3

CHILDHOOD MISFORTUNE, PERSONALITY, AND ACUTE MYOCARDIAL INFARCTION: DOES PERSONALITY MEDIATE RISK OF ACUTE MYOCARDIAL INFARCTION?

Patricia M. MORTON¹, Nicholas A. TURIANO², Daniel K. MROCZEK³, Kenneth F. FERRARO¹ (1. *Sociology, Center on Aging and the Life Course, Purdue University, USA*; 2. *Psychiatry, University of Rochester Medical Center, USA*; 3. *Human Development & Family Studies, Center on Aging and the Life Course, Purdue University, USA*)

Introduction : Previous research has discovered a link between childhood experiences and adult health, but the mechanisms underlying this relationship are the subject of much debate. To elucidate this relationship, we investigated the pathway from childhood misfortune to risk of acute myocardial infarction (AMI) via personality. Method : Longitudinal data were drawn from the National Survey of Midlife Development in the United States, which sampled 3,302 men and women aged 25-74. The Big-5 personality traits and multiple measures of childhood misfortune (including child abuse, family structure, financial strain, and poor health) were used in a series of proportional hazards models to assess whether personality mediated the effect of both additive and specific domains of childhood misfortune on AMI risk. Results : Among the Big-5 personality traits, only neuroticism was a significant mediator. Neuroticism mediated the effect of additive childhood misfortune on adult AMI risk, but no mediation effects were observed for specific domains of childhood misfortune. Conclusion : By linking childhood misfortune to personality, findings reveal that childhood misfortune may be formative in the development of personality, which, in turn, can be consequential to health in later life. Keywords : Childhood Misfortune, Personality, Acute Myocardial Infarction

OP25 322-S-4

SOCIAL CHANGE IN 20 CENTURY'S ASIA AND LIFE COURSE OF THE ELDERLY: FOCUSING ON CHILDBIRTH AND CHILDCARE NETWORKS IN FIVE SOCIETIES

Mari YAMANE¹, Sang Ook HONG², Keong-Suk PARK³, Dong Hui LI⁴, Itaru NAGASAKA⁵, Yukiko NAKASUJI⁶ (1. *Home Economics Education, Aichi University of Education, Japan*; 2. *Human Ecology and Kinesiology, Yeungnam University, Korea*; 3. *Social Sciences, Seoul National University, Korea*; 4. *Japanese Language, Dalian University of Foreign Languages, China*; 5. *Graduate School of Integrated Arts and Sciences, Hiroshima University, Japan*; 6. *Regional and Social System, Aichi University of Education, Japan*)

Introduction : The purpose of this study is to explore life course of the elderly in East and Southeast Asia focusing on family events and considering it in relation to social change in 20th century. The focus of this presentation is on changing process in childbirth and childcare networks. Method : Research method is questionnaire survey. We hold questionnaire survey on life course in 5 areas, 4 countries during the year 2009. The objects are people who were born during 1920th to 1940th. We corrected 223 cases in Dalian (China), 100 cases in Seoul (Korea), 97 cases in Daegu (Korea), 81 cases in Ilocos (Philippines), 81 cases in Nagoya (Japan). Results : Major findings are as follow. (1) We observed Multiple professionalization processes in childbirth support; from midwife to medical doctor in Nagoya and Dalian, from relative to medical doctor in Seoul and Daegu, from traditional midwife to medical midwife in Ilocos. (2) In Seoul, Daegu and Nagoya data, child care network had concentrated to mother of children, whereas in Dalian and Ilocos data, the tendency of multiple

parenting had continued. Conclusion : We should consider the meanings of these results in relation to historical change. Medicalization process of childbirth in colonial modernity would be important point to view in order to consider the different paths of childbirth support. Basic family-relative system before modernization, changes in family and gender role under industrialization, those under socialism would be indispensable factors in order to consider the difference in childcare networks. Keywords : lifecourse, Asia, network

OP25 322-S-5

A ROUGH JOURNEY: IS IT DIFFICULT TO BECOME OF ELDERLY OR TO SURVIVE AS AN ELDERLY IN KOREA?

Seung-Eun CHA¹, Jinhee KIM², Jung-Yeon SON³, Elaine ANDERSON² (1. *Dept. of Child, Family and Welfare, The University of Suwon, Korea*; 2. *Dept. Family Science, University of Maryland, USA*; 3. *Institute of Aging, Seoul National University, Korea*)

Introduction : More elderly Koreans live alone, independently than ever before. The purpose of this study is to understand psychological challenges of older Koreans by investigating the patterns of changes in depression. We intend to study the most vulnerable age and relevant factors of depression. Method : Using the data from the two waves (t1, 2006 and t2, 2008) of KLoSA (Korean Longitudinal Survey for Aged), we employed 3,320 cases (female: 54%) of elderly respondents who were in their age of 65-85 in 2006 and participated in both waves. Results : Preliminary results show that the levels of depression were highest between ages of 75-80 on average for both waves (t1 and t2) with the sample. Over the two year period (from t1 to t2), about 45% of all elderly who responded to both waves report that the level of depression increased while 30% report decrease in the levels of depression. Further, the increase in depression was significantly associated with reduced financial resources and health. Additionally, widowhood explained the increase of depression. Additional analysis will be conducted to examine whether financial resources, health, family structure, and social supports as well as their interactions are associated with increase, decrease or no change in depression levels over two-year period. Conclusion : Further, elderly are at high risk in terms of mental health, those who have high levels of depression in both waves will be examined. The results will provide implications for policy makers regarding the mental health status of elderly and potential programs and policies in Korea. Keywords : depression, social determinants, mental health, life course change

OP25 322-S-6

LIFE COURSE INDICES FOR SOCIAL DETERMINANTS OF HEALTH AND QUALITY OF LIFE AMONG KOREAN ELDERLY

Jiae LEE¹, Soong-Nang JANG², Sung-Il CHO¹ (1. *Department of Epidemiology, Graduate School of Public Health, Seoul National University, Korea*; 2. *Red Cross College of Nursing, Chung-Ang University, Korea*)

Introduction : This study investigated the indicator of social economic status (SES) that affects the elderly's health and quality of their life by life course approach. Method : The subjects were the Korean elderly aged 60 or more, and 1000 households from 10 survey regions based on the population census (2007) were randomly selected by stratified multi-stage sampling. Selected households were examined by using interview methods to assess individual background, SES during each stage of life course, health status, functional abilities, and quality of life. Data was analyzed by ANCOVA test in condition of the data adjusted by age, present economic status, types of family structure and other variables. Results : There is a sex difference regarding subjective

economic status in life course; decreased in fifties in men, but sixties in women. Living condition from early childhood to late mid life is found to be significantly associated with the satisfaction level of present life in the elderly at sixties. Of SES by childhood, educational status is found to be the significant factor of the satisfaction level of present subjective health and quality of life(QoL). Experience of meal skipping is considered an important determinant of childhood SES in both elderly men and women. The first job status affects in both elderly men and women significantly. Especially in elderly women, subjective health status and life satisfaction has big differences by the latest job status of the spouse. Conclusion : The important SES indicators that affect health status of the elderly have differences by characteristics of life course, sex, and age. Keywords : Life course approach, Social economic status, Life satisfaction

OP25 420-S
LONG TERM CARE III

OP25 420-S-1
THE EFFECTS OF ASSISTIVE TECHNOLOGY INTERVENTIONS ON USERS AND THEIR INFORMAL CAREGIVERS

Ben MORTENSON¹, Louise DEMERS², Jeffrey JUTAI³, Frank DURUYTER⁴, James LENKER⁵, Marcus FUHRER⁶ (1. Gerontology Research Centre, Simon Fraser University, Canada; 2. Rehabilitation, University of Montreal, Canada; 3. Interdisciplinary School of Health Sciences, University of Ottawa, Canada; 4. Surgery, Duke University, USA; 5. Rehabilitation Science, University at Buffalo, USA; 6. Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Institute of Health, USA)

Introduction : Some randomized control trials (RCTs) have found assistive technology interventions are beneficial for users, but no experimental research has examined their effects on users' informal caregivers. Therefore a study was undertaken to determine the feasibility of an inclusive, dyadic approach to assistive technology (AT) provision by testing if it effective in 1) improving AT users' activity performance, and 2) decreasing their caregivers' sense of burden. Method : A delayed-intervention, RCT was conducted in the homes of community-dwelling participants. Eighty-eight individuals participated in the study (44 dyads). The intervention involved: 1) a detailed in-home assessment, 2) identification of an activity that was problematic for both the caregiver and AT user, 3) negotiation of an AT focused intervention plan, and 4) implementation of this plan, including device provision, training and home modifications. The primary quantitative outcome measure for AT users was the Life H and the primary quantitative outcome measure for caregivers was the Caregiver Assistive Technology Outcome Measure (CATOM). Results: Following the intervention assistance users experienced significantly increased satisfaction with activity performance (Life H). Likewise, informal caregivers experienced significantly decreased burden with the dyad-identified, problematic activity (CATOM). Conclusion : This is the first experimental study to demonstrate that provision of AT decreases caregiver burden. The findings should help health-care providers to advocate for better funding of AT provision and related services. This study lays the groundwork for future research in this area. Keywords : assistive technology, informal caregivers, randomized control trial

OP25 420-S-2
USE OF COMMUNITY-BASED LONG-TERM CARE SERVICES BY FAMILY CAREGIVERS TO OLDER JAPANESE ADULTS

Tomoko WAKUI¹, Emily M AGREE², Tami SAITO³, Ichiro KAI⁴ (1. Population, Family and Reproductive Health, Johns Hopkins Bloomberg School of Public Health, USA; 2. Department of Sociology, Johns Hopkins University, USA; 3. Department of Social Science, National Center for Geriatrics and Gerontology, Japan; 4. Emeritus Professor of Social Gerontology, The University of Tokyo, Japan)

Introduction : The number of community dwelling elderly who require long-term care has increased in recent years, but most research has focused on the transition from community-based care to nursing-homes. The current paper is focused on differences in the pattern of community-based service utilization by caregiver-care recipient relationship, which helps to understand potential care substitution patterns between formal and informal care. Method : We conducted a longitudinal study of family caregivers (n=2510) in 17 municipalities in northwestern Japan in 2010. Information was obtained on use of three types of community-based services: home-health (times/ week), day-care (days/ week), and short-stay services (days/ 3 months). A negative binomial regression model was used to examine utilization differences by care demands (including ADL needs and dementia); caregiving situation; and caregiver relationship. The most common relationship is daughter-in-law (30.2%), followed by daughter (21.2%), wife (21%), son (15.7%), husband (7.9%) and other (4.1%). Results : Results showed that ADL dependent care-recipients were more likely to use home-health and short-stay services, but care-recipients with cognitive impairment were more likely to use day-care and short-stay services. After controlling for care demands and caregiving situation, married daughter, son, and daughter-in-law caregivers were more likely to use day-care services, compared to wives. Husbands and single sons were more likely to use home-health care. Conclusion : These results suggest that more efficient long-term care services will take into account the needs and preferences of family caregivers as well as the needs of older care-recipients. Keywords : Caregiver, Long-term Care, Community-based service

OP25 420-S-3
PROFESSIONAL CARE PROVIDERS AND STAKEHOLDERS' VIEWS OF BEST PRACTICE IN THE CARE FOR PERSONS WITH DEMENTIA IN SWEDEN

Christina BOKBERG¹, Gerd AHLSTROM¹, Ingalill R HALLBERG¹, Staffan KARLSSON¹, Ann-christin JANLOV² (1. Department of Health Sciences, Faculty of medicine, Lund University, Sweden; 2. School of Health and Society, Kristianstad University, Sweden)

Introduction : Dementia implies progressive loss of mental and physical functions during the trajectory of the disease (Porter & Kaplan, 2012). Persons with dementia need involvement of various and several care providers throughout the stages of dementia, and more knowledge is needed about best practice strategies in this complexity of care (Gurner, 2001). The aim of the study was to explore professional care providers and stakeholders' views of best practice in concepts of information, collaboration and communication in the care for persons with dementia in Sweden. Method : The study had a qualitative approach based on three focus group interviews with a variation among participants regarding professions and workplaces to represent different types of care for persons with dementia from diagnosis to end of life care. The transcribed verbatim was analyzed with qualitative content analysis. Preliminary results: In early stages primary health care specialized in dementia had close collaboration, training and mentoring, with memory clinic and home care. In the later stages the person with dementia had less frequent contacts with primary health care. Day care played an important role in information delivery of the disease, in collaboration with home and institutional

care. In the latest stage the family had an important role as a proxy for the person with dementia about desires in the care. Conclusion : A well-functioning network in professional care seems to have an impact on persons with dementia to remain at home despite loss of mental and physical functions. On the behalf of RightTimePlaceCare consortium. <http://www.righttimeplacecare.eu>. Keywords : Persons with dementia, professional care providers, best practice

OP25 420-S-4

AGING ATTRIBUTIONS AND FAMILISM INFLUENCE LONG-TERM CARE PLACEMENT DECISIONS BY SPOUSAL CAREGIVERS OF OLDER ADULTS

Lynn ZHU¹, Alan SALMON², Sandra HOBSON² (1. Department of Epidemiology and Biostatistics, Western University, Canada; 2. Faculty of Health Sciences, Western University, Canada)

Introduction : A significant number of older adults on the wait-list for long-term care (LTC) in Canada are those with a live-in caregiver and care needs low enough to be adequately supported in the homes with supportive services. Why are low needs older adults with live-in caregivers opting for LTC placement? This study aimed to uncover whether spousal caregivers' views about the aging process influence the institutionalization of loved ones. Method : A mixed methods approach was used to collect data from 40 spousal caregivers of community dwelling individuals above the age of 70. Participants completed the Aging Perceptions Questionnaire and the Revised Familism Scale. They also recommended a course of action (i.e., caregiving at home or LTC placement) for older adults described by vignettes representing the varying levels of care needed by individuals on the Province of Ontario's LTC waitlist. Semi-structured interviews were conducted to determine reasons for the recommended actions. Results : Spouses who believe themselves to have less control over the negative consequences of their own aging recommended LTC more frequently ($R^2 = -0.279$). Qualitative interviews revealed placement decisions are influenced by the needs of care recipients, caregivers' physical ability and gender, socio-cultural beliefs about caregiving (familism), access to home care services, and personal experiences of LTC institutions. Conclusion : Results suggest a balanced consideration of the physical needs and cultural beliefs of informal caregivers is required by health professionals and policymakers when addressing the allocation of home care support services or institutional placement of older adults. Keywords : family caregiver, long-term care placement, aging attribution

OP25 420-S-5

A MANAGEMENT PLAN FOR DEMENTIA PATIENTS' CARE: THE MIRANDOLA DEMENTIA SPECIAL CARE UNIT EXPERIENCE

Andrea FABBO¹, Agata MALAGOLI², Marina TURCI³, Giacomo MENABUE⁴, Annarita GUERZONI⁴, Flavia ORSI⁵, Annalisa BONORA⁴ (1. Primary Care, Ausl Modena and Cisa Alzheimer Special Care Unit, Italy; 2. Nursing School, University of Ferrarat, Italy; 3. Primary Care- Alzheimer Special Care Unit Mirandola, Ausl Modena, Italy; 4. Cisa Mirandola Alzheimer Special Care Unit, Asp Unione Comuni Modenesi Area Nord, Italy; 5. Cisa Mirandola, Asp Unione Comuni Modenesi Area Nord, Italy)

Introduction : The main problem in dementia illness that caregivers have to afford usually concerns the management of behavioral problems. The Mirandola dementia care unit provides temporary admissions to dementia patients to study problems and find proper solutions especially working with non pharmacological strategies like gentle care, occupational therapy and multisensory stimulation.

Method : The analysis of benefits was based on a multidimensional evaluation of patients obtained by comparing the data at the entrance, at discharge and at periodic follow-ups (6, 12, and 18 months after discharge). Among other data we measured the NPI scores (Neuropsychiatric Inventory) and the consumption of sedative drugs. Patients had moderate-severe dementia diagnosis and behavior disorders for an NPI score higher than 24 at the entrance. The study was developed on 63 cases. Results : 71% of the people hospitalized in the NA was discharged with a domiciliary project. The comparison made between the average NPI scores obtained at the entrance (44.66) shows a significant reduction in behavioral disorders at discharge (30.45, $p < 0.05$) which was maintained at a distance of 6 (28.81; $t = 3.663$, $p < 0.05$) and 12 months (21.29, $t = 2.743$, $p < 0.05$). Conclusion: These outcomes suggest that it is possible to plan a home care for dementia patients in their average and late stage with behavioral disorders. This is promoted in the dementia care unit by the prevention of situations that can generate agitation and aggression in these people. These benefits seem to last even after a period of 12 months after discharge. Keywords : dementia, BPSD, sensory stimulation

OP25 420-S-6

CAPABILITY AND CARERS' WELLBEING: USING INTERNET FORUMS FOR RESEARCH WITH INFORMAL CAREGIVERS

Christine STEPHENS¹, Barbara HORRELL¹, Mary BREHENY², Fiona ALPASS¹ (1. School of Psychology, Massey University, New Zealand; 2. School of Health and Social Services, Massey University, New Zealand)

Introduction : The capability approach which contains three central concepts - capability, functioning and agency - provided the theoretical framework for a study of the wellbeing of informal caregivers of older people. The study was designed to work with carers as co-researchers to identify what they consider important for maintaining their wellbeing throughout the caregiving process. Method : A researcher set up a forum on the world wide web. Participants were recruited through other internet discussion forums and through websites for older people's organisations. The researcher initiated discussion through weekly questions based around different themes (based on the capability framework). Through the forum participants interacted and introduced additional topics for discussion. Over three months, 60 carers discussed caring for their spouses, parents, grandparents and non-family members. Results : The carers' stories about caring illustrate the complex relationships associated with caregiving. The comments were analysed to reveal a set of capabilities which impact the carers' ability to be healthy. The contradictory importance of emotions was highlighted across the set of capabilities. Carers described emotional attachment that influenced their decision to provide care and also affected the freedom to fulfil their own needs. Guilt about negative emotions was expressed, suggesting that caring involves putting one's own feelings aside. Conclusion : The focus on emotions in the caregivers' stories has led to the next stage of the research. The use of an online method provided the opportunity to contextualise caregiving and to test the internet as a vehicle for participatory research with a difficult to reach population. Keywords : caregiving, capability approach, internet,

OP25 421-S

LONG TERM CARE IV

OP25 421-S-2

THE RELATIONSHIP BETWEEN USUAL MEMORY

COMPENSATION BEHAVIORS AND PROSPECTIVE MEMORY PERFORMANCES WITH USING MEMO PAPERS AMONG ELDERLY PEOPLE

Nozomi RENGE¹, Yasuyuki GONDO², Yoshiko ISHIOKA², Ikuyo KUROKAWA³, Madoka KAWASAKI², Peter RENDELL⁴
(1. Maritime Sciences, Human Sciences, Kobe University, Osaka University, Japan; 2. Human Sciences, Osaka University, Japan; 3. Osaka Prefecture, Osaka Prefecture, Japan; 4. Faculty of Arts and Sciences, Australian Catholic University, Australia)

Introduction : Prospective Memory (PM) is important in maintaining healthy and safe independent living. It is essential for people to prevent from causing PM failures by memory strategies. Dixon et al. (2001) made the Memory Compensation Questionnaire (MCQ). Almost elderly people usually use some external aid such as memo. However it is unknown whether usual memory compensation behaviors affect on PM performance. The purpose of the present study is to reveal the relationship between usual memory compensation behaviors and prospective memory performance under it is possible for elderly people to use memo papers. **Method :** The experiments were conducted with 151 elderly people (M = 68.06, SD = 5.20). They were required to answer the MCQ and conduct Virtual Week (VW, PC version; Rendell & Craik, 2000) as PM measure. VW is a PC version of a board game on which participants move around with roll of a dice and are required to make choices about daily activities and remember to carry out lifelike activities (PM tasks). **Results :** Partial correlation coefficients between MCQ Scales and VW Performances were performed. The results showed that the elderly people who usually used more reliance strategy and time strategy in daily life performed worse. **Conclusion :** Even if they could make free use of memo papers, the elderly people who usually used more reliance strategy and time strategy in daily life made more PM failures. It may be suggested that whether they tried to perform the everyday PM tasks by themselves influenced on the performance. **Keywords :** memory compensation behavior, prospective memory, memory failure

OP25 421-S-3 IS WORKING LATER IN LIFE GOOD OR BAD FOR MEMORY FUNCTIONING

Kandauda WICKRAMA (*Human Development and Family Science, University of Georgia, USA*)

Introduction : During the past decade, which is overlapped with the current economic recession, older Americans seem to have reversed a century-long trend toward early retirement. Many have been forced to postpone their retirement even beyond age 65 (Pynoos & Liebig, 2009). Thus, further examination and the extension of recent findings about the consequences of working in older age would be useful for the formulation and implementation of public health programs and policies for the rapidly increasing older American population. **Objectives of the Study.** To examine the influence of work status on subsequent memory trajectories in later years. **Method :** We used a subsample of 8,165 older adults who participated in the Health and Retirement Study and were 65 years or older in 2002 to examine work status and memory functioning after controlling for age, other demographic characteristics, and initial health. **Results :** We present results of growth curve analyses. Our results indicate that retired and non-working older adults show steeper declines in immediate memory compared to older adults working full-time after controlling for age. However, work status of older adults does not appear to influence their delayed memory trajectories. **Conclusion :** The findings from these growth curve analyses support the hypothesis that working late in life helps to impede immediate memory declines that often occur in later

years. **Keywords :** work memory aging

OP25 421-S-4 THE EFFECTS OF A 10 WEEKS INTEGRATED EXERCISE TRAINING ON FUNCTIONAL FITNESS OF COMMUNITY-DWELLING OLDER ADULTS

Hsin-Hung HO¹, Shao-Hsi CHANG², Pei-Hsin FANG¹, Pei-Ming CHAN³ (1. Department of Physical Education, National Taiwan Normal University, Taiwan; 2. Graduate Institute of Sport, Leisure & Hospitality Management, National Taiwan Normal University, Taiwan; 3. Office of Student Affairs, Ying Qiao Taipei Public Elementary School, Taiwan)

Introduction : Aging populations increase the prevalence of health problems among the elderly. Integrated exercise training may contribute positively to health and development in this population. **Method :** Thirty elderly staying at homes in Taipei City participated in this quasi-experimental study. Experimental group participants joined 10 training sessions over a 10 weeks period, while the control group did not. Both groups submitted responses to the same functional fitness test, distributed prior to and after the intervention. **Results :** The experimental group showed a significant difference (p<.05) between pre- and post-intervention frailty. The control group showed no significant change in frailty between the two periods. Also, change in experimental group frailty was more significant than in the control group (p<.05). **Conclusion :** Integrated exercise training can increase functional fitness of Community-dwelling elderly. Thus, such may be applied in Community-dwelling facilities. To enhance the physical and mental health of Community-dwelling elderly, the authors suggest including information on integrated exercise training in health promote education programs that will enhance healthcare staff and elderly fitness instructor understanding of integrated exercise training advantages and methods. **Keywords :** Integrated exercise, Elderly, Functional Fitness

OP25 421-S-5 10-YEAR COMMUNITY INTERVENTION FOR FRAILTY PREVENTION AND ITS IMPACT UPON HEALTHY AGING IN JAPAN. 4. IMPACT ON LONG-TERM CARE INSURANCE STATISTICS

Yu NOFUJI, Hiroto YOSHIDA, Mariko NISHI, Hiroshi MURAYAMA, Hidenori AMANO, Yu TANIGUCHI, Eri MATSUO, Taro FUKAYA, Yoshinori FUJIWARA, Shoji SHINKAI (*Research Team for Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology, Japan*)

Introduction : We examined the impact of the 10-year community intervention for frailty prevention on the Long-Term Care Insurance (LTCI) statistics in Kusatsu, Japan. **Method :** First, the incidence rate of disability under the LTCI program for each year during 2001-09 in Kusatsu was calculated as follows; incidence rate = number of people newly certified for long-term care need in the year / (number of primary insured - number of people previously certified for Long-Term Care need). We observed the secular trend by two age class (young-old; 65-74 years, old-old; 75- years). Second, the annual certification rates under the LTCI (= number of people certified for long-term care need / number of primary insured aged ≥65 years) during 2001-09 for Kusatsu, Gunma prefecture and whole nation were compared by age class using the LTCI national data. **Results :** Although the incidence rate of disability under the LTCI program for young-old population in Kusatsu remained unchanged, that for old-old population decreased over the period (from the peak value of 12.2 per 100 person-year in 2002 to 6.0 in 2009). The secular trend in certification rate for LTCI

for young-old population in Kusatsu was similar to that seen in Gunma prefecture and whole nation. By contrast, that for old-old in Kusatsu (increased from 21.4% to 23.6% during the period) differed significantly from that of Gunma prefecture (21.5-28.0%) and whole nation (24.2-29.4%). Conclusion : The incidence rate of disability under the LTCI program for old-old population in Kusatsu decreased during the intervention period, suggesting that the 10-year community intervention effectively delayed the late onset of disability. Keywords : Long-Term Care Insurance , frailty, community intervention

OP25 421-S-6
PHYSICAL ACTIVITY AND AGING: SUBJECTIVE REASONS TO BE INACTIVE

Elisaveta KACHAN¹, Kseniya IVKO² (1. Saint Petersburg Institute of Bioregulation and Gerontology, Russia; 2. Saint Petersburg Institute of Bioregulation and Gerontology, Kazakhstan)

Introduction : Although regular physical activity is a proven way to prolong independent living and enhance quality of life, very low physical activity levels typical for older individuals remain of particular concern. In order to find ways to encourage elderly people to be more physically active, we studied reasons of their inactivity. Method : Having developed a simple and relatively short questionnaire intended to reveal whether our respondents considered themselves to be active or not, and what were the main reasons of their inactivity in their judgement, we asked 70 residents of the Saint Petersburg city social day-care centers and visitors of the geriatric sanatorium aged 65+. Results : All respondents were aware of their being relatively inactive, but only 35% confessed to being almost absolutely inactive. Most of them explained they felt sick or suffered pains (35%), 26% told they were afraid to fall or get injured, 22% had no time or space for being active and 17% mentioned other reasons (felt lonely, had no friends). The results of our survey revealed that the real level of physical activity of our respondents didn't correspond to their subjective perception, yet the majority of them were ready to be more active if we'd advise them simple, safe and available means to do this. Conclusion : These data may help to develop educational strategies to inform older adults about the personal benefits of active aging and teach them how to practice simple physical activities (for example, Nordic Walking), as well as to design guidelines for geriatric and day care centers. Keywords : regular physical activity, inactivity

OP25 422-S
LONG TERM CARE V

OP25 422-S-1
HOW TO IMPROVE LONG-TERM CARE SERVICE THROUGH CHINA'S HEALTH REFORM

Yan LIN (PKU China Center for Health Economic Research, China)

Introduction : Both medical care and long-term care are of great importance for elderly people, and they are closely related in many aspects. However, medical care is administered by the Ministry of Health, while long-term care services are under the administration of the Ministry of Civil Affairs in China. The current health care reform hasn't paid enough attention to its coordination and integration with long-term care services. How can china's health reform respond to the increasing needs for long-term care in an aging society? Method : This paper reviewed the five major tasks in china's health reform and the current situation of long-term care service delivery, trying to explore ways that can improve long-term care through health reform. Results : We found that the low access to affordable and high quality medical care is a major obstacle for elderly people to realize "aging in place",

which forced them to choose institutional care. Conclusion : Integrated care is the future trend for providing efficiency and high-quality care for the elderly. The Ministry of Health can contribute to long-term care service in the following aspects: 1. Community health service center; 2. Multiple sites registration of physicians; 3. Essential drug policy; 4. Health information technology; 5. Long-term care insurance. Keywords : medical care , long-term care, integrated care

OP25 422-S-2
THE MOBILITY AND INDEPENDENT LIVING IN ELDERLY STUDY (MILES): STUDY DESIGN AND BASELINE CHARACTERISTICS

Tushar SINGH¹, Jane A. CAULEY¹, Pawan Kumar SHARMA², Clareann H. BUNKER¹, Jammy RAJESH², Anne B. NEWMAN¹ (1. Department of Epidemiology, University of Pittsburgh, USA; 2. Community Medicine, MediCiti Institute of Medical Sciences, India)

Introduction : Demographic increase in the older population is most rapid in developing countries and will have major impact on public health. Indian population is not well described, but evidence suggests that the current demographic transition provides a unique opportunity to better understand future disability. To accomplish this, we established a longitudinal cohort study - Mobility and Independent Living in Elders Study (MILES), in a rural population of older Indians. Method : We enrolled a random sample of 564 men and women aged 60+ from Medchal Mandal region in Andhra Pradesh state. Baseline visit consisted of two separate clinic visits for measurements of blood pressure, anthropometry, short physical performance battery, 400-meter walk, grip strength, ankle-arm index, cognitive examination, peripheral quantitative computerized tomography, knee x-ray, carotid ultrasound, blood draw and a comprehensive interview. Annual follow-up visits are planned to collect information on incident disability and disease. Results : According to preliminary data analysis from the first clinic visit, median age of the participants was 66 years (60-92); median body mass index, 21.7 kg/m²; median gait speed, 0.67 m/s and median grip strength 17 kg; 55% self-reported their health status as fair or poor and 13% reported falling >1 times in past 12 months. Conclusion : Preliminary data estimates suggest a much frailer population in this cohort compared to US subjects age 66 years. MILES will provide estimates of global burden of disease and disability and their risk factors in older adults, and findings from the study will be used to identify potential interventions to prevent disability appropriate in this rural population of Indians. Keywords : aging, disability

OP25 422-S-3
A 10-YEAR COMMUNITY INTERVENTION FOR FRAILTY PREVENTION AND ITS IMPACT UPON HEALTHY AGING IN JAPAN. 1. STUDY DESIGN AND PROCESS EVALUATION

Shoji SHINKAI, Hiroto YOSHIDA, Mariko NISHI, Yu TANIGUCHI, Yu NOFUJI, Eri MATSUO, Hiroshi MURAYAMA, Hidenori AMANO, Taro FUKAYA, Yoshinori FUJIWARA (Research Team for Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology, Japan)

Introduction : To date there has been no study on community-based intervention for healthy aging. We have conducted a 10-year community intervention for frailty prevention in a local municipality in Japan. Method : Study site was Kusatsu, Gunma Prefecture. The target population was all residents aged 65 years and over. This study was conducted with tight collaboration of municipal public health staffs. For primary prevention of frailty, we stressed the importance of physical activity, nutrition and social participation through various activities. For its secondary prevention, we introduced the

comprehensive geriatric assessment to the routine health check-ups, through which high-risk persons were screened and encouraged to participate in long-term care prevention class. The class was targeted on improvement of physical, mental and social functioning. We collected data through Long-Term Care Insurance System and conducted biannual monitoring surveys over the intervention period. Results : The municipal staffs shared the common aim with us and conducted routine works in terms of healthy aging. Although the attendance rate to annual health check-ups has remained at 30-40%, over 70% of the target population appeared at least once during 10 years. The response rate to the biannual monitoring survey has been high (over 90%) over the period. Many residents joined the surveys as interviewers, through which they recognized the issue of aged community. After long-term care prevention class, participants were motivated to continue the class by themselves. Conclusion : The municipal staffs could share the strategy for frailty prevention. Older people became acclimated to the concept of healthy aging and improved their self-care ability. Keywords : Healthy aging, Community intervention, Study design

OP25 422-S-4

A 10-YEAR COMMUNITY INTERVENTION FOR FRAILTY PREVENTION AND ITS IMPACT UPON HEALTHY AGING IN JAPAN. 3. IMPACT ON FUNCTIONAL HEALTH OF THE TARGET POPULATION

Yu TANIGUCHI, Hiroto YOSHIDA, Mariko NISHI, Hiroshi MURAYAMA, Hidenori AMANO, Yu NOFUJI, Eri MATSUO, Taro FUKAYA, Yoshinori FUJIWARA, Shoji SHINKAI (*Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology, Japan*)

Introduction : We previously reported a 10-year community intervention for frailty prevention. This study aimed to examine its impact upon functional health of the target population. Method : We conducted biannually the monitoring survey with interview method during the 10-year period (2001-11) in local municipality in Japan. The eligible subjects were all residents aged 70 and older, and we observed the secular trend in functional health. Functional health was evaluated by life-space mobility, higher-order functional capacity and healthy life expectancy. For the analysis we determined the proportions of those who had highest life-space mobility or who showed full score in each subscale (IADL, intellectual activity and social role) of the TMIG-Index of Competence. We also calculated healthy life expectancy at the age of 70 years with the Sullivan method. Results : The response rates to monitoring surveys have been very high (range: 91.1-98.8%). The proportion of those who had highest life-space mobility increased from 80.8% to 86.9% for men and from 63.7% to 74.3% for women. The proportions of men who showed full score in IADL, intellectual activity and social role increased from 72.9% to 80.8%, 64.2% to 64.7% and 55.0% to 58.8%, respectively. The corresponding values for women were 66.5% to 76.3%, 49.0% to 57.2%, and 51.5% to 58.3%, respectively. We found the extension of healthy life expectancy during the period: about 0.5 year for men and 1.2 year for women. Conclusion : The functional health of the target population was significantly improved during the intervention period. However, the causality remains inconclusive because of no control area. Keywords : community intervention, frailty, functional health, healthy aging.

OP25 423-S

LONG TERM CARE VI

OP25 423-S-1

LEARNING FROM EACH OTHER - USING CASE REVIEWS TO SOLVE PROBLEMS OF RESIDENTS WITH DEMENTIA LIVING IN A NURSING HOME

Martina ROES (*Institute for Quality and Case Management, University of Applied Sciences, Germany*)

Introduction : Interventions are active, thus we have to consider how interventions can lead to 'real' change. Four layers seem to be important for a successful implementation (Pawson 2006): the individual capacities of the key actors; the interpersonal relationships supporting the intervention; the institutional setting and the infra-structural system. Method : According to Yin (2009) a case study design should have five components; this study used standard techniques for posing research questions and defining the unit of analysis. The study design was focused on exploration and description. The unit of analysis was (1) a 'narrative', (2) using flow charts and the nursing process to structure the thick description plus (3) the integration of a multiprofessional guideline about mobility and safety of residents with dementia. Results : Nurses could easily provide 'thick descriptions about their residents' without checking the documentation system; too draw a flow chart to analyse the process which lead to a problem (like falling or wrong medication etc.) was difficult as well to structure their stories using the nursing process. Interesting was, that the addition of the guideline did not confuse the discussion, but helped to clarify the 'stories' and shaped the understanding why quality measures are important. Conclusion : All steps together supported the reflective ability of the nurses (individual capacities); supported the change into an evidence based practice (institutional setting). The participants reached also a better understanding of the importance of evidence based results and how to customize them for their practice (infra-structural system). Thus 3 out of 4 layers were addressed. Keywords : implementation, case review, multiprofessional guideline

OP25 423-S-2

THE EFFECTIVENESS OF DYADIC INTERVENTIONS FOR PEOPLE WITH DEMENTIA AND THEIR CAREGIVERS

Heehyul MOON¹, Kathryn ADAMS² (*1. Institute on Aging, University of North Carolina, USA; 2. Mandel School of Applied Social Sciences, Case Western Reserve University, USA*)

Introduction : The need for dyadic intervention is enhanced with increasing numbers of older adults with early-stage dementia. The purpose of this paper is to review the effects of dyadic interventions on caregivers (CGs) and care recipients (CRs) at the early stage of dementia. Method : Four databases, AgeLine, Medline, EBSCO, and PyscINFO were searched and relevant literature from 2000 onwards was reviewed. Results : The twelve studies identified used a variety of intervention approaches including support group, counseling, cognitive stimulation, skill training, and notebook-keeping. This review suggests that intervention programs for early-stage dementia caregiving dyads were feasible and well accepted by participants. The reviewed studies provided rich evidence of the significance of mutual understanding and communication to partners' well-being and relationship quality within the caregiving process. Conclusion : The findings suggest that these intervention approaches improved cognitive function of the CRs, social relations, and the relationship between the primary CG and the CR, although evidence of long-term effectiveness is lacking. Keywords : Dyadic, dementia, intervention

OP25 423-S-3

CARE RECIPIENT AND FAMILY CAREGIVER PERCEPTIONS OF EVERYDAY CARE IN EARLY-STAGE DEMENTIA: THE EFFECT OF INCONGRUENCE ON

QUALITY OF LIFE AND THE MEDIATING EFFECTS OF RELATIONSHIP STRAIN

Heehyul MOON¹, Aloen TOWNSEND² (1. Institute on Aging, University of North Carolina- Chapel Hill, USA; 2. Mandel School of Applied Social Sciences, Case Western Reserve University, USA)

Introduction : Few studies have examined the differences between CRs with early-stage dementia and family caregivers (CGs) in their perspectives about CRs' daily care, and the effect on CGs' and CRs' QoL. The objectives of this study were to examine the extent to which CGs and CRs have incongruence about CRs': 1) decision-making involvement (DMI), for everyday care, 2) preferences/values (VP) for social relations. In addition, the study examined 3) the effects of incongruence on VP and DMI on both CG and CR QoL. Furthermore, this study examined 4) the mediating effect on the associations between incongruence and quality of life. Method : A convenience sample of 205 dyads of CRs with early-stage dementia and family CGs were interviewed in-person. Incongruence between CGs and CRs on DMI and VP was measured by absolute differences and directions of differences. Two-level multilevel modeling with HLM6 was used to test the effects of incongruence on both CG and CR QoL, and the mediating effects of relationship strain on the associations between incongruence and QoL. Results : CGs rated CRs' involvement in decision making as significantly lower than CRs did. CGs also reported that CRs valued maintaining social relations significantly less than CRs reported. Multilevel analysis revealed that less incongruence on VP was associated with better QoL. However, this study found no mediating effect of relationship strain on the associations between incongruence and QoL. Conclusion : This study recognizes the substantial incongruence about care between CGs and CRs and the direct effects between incongruence on VP and QoL and between relationship strain and QoL. Keywords : dyadic, early-stage dementia, quality of life

OP25 423-S-4

A 10-YEAR COMMUNITY INTERVENTION FOR FRAILTY PREVENTION AND ITS IMPACT UPON HEALTHY AGING IN JAPAN. 2. IMPACT OF ANNUAL HEALTH CHECK-UPS WITH CGA ON HEALTHY AGING

Eri MATSUO, Mariko NISHI, Shoji SHINKAI, Hiroto YOSIDA, Yu TANIGUCHI, Yu NOFUJI, Hiroshi MURAYAMA, Hidenori AMANO, Tarou FUKAYA, Yoshinori FUJIWARA (Research Team for Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology, Japan)

Introduction : We previously reported the 10-year community intervention for frailty prevention in Japan. The present study aimed to evaluate the impact of annual health check-ups with comprehensive geriatric assessment (CGA) on healthy aging. Method : 656 residents aged 70 and older who lived in Kusatsu and had no mobility limitation as of 2001 were enrolled in this study. They were classified into three groups according to the number of annual health check-ups they received during 2002-05 (No-attendance, 0; Low attendance, 1-2; High attendance, 3-4 times) and then followed up from April 2006 to March 2010. Outcome measures were death and loss of active life [death or incidence of Long-Term Care Insurance (LTCI) need]. In the analysis for loss of active life, we excluded 128 subjects who had been certified under LTCI prior to the follow-up. Kaplan-Meier survival curves for three groups were compared by the log rank test. Cox proportional-hazard models were used to adjust for age, sex, comorbidity and mobility. Results : The mortality for "No-attendance" group was higher than that for "Low" or "High attendance" group (log-rank test, $P=0.02$). Similar association was observed for loss of active life,

although the difference among the three groups did not reach statistical significance ($P=0.20$). Multivariate analysis showed marginally negative associations between the numbers of health check-ups and risk of mortality and loss of active life (P for trend =0.20 and 0.06, respectively). Conclusion : The health check-ups with CGA was marginally associated with subsequent mortality and loss of active life, suggesting a beneficial effect on healthy aging. Keywords : health check-ups, mortality, loss of active life

OP25 423-S-5

THE ROLE OF SELF-EFFICACY OVER-TIME FOR MAINTAINING LIFESTYLE PHYSICAL ACTIVITY PROGRAM AMONG OLDER KOREANS

Kyung-choon LIM (College of Nursing, Sungshin Women's University, Korea)

Introduction : Self efficacy (SE) has been shown to be related directly to physical activity (PA) as well as to be a reliable predictor of PA maintenance over time in older adults. The purpose of this study was to explore the role of SE for maintaining participation in PA among community-dwelling older Koreans based on social cognitive theory. Method : This was a cross-sectional descriptive study with convenience sampling. 132 older adults in S city participated in the survey. Data were collected from the elderly who completed a questionnaire asking about their general characteristics, PA, and SE. Using SPSS 18.0 program, data were analyzed. Results : The mean age was 72.8(\pm 4.49), ranged 65 - 85 years old. Among 132 subjects, 63.6% were female. The most preferred PA was walking. The subjects who showed higher SE were more involved in all PA in terms of frequency ($t=2.27$, $p=.025$), duration ($t=2.31$, $p=.022$), calorie expenditure ($t=4.30$, $p<.001$) than those who showed lower SE. Also, The subjects who showed higher SE were more involved in moderate or vigorous activities in terms of frequency ($t=3.29$, $p=.001$) and calorie expenditure ($t=3.72$, $p<.001$) than those who showed lower SE. However, the time for moderate or vigorous activities did not show significant difference statistically ($t=-0.38$, $p=.705$). Conclusion : This study help understand SE that is doing critical roles for keeping older Koreans participate in PA program on a regular basis. This information will be useful when designing future intervention studies to promote and maintain PA in all Koreans. Keywords : aged, physical activity, self-efficacy

OP25 511-S

MARRIAGE IN LATER LIFE

OP25 511-S-1

'I'M STILL HERE, I'M STILL LIVING, I'VE GOT A LIFE TO LIVE': THE TRANSITION TO WIDOWHOOD IN LATER LIFE

Linda ISHERWOOD¹, Debra KING¹, Mary LUSZCZ² (1. National Institute of Labour Studies, Flinders University, Australia; 2. Flinders Centre for Ageing Studies, Flinders University, Australia)

Introduction : There are increasing numbers of older widowed adults living alone in the community. Social resources (social networks, support and activities) are vital in aiding adjustment to spousal loss. However, there has been limited research exploring how and why social resources change during the transition to widowhood in later life. Method : Semi-structured interviews were conducted with 20 widowed older adults (10 men and 10 women) aged 85 to 96 years. Participants were asked about their relationships with others, the exchange of social support, and participation in social activities in the transition to widowhood. The interview data were analysed

thematically using framework analysis. Life course theory provided the theoretical framework for the study. Results : Three themes relating to the transition to widowhood in later life were identified. "The transition to widowhood" describes the different transitional phases experienced pre- and post-widowhood. "The ebb and flow of the social network" explores the changing patterns of contact and support with the social network during these stages in the transition. "Life goes on" examines how social resources aid the establishment of a fulfilling life as an older widowed person. Conclusion : The transition to widowhood in later life brought considerable change to social networks, support and activities. The transition to widowhood was also found to be gendered. Male participants reported smaller social networks, received limited informal support and were less socially active during widowhood than female participants. The stronger social resources possessed by older widowed women may assist them in better meeting the challenges associated with spousal bereavement. Keywords : widowhood , social resources, gender

OP25 511-S-2

MARITAL ATTACHMENT STABILITY AND ITS RELATIONSHIP WITH SPOUSAL SUPPORT AMONG OLDER ADULTS

Yan WANG, Dahua WANG, Xiaoyan ZHAI (*School of Psychology, Beijing Normal University, China*)

Introduction : Adult attachment studies have proceeded on the assumption that attachment is relatively stable and can affect psychological development in the future, especially the interpersonal processes. This longitudinal study aimed at exploring the (in)stability of marital attachment and its relationship with spousal support among older adults. Method : There were 75 community-dwelling old adults, with age ranging from 60 to 84 years old at the first time of investigation, who were assessed twice across 3 years. The Older Adults' Marital Attachment Scale includes three dimensions, i.e. security, anxiety, and avoidance, and it was used to measure marital attachment at both of the time points. At the second time of assessment the participants were asked to report life events happened during last 3 years, and its practical as well as psychological effects. Additionally, the participants finished the Spousal Support Questionnaire, which measured the practical and emotional support received, and the satisfaction level of the two kinds of supports while encountering the life. Results : The results showed that three attachment dimensions were weakly stable over the 3 years. By controlling the practical and psychological effects of the life events, the results indicated that the participants who received more practical and emotional supports from their spouses would report more security 3 years later. Meanwhile, the participants, who received more emotional supports from their spouses and were more satisfied the supports, reported less avoidance after 3 years. Conclusion : Marital attachment dimensions were weakly stable over among older adults. In addition, the spousal support was an important predictor of the change of marital attachment. Keywords : marital attachment; spousal support; older adults

OP25 511-S-3

UNDERSTANDING REMARRIAGE IN LATER LIFE: COMPARISONS WITH LONG-TERM FIRST MARRIAGES

Teresa M. COONEY, Christine M. PROULX, Linley A. SNYDER-RIVAS (*Human Development and Family Studies, University of Missouri, USA*)

Introduction : A sizeable portion of married older adults in developed nations today are in remarriages, largely due to increased divorce. Most research on remarriage focuses on younger couples with minor

children and employs relatively small, convenience samples. Little is known about marital processes and relations in remarriages involving middle-aged and older adults, especially based on representative data from which wide-scale generalizations can be made. This study expands knowledge and understanding of mid-to-late life remarriages by considering them in comparison to first-unions. The study examines both positive (e.g., support) and negative (e.g., strain) relational features of first and higher-order unions. Within-group analyses also are conducted to determine whether the same factors (e.g., health, socioeconomic status) influence marital quality within remarriages as in first marriages. Of particular interest is how union duration shapes marital dynamics in remarriages as compared to first marriages. Method : Data are from the 2005-2006 National Social Life, Health, and Aging Project (NSHAP), which includes 4,400 U. S. adults, ages 57 to 85. All analyses are conducted separately for males and females because of established gender differences in marriage. Results : Analyses are conducted with a currently-married subsample (average age = mid 60s) that includes 556 respondents who are remarried (mean duration ~ 21 years) and 1235 who are in first unions (mean duration ~ 44 years). Relationship outcomes include marital happiness, support and strain, emotional satisfaction, physical pleasure, and time spent with spouse. Conclusion : Expanding knowledge of remarriage in later life is critical because marital quality contributes significantly to health and wellbeing. Keywords : remarriage; marital dynamics

OP25 512-S

MIGRATION AND MINORITY

OP25 512-S-1

TELECOUNSELING FOR THE LINGUISTICALLY ISOLATED: A PILOT STUDY WITH OLDER KOREAN IMMIGRANTS IN THE UNITED STATES

Yuri JANG¹, David A. CHIRIBOGA², Victor MOLINARI³, Soonhee ROH⁴, Yeddi PARK⁵, Songuei KWON⁶, Hyunhwa CHA⁷ (*1. School of Social Work, The University of Texas at Austin, USA; 2. Department of Child and Family Studies, University of South Florida, USA; 3. School of Aging Studies, University of South Florida, USA; 4. Department of Social Work, University of South Dakota, USA; 5. Silver School of Social Work, University of New York, USA; 6. Psychiatry and Addiction Department, Flushing Hospital, USA; 7. Psychiatry and Addiction Department, Hamilton Madison House, USA*)

Introduction : Responding to the critical needs of the linguistically isolated, this pilot study tested the use of telehealth technology in providing access to culturally and linguistically appropriate mental health services. The goal of the study was to explore the feasibility and preliminary efficacy of a telecounseling program in the client's native language. Method : Using a small sample of older Korean immigrants living in a low income housing facility in Orlando, Florida, who had concerns about depressive moods (n = 14), the pilot telecounseling program was implemented via videoconferencing, whereby four weekly sessions were conducted by four Korean mental health counselors based in New York. Results : Twelve participants completed all four sessions (completion rate of 86%). The mean score of the PHQ-9 at the immediate-post assessment (M = 8.50, SD = 2.27) was lower than that at the pre-assessment (M = 11.6, SD = 2.14), and the difference was statistically significant (t = 13.1, p < .001). The PHQ-9 scores at the 3-month follow-up averaged 9.25 (SD = 2.00), which was significantly higher than the mean at the post-assessment (t = 2.46, p < .05) but still lower than that at the pre-assessment (t = 10.5, p < .001). The findings indicated that depressive symptom severity was reduced upon immediate completion of the program. At the 3-

month follow-up, benefits waned, but the participants' depressive symptom scores remained significantly lower than those at the initial assessment. Conclusion : The findings support the value of telecounseling for the linguistically isolated and suggest further efforts to extend such programs. Keywords : telecounseling, depressive symptoms, linguistically isolated populations

OP25 512-S-2

LONELINESS AMONGST ETHNIC MINORITY ELDERLY: PRELIMINARY RESULTS OF A SURVEY IN ENGLAND AND WALES

Christina VICTOR¹, Vanessa BURHOLT² (1. School of Health Sciences and Social Care, Brunel University, United Kingdom; 2. Centre for Innovative Ageing, Swansea University, United Kingdom)

Introduction : For those aged 65+ in Britain research has consistently reported the prevalence of loneliness at approximately 8-10% but there is only limited evidence examining the prevalence of loneliness amongst older people from ethnic minorities. Method : We report the prevalence of loneliness, measured using both a self-report question and the de Jong Gierveld scale, for those aged 40-64 and 65+ years using data from a direct interview survey of 1200 people from the key minority groups growing old in Britain (200 participants each from the Indian, Pakistani, Bangladeshi, African Caribbean, and Chinese populations). We draw explicit comparisons for these groups with the prevalence of loneliness reported for the general population and with older people in their countries of origin as well as adults from these communities aged 40-64 years. Results : Preliminary analysis demonstrates an overall loneliness prevalence of 15% among minority elders and 11% for the mid-life group. For those aged 65+ the highest rate of loneliness at 24% was demonstrated by the Chinese population with only those from the Indian population, at 7%, reporting a prevalence of loneliness which approximated to the national norm. For those in the mid life group the prevalence of loneliness showed much less variation ranging from 3% (Indian group) to 7%. Conclusion : Rates of loneliness are elevated amongst minority elders but approximate to the national norm for those in mid-life. Keywords : Loneliness ethnic minority elders

OP25 512-S-3

UNDERSTANDING THE PARADOX OF SOCIAL ISOLATION AND SOCIAL INTEGRATION FOR OLDER ASIAN IMMIGRANTS IN NEW ZEALAND

Valerie WRIGHT-ST. CLAIR¹, Shoba NAYAR² (1. Research Cluster for Active Ageing, AUT University, New Zealand; 2. Centre for Migrant and Refugee Research, AUT University, New Zealand)

Introduction : New Zealand research of older Asian immigrants suggests poorer post-migration health outcomes associated with declining social networks and social support. Such outcomes hold social and economic implications for supporting an ageing, culturally diverse population. This study explored how Indian, Chinese and Korean elder migrants contribute to New Zealand society. Method : This grounded theory study included Indian, Chinese and Korean men and women, aged 60 or over. Through purposive sampling 74 participants for 9 focus groups across the three communities were recruited. Up to a further 30 individual interviews (10 with each community) were recruited using theoretical sampling. Semi-structured interviews in language of choice were audio recorded, transcribed verbatim, and translated where relevant to English for analysis. Questions explored how participants contributed to community and the impact on their wellbeing. Data were analysed

using grounded theory methods. Ethics approval was obtained from Auckland University of Technology Ethics Committee. Results : Participants noted a range of ways in which they facilitated their social integration. For example by volunteering at local organisations and engaging in social groups established for elders within specific ethnic communities. However, barriers were identified such as language and public transport, which increased the potential for social isolation, thus diminishing wellbeing. This was particularly so for the Chinese and Korean communities. Conclusion : Post-migration, participants report both social integration and social isolation as being part of their settlement experience. However, fundamentally the ways in which participants engaged in civic society contributed to both their self-reported wellbeing as well as the good of New Zealand society. Keywords : Older immigrants, Ethnic diversity, Social participation

OP25 512-S-4

IMMIGRATION AND AGING IN THE CITY OF SAO PAULO: PROFILE OF A GROUP OF KOREAN ELDERLY PEOPLE

Hee Jeung HONG, Beltrina CORTE (Gerontology, PUC University, Brazil)

Introduction : Sao Paulo accounts for nearly 90% of the Korean population in Brazil. The history of the first elderly Korean immigrants in Brazil has February 12th in 1963 as an official mark, and currently there are no studies regarding these early immigrants. This study has a quantitative approach aiming to comparatively track the profile of an elderly immigrant Korean group located in Sao Paulo among men and women. Method : A semistructured survey with closed-ended questions and a single open-ended question was carried out. A total of 155 respondents, 120 females and 35 males, which are Koreans and over 65s. Results : Throughout gathered data analysis, the elderly Korean longevity was noted, with 44% are aged between 70 and 79 years and 35% between 80 and 85 years. 59.2% were widows and 18.2% were widowers, indicating an old age feminization in the Korean community. It was found, incidences of Hypertension (39.5%), Diabetes (22.2%), Cardiovascular Diseases (21%), Osteoarthritis (18.6%) and Hypercholesterolemia (16.2%). 55.6% of women were hypertensive. Diabetes and heart disease ranked second, prevailing in 28.3% of women and 12% of men. Private health plans are the choice of 45%, while 9% of seniors reported usage of public health service. Conclusion : The gathered data contributes to the formulation of guidelines for social and educational actions targeted to this specific group that are broad, informative and inclusive, since these individuals exclude themselves from government initiatives for the country elderly population, either by unawareness or communication difficulties. Keywords : Korean Immigrants/ Aging/ Elderly

OP25 520-S

LONG TERM CARE VII

OP25 520-S-1

PAIN AND WANDERING BEHAVIORS IN NURSING HOME RESIDENTS WITH DEMENTIA

Hyochol AHN, Ann HORGAS (Adult and Elderly Nursing, University of Florida College of Nursing, USA)

Introduction : Nursing home residents with dementia have cognitive and communicative impairments that impair effective verbalization of pain. Thus, many older nursing home residents with dementia are under-treated for pain, a fact that may contribute to behavioral problems. The purpose of this study is to (a) to describe the prevalence of pain and wandering behaviors, and (b) to examine the relationship between pain and wandering behaviors in nursing home residents with dementia. Method : This is a secondary analysis of the nursing home

Minimum Data Set from the state of Florida, U.S., during calendar year 2009. Selection criteria were applied to ascertain data from nursing home residents older than 65 years old with Alzheimer's disease or other dementia. Data from comatose residents were excluded. The sample consisted of 56,577 nursing home residents with dementia (67.7% female; Mean age = 84 ± 7 years). Results : Among 56,577 nursing home residents with dementia, the prevalence of pain is 36.9% ($n = 20,858$) and wandering behaviors is 9.0% ($n = 5,114$). For the bivariate relationship between pain and wandering behaviors, pain is negatively correlated with wandering behaviors (Spearman's correlation = -0.090). In multivariate ordinal logistic regression, pain is still negatively associated with the frequency of wandering behaviors ($OR = .75$, $p = .000$), after controlling for covariates (e.g., cognitive impairment, ADL impairment, and sociodemographics). Conclusion : This study suggests pain is negatively related to locomotive behaviors. This result suggests that effective pain management may help to promote mobility in persons with dementia. Keywords : Pain, Wandering behaviors, Nursing home

OP25 520-S-2

CHANGES IN PHYSICAL PERFORMANCE, QUALITY OF LIFE AND PAIN AMONG THE ELDERLY PARTICIPATING IN GROUP REHABILITATION

Minna-Liisa LUOMA¹, Mariitta VAARA¹, Susanna MUKKILA²
(1. Functional Capacity Unit, National Institute for Health and Welfare, Finland; 2. Minimum Income Unit, National Institute for Health and Welfare, Finland)

Introduction : Multidisciplinary gerontological rehabilitation is intended to maintain functioning and enhance the independence and meaningful life of older people living at home. Therefore reducing pain and symptoms of depression as well as promoting functional capacity and quality of life (QoL) are the central aims of the rehabilitation of elderly. The aim of this study is to evaluate changes in pain, symptoms of depression, functional capacity and QoL, among the participants of the rehabilitation courses. Intervention was targeted to elderly whose coping at home was threatened because of decreasing functional capacity due to muscular-skeletal disease. Method : QoL was evaluated by using WHO-QOL BREF and SF36, pain by using the Visual Analogue Scale (VAS), depression by using GDS, and functional capacity was measured by using SPPB. Both QoL and physical performance were measured at baseline after 6 and 12 months. Statistical significance was measured by using t-tests ($p < 0.05$). Results : The mean age of participants ($n=376$) was 79.5 years (range 74-97). After six months the quality of life of 63-72 % of the participants was maintained the same or increased, depending on QOL questionnaire and domain. Physical performance was maintained or increased for 73 % of participants. The severity of pain and symptoms of depression decreased. Most changes maintained in 12 months follow-up. Conclusion : Results indicate that the elderly benefit from gerontological rehabilitation in terms of improved physical performance and quality of life leading to reduction in pain and in the symptoms of depression. Keywords : Rehabilitation, Functional Capacity, Quality of Life

OP25 520-S-3

HEALTH STATUS AND HEALTH DETERMINANTS OF RESIDENTS AND STAFF IN GERMAN NURSING HOMES- HEALTH PROMOTION RESEARCH IN LONG- TERM CARE

Annett HORN, Thomas KLEINA, Doris SCHAEFFER (Health Services Research and Nursing Research, University of Bielefeld, Germany)

Introduction : Health promotion (HP) for the oldest-old population is more established on the international research agenda than in Germany, although the demographic trend shows that the number of frail elderly has risen during the last years and will rise further in Germany. This has led to enormous changes in institutions of long-term care (LTC). Nursing homes (NH) have to implement health promoting activities for residents and staff. But there is a lack of knowledge about health status and health determinants for both target groups although that is needed for developing HP-programs. Method : Based on data collected in 8 German NHs the health status, functional independency, handicaps and health risks of residents were analyzed as well as the health status and working conditions of the employees. For this purpose standardized validated instruments were used to collect data of 807 residents and 297 employees. Results : The results stress out the high level of physical and cognitive impairment among the users of institutional LTC facilities and show that time pressure and workload have a strong influence on the health status and well-being of NH staff. Conclusion : Based on the results specific HP interventions should be designed, implemented and evaluated for both groups, residents and staff, considering characteristics of the setting. That's the central aim of the program line "Health Promoting Long-Term Care" conducted by the LBIHPR, Vienna in scientific collaboration with the University of Bielefeld. Keywords : Health Promotion, Long-term Care, Survey

OP25 520-S-4

A COMPARATIVE ANALYSIS ON THE IMPACT OF WIDOWHOOD ON AGED MEN AND WOMEN'S LONG-TERM CARE ARRANGEMENT: EVIDENCE FROM THE CHINA HEALTH AND RETIREMENT LONGITUDINAL STUDY, PILOT

Yan LIN (PKU China Center for Health Economic Research, China)

Introduction : Spouse loss is a crucial event in aged life that exposes the elderly widows to various psychological and social challenges. Their long-term care provision will be influenced most directly. However, women are more likely to experience widowhood than men. The 5th national population census of China indicates that 70% are women among those widowed elderly. Method : This paper uses data from the China Health and Retirement Longitudinal Study, examines the living arrangement and care provision of widowed men and women, and their physical functioning and psychological capacity, exploring their different long-term care needs and providing implications for community care service delivery design. Comparison has been made between different genders and regions, and also with other Asian and western countries to analyze the influence of different social context. Results : The result indicates that elderly women encounter more serious problems in their care-receiving after widowed than men. Widowed women are in a worse situation both physically and psychologically than their counterpart, while their care resources are even less than widowed men, and also they have less probability to remarry after widowhood. Rural widows are in the most disadvantaged situation. Conclusion : The long-term care service in the future should therefore allocate more resources to widowed women, and target their special needs. Keywords : widowhood, long-term care, gender

OP25 520-S-5

A COMPARISON OF USERS AND PROVISIONS OF LONG-TERM CARE IN RURAL AND URBAN MUNICIPALITIES IN JAPAN AND SWEDEN

Marten LAGERGREN¹, Noriko KURUBE² (1. SNAC, Stockholm Gerontology Research Center, Sweden; 2. Dep. of Management of Health Care and Social Services, Nihon Fukushi University, Japan)

Introduction : Japan and Sweden both have national systems of LTC for older persons that aim to provide equal, equitable and universal access, although they have chosen different social political solutions to achieve this goal. The aim of this study was to establish whether there are similarities and differences in users and provisions of LTC between rural and urban municipalities in the two countries and if these urban/rural differences seem to have similar patterns and causes.

Method : The comparisons were made using individual-based data describing disability and provisions of LTC collected from nine municipalities in each country grouping them into three types of municipalities: large city urban, midsize urban and rural. **Results :** The main results is that LTC recipients in large city urban areas in both countries are on average significantly less disabled than those from midsize or rural municipalities. In both countries costs per user of LTC was lower in the large urban municipality than in the rural municipalities (10% and 14% resp.). However, standardized for level of disability the per capita costs were higher in the large city urban municipalities (4 %). **Conclusion :** A possible explanation for this is that in the large city urban municipalities a lower proportion of old persons live in extended family. This increases the propensity for old frail persons in these municipalities to apply for LTC. Since the proportion of older persons living in the extended family is decreasing in Japan the result shows what kind of LTC development to expect. **Keywords :** LTC comparison provision

**OP25 520-S-6
PROMOTING PHYSICAL ACTIVITY OF NURSING HOME RESIDENTS: COMPARISON OF INTERVENTION SUPPLY AND PARTICIPATION IN DEMENTIA CARE AND TRADITIONAL CARE UNITS**

Kerstin KOEHLER, Rebecca PALM, Christian SCHWAB, Sabine BARTHOLOMEYCZIK, Bernhard HOLLE (*Witten, German Center for Neurodegenerative Diseases (DZNE), Germany*)

Introduction : There is evidence that physical activity interventions (PAIs) improve physical functioning and cognitive abilities of nursing home residents with dementia. To better meet their needs nursing homes (NHs) establish more and more special care units (SPUs). It is anticipated that PAI supply and participation differs between SPUs and traditional care units (TCUs). **Method :** Aim of this study is to investigate PAI supply and participation in German NHs with regard to differences between SCUs and TCUs. Data is derived from the survey 'DemenzMonitor', an annually repeated measurement using a multi-level questionnaire collecting data on the level of NHs (n=47), living units (n=97) and residents (n=1672). Data are analyzed descriptively using chi-square to test for significance. **Results :** 87% of the NHs (n=39) include PAIs as an important component of their written care concepts. Supply of PAIs in the SCUs (n=40) and TCUs (n=57) does not differ distinctly. SCUs offer more 'social' events (e.g. ballroom dance) while TCUs promote a more 'sportive' agenda (e.g. gymnastics). Resident participation in PAIs is slightly higher in SCUs (80%) than in TCUs (72%). Considering the amount of time spent on PAIs, involvement in both groups is low. 46% of the residents moved less than 30 minutes a week. **Conclusion :** In German NHs the awareness for the importance of promoting PAIs is high. A majority of residents participates but only spends a limited amount of time. In view of the investigated topics there are few differences between SCUs and TCUs. **Keywords :** nursing home, physical activity, dementia

**OP25 521-C
CARDIOVASCULAR DISEASE**

**OP25 521-C-1
GENDER DIFFERENCES IN TRAJECTORIES OVER TIME QUALITY OF LIFE AND DEPRESSION AMONG PEOPLE WITH CORONARY HEART DISEASE (CHD)**

Paola ZANINOTTO (*Epidemiology and Public Health, UCL, United Kingdom*)

Introduction : The aim of this study is to explore gender differences in trajectories of quality of life and depression among people with coronary heart disease (CHD) over four year time (2002-03 to 2005-05). **Method :** The data come from the first three waves of the English Longitudinal Study of Ageing (ELSA) which is a panel study of people aged 50 and over living in private households in England. The main outcome measures are quality of life measured using CASP-19 and depressive symptoms measured using CESD-8. The main exposure is self-reported CHD in the two years preceding the baseline interview. **Results :** Trajectories over time of quality of life had a different shape from trajectories of depressive symptoms after the onset of CHD. Men's quality of life declined over time and no changes in depressive symptoms were found. Women's quality of life declined only between baseline and four year follow-up, while in the same period their risk of having depressive symptoms reduced. It was found that women reported the same quality of life as men at baseline, and higher quality of life at years two and four of follow-up independent of other covariates. Women reported higher odds of having depressive symptoms than men at baseline and two year follow-up but not at four year follow-up. **Conclusion :** Differently shaped trajectories over time of quality of life and depressive symptoms in men and women following the onset of CHD were found. Women had better quality of life than men and their risk of depression decreased over time. **Keywords :** Quality of life, depression, CHD

**OP25 521-C-2
MANY ELDERLY WITH HEART FAILURE USE CONTRAINDICATED DRUGS: A POPULATION BASED STUDY**

Catherine GIROUARD¹, Jeanne-Francoise KAYIBANDA¹, Jean-Pierre GREGOIRE¹, Paul POIRIER², Jocelyne MOISAN¹ (*1. Faculte de Pharmacie, Universite Laval, Canada; 2. Cardiology, Institut Universitaire de Cardiologie et de Pneumologie de Quebec, Canada*)

Introduction : As much as 12% of people over 80 have heart failure (HF). Drugs causing fluid retention (corticosteroids, NSAIDs, dihydropyridines type calcium channel-blockers (CCB) and thiazolinediones) or decreasing the contractile function (class I antiarrhythmic agent, carbamazepine and tricyclic antidepressants) are contraindicated after an HF diagnosis. The use of those drugs in elderly patients and the temporal variation of this use after HF diagnosis are unknown. The objective of this study is to determine, in a population of elderly, at time of a first HF diagnosis and at months 3, 6, 12, 36 and 60 thereafter the proportion of patients using 0, 1, 2, 3, 4, 5, 6 or 7 contraindicated drugs. **Method :** Population-based inception cohort study including all individuals aged 65 and older who received a first HF diagnosis between 2000 and 2009. Data come from the Quebec health insurance board database, the Quebec registry of hospitalizations and the death registry. We calculated the proportion of patients using 0, 1, 2, 3, 4, 5, 6 or 7 contraindicated drugs for each of our 5 time periods. **Results :** At time of HF diagnosis, 70% of the 145,608 individuals included in the cohort (mean age 78.6 years) had 0 contraindicated drugs, 25% had 1, 5% had 2, and 1% had 3. These figures were 76%, 21%, 3% and 0% at 3 months. No further change was observed past three months. **Conclusion :** Almost the third of HF elderly are exposed to contraindicated drugs. Interventions have to be

implemented to improve drug use in HF elderly patients. Keywords : Quality of treatment, contraindicated drugs, Heart failure in elderly patients

OP25 521-C-3

IMPACT OF TRANSCATHETER AORTIC VALVE REPLACEMENT ON QUALITY OF LIFE AND FUNCTIONAL OUTCOMES

Caroline A. KIM, Suraj P. RASANIA, Dae H. KIM (*Division of Gerontology, Beth Israel Deaconess Medical Center, Harvard Medical School, USA*)

Introduction : Transcatheter aortic valve replacement (TAVR) has been shown to improve survival in high-risk patients with severe aortic stenosis. However, its impact on quality of life and functional status has not been summarized. Method : We conducted a meta-analysis to evaluate the impact of TAVR on the following measures of quality of life and functional status: the New York Heart Association (NYHA) functional class and the Short-Form physical component summary (SF PCS) and mental component summary (SF MCS). We used random-effects model to estimate the mean (95% confidence interval) change in primary outcomes over 6 months and 12 months in patients who received TAVR, surgical aortic valve replacement (SAVR), or conservative treatment (CT). Results : In 39 studies that included 5057 TAVR, 498 SAVR, and 257 CT patients, there was a statistically and clinically meaningful improvement in TAVR patients: NYHA class (-1.4 points [-1.5,-1.2] over 6 months and -1.4 [-1.6,-1.2] over 12 months), SF PCS (9.3 [5.2,13.4] and 8.9 [5.1,12.8]), and SF MCS (5.9 [2.6,9.2] and 4.6 [2.3,6.8]). These were comparable to the corresponding improvements in SAVR patients: the NYHA class (-1.7 [-1.8,-1.5] and -1.3 [-2.1,-0.6]), SF PCS (7.1 [5.5,8.7] and 5.7 [4.0,7.4]), and SF MCS (3.9 [2.1,5.6] and 4.4 [2.6,6.3]). There was no meaningful improvement in CT patients. However, data should be interpreted with caution because they were obtained from survivors. Conclusion : In high-risk patients with severe aortic stenosis who survived the procedure, TAVR seems to provide clinically meaningful improvement in quality of life and functional status over 1 year. Keywords : TAVR, aortic stenosis, quality of life

OP25 522-S

LONG TERM CARE VIII

OP25 522-S-1

INNOVATIVE BUSINESS MODELS FOR THE ELDERLY CARE SERVICE INDUSTRY IN TAIWAN

Chuang-Chun CHIOU (*Industrial Engineering & Technology, Human Resourc, Dayeh University, Taiwan*)

Introduction : Global aging is occurring at a speed never seen before. With the recent advance of Information and Communication Technology (ICT) development, there are many innovative ICT applications that can be embedded for the care service. However innovative technologies must be matched with innovative business models. An innovative business model can bring about lower costs, higher quality, and greater accessibility. In addition, the framework of business model can serve as an important tool for entrepreneurship. Method : This paper intends to apply a business model analysis methodology in order to better understand the holistic approaches of these care service providers and facilitate the service providers to position themselves in the most valuable position in the elderly care service industry. Results : A business model framework is used to design the innovative services for the elderly in Taiwan. Conclusion : With business model analysis, the companies can systematically

design new ways of doing business profitably. Furthermore, it can encourage companies to develop innovative services needed for an aging society in the near future. Keywords : business model, innovation, elderly care service

OP25 522-S-2

PUBLIC INSTITUTIONAL CARE, PUBLIC HOME CARE AND CHILDREN PROVIDING PERSONAL CARE TO THEIR DEPENDENT PARENTS

Thijs VAN DEN BROEK, Pearl A. DYKSTRA (*Sociology, Erasmus University Rotterdam, Netherlands*)

Introduction : Many scholars have studied whether intergenerational support from adult children to dependent older parents is crowded out in countries with generous public long-term care arrangements. Country level public care generosity, however, is typically measured in a broad way, for instance in terms of the proportion of employees working in the social services sector. Such a measure does not distinguish different forms of public care, which is unfortunate because there are reasons to believe they might have differential implications for intergenerational exchanges. We focus on intergenerational personal care. When public institutional care is widely available, the necessity and opportunities for children to provide personal care to parents are reduced. Public home care does not reduce the opportunities or the necessity for informal care. Home care eligibility criteria are typically designed to encourage informal caregivers to step up. Thus, we expect to find that public home care does not serve as a substitute for informal care but rather complements it. Our hypothesis is that widely available public institutional care crowds out intergenerational care and that public home care crowds in intergenerational care. Method : Multilevel logistic regression analyses of SHARE panel data enriched with country level indicators from the MULTILINKS database. Results : Receiving public home care is associated with a greater probability of a child providing personal care, as expected. No effect of the availability of public institutional care on intergenerational care was found. Conclusion : Different forms of public care need to be distinguished when investigating the relationship between public care and intergenerational personal care. Keywords : long-term care, crowding out, intergenerational care

OP25 522-S-3

DELIVERING HEALTH CARE AT HOME: CHALLENGES AT THE INTERSECTION OF THE PUBLIC AND THE PRIVATE SPHERES

Anne MARTIN-MATTHEWS¹, Joanie SIMS-GOULD², Catherine CRAVEN² (*1. Sociology, The University of British Columbia, Canada; 2. Centre for Hip Health and Mobility, The University of British Columbia, Canada*)

Introduction : The delivery of home or domiciliary care services to elderly people in Canada occurs at the intersection of the public and the private spheres. The presumed availability of family ('informal' or unpaid) carers to supplement the labour of paid carers is foundational to the delivery of home care services. We examine the perspectives of agency managers and unregulated workers, and of elderly clients and family carers in identifying the key opportunities and challenges of these 'shared care' expectations. Method : We conducted in-depth interviews with 19 managers, 118 home support/personal care workers, 83 elderly clients and 58 family carers in British Columbia, Canada. Comparative data from 72 home care workers in two other Canadian provinces inform our analyses. Results : For managers and workers, and older clients and family carers, presumptions of availability of unpaid carers relate both to scope of services (Including

worker training) and scheduling of services (including worker continuity). Our findings align substantially with the Canadian Home Care Association's guiding principles of home care within an integrated care system, and recognition of family carers as vital players in care delivery. Conclusion : Many of the current conditions of the labour of home support (the 'unregulated' work of home care) are inconsistent with their full partnering within an integrated health care system. The conditions of work are the conditions of care. Thus, home 'care' can only be fully integrated with acute and primary care systems when the nature and characteristics of home care 'work' (scopes of practice, training, wage equity) are fundamentally changed. Keywords : home care, paid/unpaid care, care workers

OP25 522-S-4
IS CARING FOR YOUR ELDERLY PARENTS HARMFUL TO YOUR PSYCHOLOGICAL HEALTH? - EMPIRICAL EVIDENCE IN SOUTH KOREA

Hee Seung LEE, Douglas A. WOLF (*Public Administration and International Affairs, Center for Policy Research, Syracuse University, USA*)

Introduction : This study examines mental health outcomes of Korean adult children providing help to their elderly parents who have difficulties in activities of daily living (ADL). It argues that the caregiving activity itself might not be the only trigger of stress or overload in the relationship between adult children and parents. In addition to caregiving behavior, the physical need of care recipients may function as a separate stressor and have a significant harmful effect on the mental health of adult children caregivers. Method : Using the 2006 and 2008 waves of the Korean Longitudinal Study of Aging (KLoSA), this study estimates ordered probit model for self-assessed depression symptoms measured in the Center for Epidemiological Studies-Depression instrument (CES-D). The sample is composed of 5,300 people, who have at least one of living parents. Results : This study found that adult children with parents who need help in ADL tend to be more depressed compared to people who have parents without those need. However, caregiving behavior itself does not significantly affect depression symptom after controlling for care receivers' need and other conditions. Conclusion : Long term care policies that directly target the conditions of care recipients might be more effective than other alternative approaches if they aim to improve the mental health of caregiver. In terms of caregiver depression, policy designs should consider giving higher priority to targeting the care-recipient than the caregiver. Keywords : Family caregiving, Mental health, Long term care

OP25 522-S-5
CAREGIVING NEEDS FOR CHINESE SENIORS LIVING WITH HEART DISEASE OR STROKE

Lichun Willa LIU (*Sociology and Equity Studies, University of Toronto, Canada*)

Introduction : Canada is experiencing population aging. The aging Canadian population is also becoming increasingly diverse. Chinese seniors make up a large share of the Canada's ethnic minority senior population. Funded by the Heart and Stroke Foundation of Canada (2012), this paper examines the service gaps, needs, and barriers encountered by Chinese seniors living with heart disease or stroke and their family caregivers, as well as the strategies they utilized in self-care and self-management. Method : Mixed research methods were used in data collection, which included focus groups (n=9), individual interviews (n=8), and an open-ended email survey (n=10). Sixty-two informants participated in the study, including 26 survivors of

cardiovascular diseases, 19 family caregivers, and 17 health care providers from the Greater Toronto Areas and five other regions in Ontario, Canada. Results : Data analysis highlighted findings in the following areas: 1. Insufficient Chinese-speaking family doctors and specialists lead to long waiting time and cause delay in treatment. 2. Due to language barriers, many survivors sought health information and medical advice from "non-professionals" sources in Chinese. 3. Many recent immigrants used traditional Chinese herbal medicine alongside prescribed Western medicine, which may affect the efficacy of the prescribed medicine and mislead the doctors in diagnosis. 4. Self-management and self-care practices include physical exercises on a daily basis, eating healthy food and maintaining a healthy lifestyle, actively seeking health information from various sources, and developing a positive/optimistic outlook. Conclusion : Improved integration and coordination of care services are needed and more ethnically and linguistically appropriate programs were recommended. Keywords : caregiving for seniors

Wednesday June 26th

OP26 101-S
LONG TERM CARE IX

OP26 101-S-1
PERSPECTIVES OF LONG-TERM CARE IN BRAZIL
Maria Tereza Marsillac PASINATO (*Policies and Licensing of Health Insurance and Plans Office, ANS, Brazil*)

Introduction : The main questions refer to the way the current social security systems have dealt with the complexity of the new demands imposed by the process of population aging; and how to articulate long-term care policies with the current framework of the Brazilian social security system. Method : The paper analyze the situation of the Brazilian elders both in socioeconomic and familial terms. Based on the information of the Household Sample Survey (PNAD) and according to the degree of functional and instrumental limitation to perform ADL, three categories of Brazilian elders over 65 were defined: with functional limitations; with instrumental limitations and without limitations. We analyze the three categories in terms of health, family arrangements, poverty and its impact for the social security system. Results : The encompassing transformations observed in the Brazilian society, such as the verticalization of families, the increase in women's participation in the labor market and population aging bring into the policymakers' agenda the question of providing care for elders with instrumental and/or functional limitations. This group is substantial, representing approximately ¾ of female elders aged 80 years and over. Conclusion : It is necessary to rediscuss and redefine a series of parameters of the current Brazilian social security system. The precarious balance of the system needs to be analyzed in the light of demographic, social and economic trends forecast for the next 20 or 30 years. Only after the restructuring of the system is it possible to consider the incorporation of this new and latent demand (LTC) from the Brazilian society. Keywords : Brazilian social security system, public policy, aging

OP26 101-S-2
HOW TO COMPARE THE PERFORMANCE OF THREE EUROPEAN LONG TERM CARE SYSTEMS BY USING THE BALANCED SCORECARD FRAMEWORK

Samir HENNI¹, Bruno FANTINO², Christophe GERMAIN³, Olivier BEAUCHET² (*1. Geriatry, Hospital Center Francis Robert and Aime Jallot, France; 2. Geriatry, Hospital University Center of*

Angers, France; 3. Vice Dean - Academic Director, Audencia school of management, France)

Introduction : The economic context is characterized by a decline in revenues of the state and an increase in deficits and debt. Even if this context has an impact on healthcare systems, it is not sufficient to limit the thinking to the economic dimension to evaluate healthcare systems performance. In fact, the only measure of the efficiency of financial indicators, leads to a 'management by the mirror.' It is therefore necessary to adopt a more balanced and forward-looking. A tool for performance evaluation, called Balanced ScoreCard (BSC) seems appropriate mainly because it measures criteria for recognition and anticipation. Thus, the aim of our study was to compare systems of care for elderly in France, Germany and the UK using the BSC approach. Method : We aggregated values of each country for the four dimensions of BSC (financial, customer/user/patient, internal process and organizational learning). We select the best value among the three studied countries and we calculated the percentage difference between the value of each country and the reference value of each indicator. Results : We found that French system of care for elderly people is quite efficient compared to the resources allocated and results recorded. Furthermore, France system approaches evenly the four dimensions of BSC compared to the other countries. Limitations: the multidimensional nature of our comparison (three countries compared according four dimensions). Conclusion : The research shows that the theory and the concept of the BSC, initially designed for industries in the private sector may be applied in the context of healthcare systems to compare healthcare performance across organizations, sectors and countries. Keywords : European long term care , BSC Balanced Scorecard, efficiency health system

**OP26 101-S-3
AN EVALUATION OF RECENT SOCIAL POLICY INNOVATIONS IN SOUTH KOREA**

Hee Seung LEE, Douglas A. WOLF (*Public Administration and International Affairs, Center for Policy Research, Syracuse University, USA*)

Introduction : Care for the elderly involves shared responsibilities between the family and the state. Various policies have been enacted in developed countries in order to organize elder care efficiently and effectively. In 2008, South Korea launched two new policies, a Basic Old-Age Pension (BOAP) which provides means-tested income support for the bottom 60 percent of the population, and a Long Term Care Insurance (LTCI) program which provides universal social insurance similar to that provided in Germany and Japan. This study investigates the effect of both policies on subjective wellbeing of the older population. Method : We use data from the first and second waves of the Korean Longitudinal Study of Aging (KLoSA), a nationally representative panel study of the older population in South Korea. The 2006 data represent the "pre-treatment," and the 2008 data do the "post-treatment" situations; we use regression and random-imputation methods to create comparison groups for purposes of inferring program impacts. Subjective wellbeing is measured in three ways-general life satisfaction, satisfaction with health and satisfaction with economic status. Results : The findings of this study suggest that two life satisfaction measures are increased in response to the BOAP and LTCI programs. LTCI alone significantly improves one of three subjective wellbeing outcomes. Combined policies of both LTCI and BOAP significantly increase two subjective wellbeing outcomes. Conclusion : Korean old people with middle or low wealth status are benefited most from the two policy innovations in terms of general life satisfaction and satisfaction with economic satisfaction. Keywords :

Long Term Care Insurance, Program Evaluation, Korea

**OP26 101-S-4
MONITORING IN LONG-TERM CARE- PILOT PROJECT ON ELDER ABUSE (MILCEA)**

Uwe BRUCKER, Andrea DR. KIMMEL, Nadine SCHEMPP (*Long-term-care insurance, Medical Advisory Service of the German Long-Term-Care-Insurances (MDS e.V.), Germany*)

Introduction : The MILCEA-Project (funded by the European Commission) developed a Monitoring-System for the prevention of elder abuse in long-term-care-settings. As the part of people aged 65 years and older is growing all over Europe also elder abuse will grow as a public health and societal problem. Elderly particularly in later and end of life are in the risk of becoming frail. The increasing dependency make people in need of long-term nursing care vulnerable to maltreatment. Monitoring Elder Abuse refers to a constant observation and evaluation of the care giving process in order to detect either a risk situation in elder abuse or an actual case of abuse. The function of a monitoring system thus is prevention of elder abuse and protection of the (potential) victim. Method : The MILCEA-Project held focus-discussions on five national experts' level: function and elements of a monitoring system in preventing elder abuse were defined, indicators and risk factors were fixed. After analysing (force field analysis) existing national monitoring structures for identifying and recording elder abuse, key actors of the existing structures, their deficiencies and the lack of structures were identified. Finally the prerequisites of a monitoring system for European countries are given as recommendations how to improve existing monitoring systems. Results : Findings for a framework of a monitoring system: Basic requirements must be realized both on political and on organizational level. Conclusion : Awareness and knowledge of elder abuse must be given, the realization of positive view of old age is a political and societal task. Keywords : elder abuse; monitoring; prevention

**OP26 101-S-5
HORIZONTAL AND VERTICAL PARTNERSHIP WORKING IN LONG-TERM HEALTH AND SOCIAL CARE SYSTEM**

Hengliem Lisa CHEN (*School of Education and Social Work, University of Sussex, United Kingdom*)

Introduction : Fragmented care was a matter of concern in many long-term care system for older people. This suggests that partnership in the care system should be recognised as a vital component if quality of care in long-term care is to be promoted. Although partnership is not an entirely new phenomenon; there is as yet no widely accepted model in operation. What this study hopes to achieve is to outline the approaches that each country has adopted and the difficulties that they are facing. Method : It uses qualitative data from England, the Netherlands and Taiwan. Interviews were undertaken with care recipients and their cluster of relevant care actors at micro-, meso- and macro-level. A total of 143 participants (48 in England, 43 in the Netherlands and 52 in Taiwan) were included in the analysis. Results : One of the important findings was that the Netherlands but not the other two countries seemed to have higher degree shared goals for making efficient partnership more feasible. The Dutch partnership model clearly provided greater consultation within a care system based on fewer power barriers and a more transparent care strategy between the actors from top to bottom. Taiwan and especially England, however, had cooperation difficulties between various departments, especially between health care and social care. These were demonstrated in the difficulties faced in professional practice and service delivery. Conclusion : It is not sufficient to focus only on

addressing the challenge of the horizontal or vertical partnership in the long-term care system, because both issues are strongly interlinked. Keywords : Partnership, , long-term care, cross-national comparison

OP26 102-S

INTERGENERATIONAL RELATIONSHIP I

OP26 102-S-1

CHANGES IN VALUE AND BEHAVIOR IN INTERGENERATIONAL TRANSFERS WITHIN FAMILIES IN TRANSITIONAL CHINA

Zhiyong LIN (*Department of Sociology, Tsinghua University, China*)

Introduction : This study examines the impact of rapid economic and social changes on intergenerational transfers in Chinese families in contemporary China. Method : Hypotheses under the paradigm of “solidarity-conflict” were proposed and tested with the data collected from the project of Financial and Society Survey in 2011. Scale construction method was used to identify socio-economic and cultural factors affecting intergenerational transfers within families and ANOVA was employed to compare three geographical areas that respectively represented different levels of development. Results : Findings from the analyses indicate that (1) values, filial norms and other cultural practice concerning families, parents and children have experienced great changes across China; (2) although intergenerational ambivalence is prevalent, ambivalence between dependence and autonomy and between personal expectations and societal norms is various across three areas examined. Conclusion : The findings suggest that further research attention should be given to the contradictions between traditional cultural factors and intergenerational transfers rather than solely following the normative approach of over-emphasizing the intergenerational “solidarity-conflict” paradigm. Modern societies with dynamics of change have a tendency to the devaluation of the elderly and the subsequent loss of normative force over their posterity. This phenomenon is especially obvious in transitional regions in China. Keywords : Social Transition, Intergenerational Transfers, Intergenerational Ambivalence

OP26 102-S-2

ATTITUDE TOWARDS OLDER ADULTS AND PERSPECTIVE ON ELDERLY CARE AMONG COLLEGE STUDENTS IN CHINA

Jing TAN, Kathleen BAILEY (*Social Work, Bridgewater State University, USA*)

Introduction : China has the largest net aging population in the world along with a rapid aging pace. Historically, the family has been the source of support and care for their elders, and filial piety has been a fundamental tenet in Chinese culture. However, increased geographic mobility and reduced family size have made more adult children unavailable for elder care. Very little empirical research has examined the attitudes and perspectives among college students in China towards older adults and elderly care. Method : A mixed method approach was used with both quantitative and qualitative data collection. A convenience sample (N= 380) was collected through anonymous, self-administered survey questionnaires. In addition three one-hour long English focus groups were conducted. Survey data were inputted and analyzed using SPSS. Focus groups were transcribed and analyzed using content analysis methods. Results : Quantitative data reported that the ASD scores are neutral, and indicate there are gender differences in perspectives on future elderly care for their parents. Qualitative data suggested that traditional Chinese obligations to live with one’s parents throughout life are not as prominent today. In

addition, the nursing home business has developed and this option has seemingly become more popular among Chinese families with ageing adults. Conclusion : Findings from this study provide important and meaningful information for gerontological educators, service providers, and policy makers. With the one-child policy in place for a generation, China is facing an ever-growing need for trained professional service providers such as social workers to address the needs of older adults. Keywords : Attitude towards Older Adults, elderly care, China

OP26 102-S-3

SELF-RATED HEALTH TRAJECTORIES AMONG RURAL CHINESE OLDER ADULTS: THE ROLE OF INTERGENERATIONAL RELATIONSHIP

Nan LU¹, Vivian, W.Q. LOU², Iris CHI³ (*1. Department of Social Work & Social Administration, The University of Hong Kong, Hong Kong; 2. Department of Social Work & Social Administration, Sau Po Centre on Ageing, The University of Hong Kong, Hong Kong; 3. School of Social Work, University of Southern California, USA*)

Introduction : Self-rated health is an important predictor of adverse health outcomes (e.g. mortality) and health service use. It can be used as an effective and economic instrument to measure the health of rural Chinese older adults, which is the largest aged population in the world. However, little is known about the patterns of change trajectories of self-rated health of rural Chinese older adults. Method : The data was derived from the longitudinal study named as “The well-being of older people in Anhui Province”. The data from the 2001, 2003 and 2006 waves were included in the analysis. Multiple imputation was implemented to handle the sample attrition. General growth mixture modeling was used to investigate the number of latent classes of self-rated health trajectories as well as the antecedents of class memberships. Results : Two types of self-rated health trajectories were identified. The first is good but declining self-rated health group. The second is poor and declining self-rated health group. We found that the memberships were significantly associated with annual household income, IADLs, disease and intergenerational relationship. Conclusion: The empirical findings suggested that rural families play central roles in promoting self-rated health trajectories of rural older adults. New policies should be developed to support rural families to care for their older parents, with a particular focus on improving family relationships across generations. Keywords : self-rated health trajectories, intergenerational relationship, rural China

OP26 102-S-4

THE CHANGING PATTERNS IN LIVING ARRANGEMENTS AND THEIR IMPACTS ON INTERGENERATIONAL TRANSFERS IN CHINA

Taichang CHEN (*School of Public Administration, Renmin University of China, China*)

Introduction : Living arrangements are vital to intergenerational transfers and welfare in old age, particularly in China which lacks social security system that provides universal coverage. Recent empirical evidence shows that co-residence with children in China has declined over time as a result of increased financial independence, changing norms, and land and housing reforms. It is not yet clear how intergenerational transfer is affected by this trend of living away from children. Method : This study seeks to extend current understanding of the dynamics of living arrangements among older Chinese by exploring two sets of nationally representative survey data that were conducted by the China Research Center on Ageing in 2000 and 2006 respectively, covering 20,000 samples aged 60 and over. Instead of

binary variable, coresident or not, used in previous analyses, this study introduces trichotomous variable (live in the same household, live in the same city, not live in the same city) to measure potential effects of living arrangements (distance from children) on adult children's transfer behaviours. Results : The results suggest that living close to children, rather than co-residing with them, has become an important way of providing old-age support. However, such changes in living arrangements do not necessarily constrain intergenerational transfer capacity and make old parents worse-off. Weak evidences have been found that, generally, parents live far from children receive more intergenerational transfers. Conclusion : The family unit and traditional family support in old-age seem likely to continue to be the essential pillar of the old-age security, particularly in rural areas. Keywords : living arrangement, intergenerational transfers, China

OP26 102-S-5
FACTORS INFLUENCING SUICIDAL IDEATION AND SUICIDAL ATTEMPTS OF OLDER PERSONS : FOCUSING ON EFFECT OF POVERTY AND EMPLOYMENT STATUS

Geum Sun BYUN, Seung Jae AHN (*Institute of Social Welfare, Seoul National University, Korea*)

Introduction : This study explore factors influencing the suicidal ideation and the suicidal attempts of older persons in Korea. Korea ranked the highest suicide rate in old age among OECD countries (83 older people suicide per 100 thousand persons in 2010). Combined with population ageing, elderly suicide became a prior social problem to solve with urgent social intervention. Many articles indicated that economic shift like poverty and job loss effects people's drastic act and most old people sustain serious economic insecurity for ageing. But much of researches have been tried to find the factors of old age suicide from psychological reasons, like depression only. This study focus on the effect of economic situations and employment status on the older persons' suicidal ideation and attempts. Method : Using 2 years accumulated data from the KWPS(Korea Welfare Panel Study), this study examined what makes older person think and try to suicide. Ordinary least squares(OLS) and panel data analysis are used in this research. Results : Controlling for demographic characters, self-esteem and depression, absolute poverty, material hardship, and job loss experience positively affects on suicidal ideation and suicidal attempts. In contrast, annual household income level and relative poverty do not have a significant association with suicidal ideation and suicidal attempts. Conclusion : These results show that improving the old-age income security can be one of important solution to reduce elderly suicide rate. So the government need to concentrate on income security as well as psychological treatment program in social intervention for older persons in the grip of sever situation. Keywords : elderly suicidal ideation, old-age poverty, old-age labor participation

OP26 103-S
INTERGENERATIONAL RELATIONSHIP II

OP26 103-S-1
ELDERLY'S PERCEPTION ON INTERGENERATIONAL RELATIONSHIP: A CASE OF RURAL INDIA

Dhananjay W. BANSOD (*Population Research Centre, Institute for Social and Economic Change, India*)

Introduction : The paper focuses on care and support elderly gets in the family and their perceptions towards the younger generation in rural Maharashtra. Issues like situation of the aged in the context of respect and care, how the aged and their subsequent generation perceive ageing, elderly's views and opinions about the young generation have

been explored in this study. Further, the impact of various socio-economic characteristics on the perceptions of the elderly towards the younger generation is discussed in detail. Method : Data for this study was collected from the rural Maharashtra using semi structured interview schedule. 600 males and females were interviewed; systematic sampling technique was used for data collection. Multivariate analysis is used to examine the impact of predictor variables on the perceptions of the elderly about the younger generation. Results : More than one third of the elderly in rural area are not getting proper care and support from their children/family. Age, sex, type of family, standard of living, and economic status are the significant variables to the family support. A majority of the elderly respondents perceive ageing as a problem as they cannot do the work they used to do it earlier and also their family member's consider them as a burden for the family. The results show that elderly people living alone with their spouses develop a more negative perception towards the younger generation than those living with their children. Conclusion : The study highlights the need for company of either married or unmarried children to make the elderly feel more secure. Keywords : Elderly, younger generation, perception,

OP26 103-S-2
LIKE FATHER, LIKE SON: INTERGENERATIONAL RELATIONS, KOREAN PATRIARCHY, AND AMBIVALENCE

Allen J. KIM, Judith TREAS (*Sociology, University of California, Irvine, USA*)

Introduction : In the South Korean press and Korean-American communities, patriarchal norms are criticized for causing distant and dysfunctional family relationships, particularly between fathers and children. Father School (FS) is a large, transnational, men's movement which aims to convert traditional fathers into caring dads--consistent with the Western "new father" ideal. FS participants illustrate the implications of cultural change for father-son relations in adulthood. Method : Drawing on observational research conducted at FS events in U.S. immigrant communities and South Korean community, prison, and military settings, this paper analyzes how men make sense of their relations with their fathers in light of changing cultural expectations. Based on a content analysis of 100 personal letters that middle-aged workshop participants wrote to their own aging fathers, we identify recurrent themes in men's accounts of the painful emotional legacy of their fathers' traditional masculinity. Results : While describing the negative aspects of their relationships with their fathers, informants also point to this experience as motivating their desire to act differently toward their own children. A comparison of South Korean and U.S. FS participants show that immigrants experience an additional burden. Immigrants feel guilty about not being available to care for aging parents. Conclusion : Although Korean men reject the patriarchal values which undermined their personal relationships with their fathers, even U.S. immigrants embrace traditional filial values which emphasize their responsibility for aging parents. Consistent with the time-and-place paradigm of life course theory, this study shows that the content and meaning of intergenerational relationships are contingent on historical era and cultural context. Keywords : Intergenerational Relationships, Korean Families, Fatherhood

OP26 103-S-3
WHY WOULD FILIAL OBLIGATION REMAIN A STRONG NORMATIVE VALUE AMONG MODERN CHINESE WOMEN?

Patricia O'NEILL (*Sociology/ Oxford Institute of Population Ageing, University of Oxford, United Kingdom*)

Introduction : Unlike in the past, many Chinese women today are likely to be educated, employed, financially self sufficient and making their own decisions. Domination by and dependency on the family has diminished to a great extent. Yet, daughters' commitment to the filial tradition of caregiving has largely remained. This research seeks to understand why Chinese daughters are still willing to undertake family caregiving activities considering their modern lifestyles and attitudes and to examine the shift in the practical discharge of traditional filial obligations. **Method :** Fifty five Chinese women born between 1946 and 1980 participated in semi-structured, in depth interviews in Hong Kong and Singapore. Thematic analysis was performed on the transcribed data. **Results :** Framing rules provide the normative structure in which adult Chinese daughters are expected to care for ageing parents and in-laws. Feeling rules and emotion work determine their willingness to do so. The core belief in duty has not fundamentally changed from the parent's generation. However, the manner in which filial obligation is discharged has. Growing reliance on foreign domestic helpers as well as nursing homes appears to be inevitable. **Conclusion :** With a rapidly ageing Asian population and inadequate pension and retirement schemes, pressure on daughters to continue care giving activities is strong. Enduring social norms and cultural expectations suggest daughters will likely continue to care for ageing parents, but perhaps not in-laws. Fewer women, due to low fertility, and demands on time, combined with a modification of feeling rules, suggests the manner in which caregiving activities are carried out may be evolving into a new cultural paradigm. **Keywords :** filial obligation

OP26 104-S

IMPACT OF POPULATION AGEING

OP26 104-S-1

COMPARATIVE STUDY ON HEALTH OF OLDER PERSONS IN SELECTED COUNTRIES IN THE WESTERN PACIFIC REGION

Julie E. BYLES¹, John HALL², Cate D'ESTE² (1. *Research Centre for Gender, Health and Ageing, The University of Newcastle, Australia;* 2. *Centre for Clinical Epidemiology and Biostatistics, The University of Newcastle, Australia*)

Introduction : The Western Pacific Region is geographically vast, culturally diverse, and ageing at different rates across its 37 countries. Fifteen percent of the 1.8 billion people in the WPR are aged ≥60 years, representing 30% of the world's older population. The age of the region's population, and life expectancies, are increasing rapidly, particularly in lower income countries. Governments, health care providers and communities require information to strategically plan for changing needs of their populations. **Method :** Data on older people, obtained from international databases including World Health Organization, United Nations, and country specific surveys of older people such as SAGE (China), INDEPTH (Vietnam) and KLOSA (South Korea), were compared for selected countries across the Western Pacific Region. **Results :** Primary health data on self-rated health, health conditions, physical functioning, health behaviours, and sociodemographic data will be presented for selected countries. Results are adjusted for population differences in age and sex, and also include cross-country comparison of associations between health status and socio-demographic factors. Additional fact sheets prepared for each country provide information on population trends, life expectancy, and burden of disease (DALYs). A meta-survey of data sources across the region identifies gaps in data coverage and a lack of recent studies to monitor the progress and impact of population ageing in many settings. **Conclusion :** This paper provides insights into the health of persons aged 60 years and over in the Western Pacific

Region. These data are an important regional resource for development of policy, practice and research related to ageing and health. **Keywords:** health status, cross-country, population ageing

OP26 104-S-2

GENDER IMBALANCE AT BIRTH AND PARENTS' ANXIETY ABOUT OLD AGE IN CHINA

Yoshihiko KADOYA, Ting YIN (*Institute of Social and Economic Research, Osaka University, Japan*)

Introduction : Chinese parents prefer to have sons as they depend on their sons for support in old age, according to most of the literature. This paper uses the Preference Parameters Study, which randomly interviewed individuals in six major cities in China in 2011, to present empirical evidence about the possible cause of the problematic gender imbalance at birth in China. **Method :** From the dataset, this paper compares sons' and daughters' commitment to parental care from a selection of respondents who were married, aged 20-70, had at least one living parent, and had no missing answers to the interview questions. **Results :** Chinese sons (and their wives) are more likely, compared to daughters (and their husbands), to be primary caregivers for parents. The paper concludes that parents' dependency on their children would not necessarily decrease with the development of social security, although children with highly educated spouses appear to present an exception. **Conclusion :** The current study supports the initial claim found in literature; however, no evidence is found that the development of a social security system is to be the solution. **Keywords :** gender imbalance, son preference, anxiety about old age

OP26 104-S-3

WORK-CARE RECONCILIATION FOR CARERS OF OLDER PEOPLE IN CONTRASTING WELFARE SYSTEMS: DEVELOPMENTS IN EMPLOYMENT LAW, PUBLIC POLICY AND ORGANISATIONAL PRACTICE

Sue YEANDLE¹, Janet FAST² (1. *Sociology and Social Policy, University of Leeds, United Kingdom;* 2. *Human Ecology, University of Alberta, Canada*)

Introduction : This paper draws attention to work-care reconciliation developments affecting family carers of older people in Europe, East Asia, Australia and North America. Highlighting common contextual factors high/ rising levels of female employment; population ageing and policy concerns about care deficits; and the emergence of NGOs advocating on behalf of 'working carers' - the paper considers policy convergence and differentiation in different welfare systems. **Method :** Using secondary analysis of statistical data on carers, highlighting evidence from qualitative studies, and contextualising this material in comparative analysis of legislation, policies and debates, the paper explores the pace, direction and varieties of change observable in 8 societies. It asks how far employers are drawing carers of older people into the remit of their wellbeing and work-life balance agendas, and examines how governments have responded to the challenge of supporting carers to remain at work. **Results :** Drawing on Yeandle's edited collection with Kroger (Policy Press, 2013) which explored developments in East Asia, the Nordic countries and two liberal democracies as well as Fast's recent Canadian workplace survey and interviews with HR professionals about support for carers, the paper also highlights emerging policy and practice in Canada and the USA. **Conclusion :** In conclusion, the authors reflect on their work with employer forums of various kinds, and ask, how far has workplace support for carers of older people crept up organisational agendas? Do carers and older people benefit from these changes? Do these developments help carers combine work and care without detriment to

their jobs, careers and family commitments? Keywords : carers; work-life; older people

OP26 106-S HETEROGENEITY AMONG OLDER PERSONS

OP26 106-S-1

POPULATION AGEING IN RUSSIA: GENDER DIFFERENCES
Gayane SAFAROVA¹, Lenar KOZLOV², Anna SAFAROVA¹
(1. Laboratory of Theoretical Economy, Saint-Petersburg Institute for Economics and Mathematics, Russian Academy of Sciences, Russia; 2. Laboratory of the Demography of Ageing, Saint-Petersburg Institute of Bioregulation and Gerontology, Russia)

Introduction : Population ageing is a triumph and a challenge for development in the 21st century. The population of Russia is rapidly ageing, and with ageing progress the need for thorough analysis of this process increases. Demographic development of Russia is characterized by high mortality difference by sex and significant imbalance between males and females in age composition. The paper aims at analysing gender differences in ageing development in the Russian Federation since the beginning of the 1990s. Method : Changes in number and percentage of the elderly (60+) and the number of males per 1000 females in older age groups are considered. Special attention is given to gender gap in life expectancy at older ages. Regional aspect is touched on, and comparisons with developed European countries are made. The paper is based on censuses (including the last 2010 census) and data on vital events. Results : It is shown that ageing process in Russia is characterized by significant imbalance between males and females in population age structure (the number of females at older age groups is higher than the number of males; the proportion of population 60+ for females is higher than that for males). Male life expectancy is lower than female one, leading to high prevalence of widowhood, the latter increasing with age. Gender imbalance in Russia has been more marked than in developed European countries. Conclusion : Measures to adapt economy and social infrastructure of Russia to the ageing society should be elaborated. Without taking account of gender differences, they are doomed to be ineffective. Keywords : population ageing, demographic aspects, gender differences

OP26 106-S-2 CULTURAL DIFFERENCES IN OLDER PEOPLE'S RELATIONSHIPS WITH THEIR ADULT CHILDREN

Xiaoping LIN¹, Christina BRYANT², Briony DOW¹, Jennifer BOLDERO³ (1. Health Promotion, National Ageing Research Institute, Australia; 2. Psychology, University of Melbourne & Royal Women's Hospital, Australia; 3. Psychology, University of Melbourne, Australia)

Introduction : Based on the solidarity-conflict model (Bengtson, Giarrusso, Mabry, & Silverstein, 2002), this study explored the complexity of older people's relationships with their adult children from the older person's perspective. In the context of increasing cultural diversity in Australia, the study focused on cultural differences in these relationships, in particular, those between older Australian-born individuals and older Chinese immigrants. Method : A total of 122 community-dwelling older people (60 Australian-born and 62 Chinese-born people) were interviewed in the study. The interviews collected demographic data (e.g. age, gender, and financial situation), and information on intergenerational relationships (e.g. living arrangements, frequency of contact, patterns of intergenerational exchanges, and filial expectation). Results : The study revealed

complex cultural differences in older people's relationships with adult children. Compared to older Australian-born individuals, older Chinese immigrants were more likely to live with their children and had higher filial expectation. However, more than half (65%) of the Chinese participants (65%) did not live with their children, and among them, most (93%) were satisfied with such arrangement. Among the Chinese participants who did live with their children (n=22), more than 60% payed board or shared expenses with their children. Conclusion : The study found complex cultural differences in older people's relationships with adult children. In particular, it found evidence that suggests important changes in the traditional practices that reflect filial piety in older Chinese immigrants' relationships with their adult children. These findings provide valuable insights for future aged care provision in multicultural countries like Australia. Keywords: intergenerational relationships

OP26 106-S-3 REGIONAL DIFFERENCES IN POPULATION AGEING (THE CASE OF THE VALENCIAN COMMUNITY)

Carles SIMO¹, Gaiane SAFAROVA² (1. Sociology and Sociological Anthropology, University of Valencia, Spain; 2. Institute for Economics and Mathematics, Russian Academy of Sciences, Russia)

Introduction : With ageing development the need for thorough analysis of this process increases, especially for like Spain that may be considered as rather "old" countries. The Valencian Community (VC) is the fourth country's region in terms of population size and consists of three parts: Alicante, Castellon and Valencia having different population size and demographic indicators. The paper aims to make a comparative analysis of ageing development in the regions of VC since the beginning of the 1990s. Method : Changes in age structure by major age groups are considered, and a number of ageing characteristics are computed for VC and its regions. Ageing indicators for VC are compared with those for Spain as a whole. Both conventional measures, including proportions of the elderly in the total population, ageing index, old age dependency rate, parent support ratio, and prospective measures that take account of remaining years of life (proportion of persons in age groups with remaining life expectancy (RLE) equal to or less than 15 years, prospective old age dependency rate and population average remaining years of life) are examined. The paper is based on censuses and micro-data on vital events. Results : Substantial regional differences in values of ageing indicators have been found. Values of traditional measures are shown to be smaller than those of corresponding prospective measures. Conclusion : The study is revealing similarities and diversities in dynamics of ageing indicators for VC and Spain, and inside VC. Results obtained may contribute to the management, administration and planning of social programmes related to population ageing. Keywords : Population ageing, regional differences, prospective measures

OP26 106-S-5 GRANDPARENTS AND GRANDCHILDREN IN SITUATIONS OF DIVORCE: THE ROLE OF THE MIDDLE GENERATION IN THE INTERGENERATIONAL CONTACT

Anne Carolina RAMOS (Department of Education, Federal University of Rio Grande do Sul, Brazil)

Introduction : In childhood, relations between grandparents and grandchildren are heavily determined by the middle generation. It is usually the children's parents who make it possible to build a bridge between these two non-adjacent generations, which may involve a strong preference for the mother's side of the family, increasing

distance or even complete breakdown in intergenerational contact, especially when families break up and are reconstituted. Method : This study examines how the relations between grandparents and grandchildren happen in nuclear, single parents and reconstituted families from the perspective of thirty-six Brazilian children aged between seven and ten years from the city of Porto Alegre, in the South region of Brazil. Results : In their reports, they tell us about the importance of the ties created by the middle generation in intergenerational interaction and show us how the divorce of their parents can lead to significant consequences in the quality and intensity of contact with their grandparents. Conclusion : When the ties between these two generations weaken and break down, children can symbolically divest them of the role of grandparents. This shows that children have great power in the process of inclusion and exclusion of family members and that it is not enough for grandparents to consider themselves grandparents. For this relation to establish itself, the grandchildren too must consider themselves grandchildren, which floors the idea that adults have the last word, giving new perspectives to the intergenerational studies.

OP26 113-S
AGEING AND DISABILITY II

OP26 113-S-1
AN ANALYSIS OF INEQUALITY OF PUBLIC SPHERE AND HEALTH STATUS OF AGING COMMUNITIES IN KHUZISTAN PROVINCE, IRAN

Abdolrahim ASADOLLAHI¹, Laleh Fani SABERI², Ali Hosein HOSEINZADEH³ (1. Australian Centre for Quality of Life, Deakin University, Australia; 2. Community Health, Mazandaran University of Medical Sciences, Iran; 3. Sociology, Shahid Chamran University of Ahwaz, Iran)

Introduction : Increasing aged population (3.1%) as compared with natural growth in the Iranian population (1.2%) is a problematic issue. The literature acclaims that physical disabilities and health problems in the late life have a significant relationship with social participation of the elderly and their cohesive actions in the society. Method : This study illustrates social participation as an indicator of social cohesion in the Iranian background, as well as its factors and obstacles especially among the elderly. The scale of aged participation (SAP) was constructed according to the selected theories of four basic items and its 35 sub-items. The study was carried out in 2010 and the sample of population comprised the aged communities from five selected cities of Khuzistan province in southwest Iran, namely, Ahwaz, Behbahan, the Mah-Shahr Port, Dezful, and Abadan. The research studied 768 samples of urban and rural aged citizens, chosen using the cluster-ratio sampling method. Results : The findings revealed that social participation was low while social cohesion was poor. There were significant relationships with burgess, high literacy, ethnicity, living with children, feminine, growth of welfare, having the chronic disease of respiratory disorder, social alienation, cost of participation, reduction in benefits of participation, and growth of their children's and new generation's income. Conclusion : The social Sphere and health status of aged samples were moderated by their engaging in the community level. Keywords : Social Cohesion, Health Status, Participation, Aging, Khuzistan Province, Iran

OP26 113-S-2
FACTORS ASSOCIATED WITH MACRONUTRIENT INTAKE IN A COHORT OF ADVANCED AGE: LILACS NZ

Carol WHAM¹, Ruth TEH², Simon MOYES², Ngaire KERSE² (1. Human Health and Physiology, Massey University, New Zealand;

2. Department of General Practice & Primary Health Care, University of Auckland, New Zealand)

Introduction : Understanding the nutritional status of people in advanced age is an essential component of addressing health and well being. Method : In the Life and Living in Advanced Age: a Cohort Study in New Zealand 578 Maori and non Maori octogenarians completed two 24 hour multiple pass recalls of food intake. A t-test or Mann-Whitney U test was used to determine whether macro-nutrient intake differed by social or cultural factors. Results : For Maori (n=216) the mean (SD) energy intake was 1564±589 kcal (carbohydrate 44±9%; protein 17±4%; fat 39±9%). Those with a role in Maori organisations compared to those with no role had a lower % intake of CHO (39.8±7.5 versus 44.8±8.7) (p=0.002) and a higher % intake of protein (17.4±4 versus 16.3±3.7) (p=0.04) and fat (42.5±8.1 versus 40.8±9) (p=0.004). Maori who converse in Te Reo compared to those who don't had a higher % fat intake (40.8±9 versus 37.4±8.3) (p=0.02). For nonMaori (n=362) the mean (SD) energy intake was 1739±557 kcal (CHO 45±8%; protein 16±3%; fat 37±7%). Those who live alone compared to those who live with others had a lower % fat intake (35.2±7.9 versus 38.0±7.0) p=0.02. NonMaori participants who receive superannuation compared to those who receive superannuation plus other income tended to have a higher % CHO intake (46.5±7.3 versus 44.7±8.5) p=0.07. Conclusion : Maori who are more embedded in their culture eat more protein and fat related to their traditional diet. Among nonMaori those with more income eat less carbohydrate. Dietary intakes are in part associated with cultural practices and financial resources. Keywords : macronutrients, culture, New Zealand

OP26 113-S-3
LONGITUDINAL DYNAMICS IN INDICATORS OF FRAILTY: PATTERNS AND PREDICTORS

Oleg ZASLAVSKY¹, Barbara COCHRANE², Hilaire THOMPSON³, Nancy Fugate WOODS³, Jerald HERTING⁴, Andrea LACROIX⁵ (1. Departments of Nursing, University of Haifa, Israel; 2. Family and Child Nursing, University of Washington, USA; 3. Biobehavioral Nursing and Health Systems, University of Washington, USA; 4. School of Sociology, University of Washington, USA; 5. Public Health Science Division, Fred Hutchinson Cancer Research Center, USA)

Introduction : Despite a long conceptual and operational history in research and publications, both frailty and mechanisms of its development are still poorly understood. A detailed description of trajectories of frailty indicators is needed to provide insights on longitudinal dynamics involved in the development of frailty. The purpose of this study was to: 1. Describe longitudinal (~10 years) trajectories of change in musculoskeletal and neuro-cognitive indicators of frailty in older women enrolled in the Women's Health Initiative (WHI). 2. Estimate the extent to which baseline factors (e.g., demographic characteristics, health status and behaviors) were associated with a likelihood of membership in the derived longitudinal trajectories. Method : We used longitudinal data from a subset of older (≥65 years at baseline) WHI Clinical Trial participants (N=19,891). Latent class growth models were used to estimate longitudinal dynamics in indicators of frailty and ordered logit models were applied to estimate the effects of baseline predictors on these trajectories. Results : The study findings demonstrated a high degree of heterogeneity in longitudinal dynamics of individual frailty criteria. However within specific criteria, elderly women maintained fairly similar patterns of functioning over time. Age, socio-demographic variables, health status, health behavior, environmental factors and personality traits were important determinants of individual frailty

criteria, but their effect on the frailty phenotype was complex and mostly criterion specific. Conclusion : The results of the study might help to identify distinct groups among aging women with potentially modifiable risks of adverse health outcomes and guide future interventions. Keywords : frailty, longitudinal modeling, women's health initiative

OP26 113-S-4

WORK ABILITY IN MIDLIFE AND SELF-RATED HEALTH: A 28-YEAR LONGITUDINAL STUDY

Jorma SEITSAMO¹, Mikaela B. VON BONSDORFF², Monika VON BONSDORFF² (1. *Promotion of Work Ability and Health, FIOH, Finland*; 2. *Finnish Gerontological Research Centre, University of Jyväskylä, Finland*)

Introduction : The main objective of this study was to examine longitudinally the associations between the work ability of middle-aged occupationally active employees and their self-rated health (SRH) over the retirement years. Method : The study sample constitutes of a cohort of middle-aged Finnish municipal workers (n=6257). The study started in 1981, and over the follow-up, 2220 persons deceased. In 2009, a total of 3092 persons responded to the final questionnaire (the response rate was 75%). The measure of SRH was constructed from the following item: 'Compared to your friends of the same age, how is your health?' The responses were classified as better, the same, and worse. General linear models with repeated measures was used to assess the effects of work ability index (WAI) and co-variables (functioning, activity, diseases, health behaviours, gender, age, marital status, and socio-economic status) on health. Results : The results showed that WAI was a strong predictor of later-life SRH. If a person had an excellent work ability the odds of reporting good health was 4-fold (among men OR=4.4, 95% CI 3.4 - 5.8, among women OR=3.80, 95% CI 3 - 4.8) compared to the odds of a person with poor work ability having good health during the retirement years. Even an increase from poor work ability to moderate doubled the odds of good health. Conclusion : The strong connection between work ability and SRH suggests that promotion of work ability during occupationally active years may have positive impacts on health and well-being far beyond retirement transition. Keywords : aging health retirement

OP26 113-S-5

SELF-NEGLECT AMONG THE ELDERLY: A COMPARATION BETWEEN TWO EUROPEAN COUNTRIES

Adina Carmen ILIE¹, Papaioannou Emmanouil STAMOS², Ovidiu ALEXA³, Ioana Dana ALEXA¹ (1. *Department of Geriatrics, Faculty of Medicine, University of Medicine and Pharmacy 'Gr.T.Popa', Romania*; 2. *Faculty of Medicine, University of Turku, Finland*; 3. *Department of Trauma, Faculty of Medicine, 'Gr. T. Popa' University of Medicine and Pharmacy, Romania*)

Introduction : Self-neglect is the inability to provide for oneself the basic needs. The self-neglected refuses to adequately feed, water, shelter, or clothe himself, refusing medications or medical care and personal safety measures. This paper reports the partial results of a study which aims to compare medical, social, psychological and behavioral self-neglected elderly hospitalized in two geriatric units from Greece and Romania. Method : In this study we included patients over 65 years hospitalized in our clinic and who presented signs of self-neglect (on clinical exam and anamnesis). To determine the degree of self-neglect, all patients were assessed using data from their medical files and questionnaires that included comprehensive geriatric assessment tools, economic and social details, psychological and

behavioral elements. Results : Data obtained from 66 patients during 12 month period has been analyzed. The demographic data were comparable in both groups. We observed an increased rate of cognitive disorders, depression and family dysfunction in both groups and an increased rate of alcoholism and low income in the Romanian group. Conclusion : There are various factors involved in self-neglect in elders including socioeconomic and are related with the quality of social services. Understanding the disorder and the risk factors will develop the proper procedures to use in the prevention and treatment. This subject has an increased importance because self-neglect is cited as marker for increased mortality independent of cognitive function or physical shape. Keywords : elderly, self-neglect, abuse

OP26 113-S-6

CROSS-NATIONAL DIFFERENCES IN OLDER ADULTS PHYSICAL FUNCTIONING: RESULTS FROM HRS, ELSA AND SHARE STUDIES OF AGEING

Paola ZANINOTTO¹, Omar PACCAGNELLA², Giovanna BOCCUZZO² (1. *Department of Epidemiology and Public Health, University College of London, United Kingdom*; 2. *Department of Statistical Sciences, University of Padua, Italy*)

Introduction : Disability has a multidimensional structure making difficult to define and to measure in practice. One approach is using reliable indicators of individual's functional status of everyday life such as limitations with activities of daily living (ADL). This paper aims at exploring and comparing the presence and severity of physical functioning among older adults living in the England, United States and mainland Europe and seeking to explain country differences. Method : Data come from the English Longitudinal Study of Ageing (ELSA), the Health and Retirement Study (HRS) and the Survey of Health and Retirement in Europe (SHARE). The statistical solution we adopt is written as a system of equations, jointly analysing the presence of any disability and its severity. Results : After full adjustment, compared to the US, older people living in: - England and Belgium are more likely to have one or more limitations with ADLs, but less likely on the severity; - Germany and Poland are more likely to have ADLs, but no difference in severity; - The Netherlands, Italy, Denmark, Greece and Czech Republic are less likely to have ADLs, but no difference in severity; - Sweden, France, Switzerland and Ireland are as likely to have ADLs, but less likely on the severity; - Spain are as likely on the presence, but more likely on the severity. Conclusion : Country differences are more important comparing the presence of any disability rather than their severity. Unobservable components affecting the onset of a limitation are correlated with unobservable factors influencing the severity of such limitation. Keywords : ADL, Cross-country comparisons, Sample selection

OP26 119-B

AGING TOXICOLOGY

OP26 119-B-1

EFFECT OF ACRYLAMIDE AND ITS METABOLITE GLYCIDAMIDE ON ENDOTHELIAL CELL VIABILITY AND SENESENCE IN-VITRO

Nicolas GROSSIN, Francois MALADRY, Cyril SELLIER, Rodrigo LORENZI, Maite DAROUX, Eric BOULANGER (*Aging Biology, Lille2 University, France*)

Introduction : Cellular senescence is characterized by a limited ability of cells to divide when cultured in vitro. Many compounds in food can induce an earlier vascular senescence. Acrylamide (AAM) is a recent discovery in food, as a Maillard reaction product. After ingestion, 30%

of AAM are metabolized to glycidamide (GA). AAM and GA have been described as carcinogenic, reprotoxic and neurotoxic in laboratory animals. However, the vascular toxicity of AAM and GA has never been studied. The aim was to assess the effects of AAM and GA on endothelial viability and senescence in-vitro. Method : All experiments were performed on Human Umbilical Vein Endothelial Cells (HUVECs). Cell death induction was assessed by double labelling (flow cytometry) with DiOC6(3) (apoptosis) and propidium iodide (necrosis) in presence of AAM (0.1-100 mM) or GA (0.5-10mM). To evaluate cellular senescence, activity of β -galactosidase (X-gal or C12FDG metabolisation) was measured in HUVECs cultured for 3 months with AAM or GA (10 or 100 μ M). Telomere shortening was measured by qPCR and telomerase activity by a TRAP method. Results : AAM and GA (0-100mM) induced HUVEC apoptosis and necrosis ($p < 0.05$) in a dose-dependent manner. The extended culture with lower doses of AAM or GA (0-100 μ M) reduced cell division ($p < 0.01$). The activity of β -galactosidase was increased by AAM or GA ($p < 0.05$). Telomere shortening was accelerated by AAM or GA ($p < 0.05$), in association with the inhibition of telomerase activity. Conclusion : Low doses on chronic exposure induce an accelerated senescence. The chronic exposure to dietary AAM may accelerate vascular aging. Keywords : Dietary Maillard products, Endothelial cell, Senescence

OP26 119-B-2 EFFECTS OF DIETARY N ϵ -CARBOXYMETHYLLYSINE ON ARTERIAL AGING IN MOUSE MODEL

Nicolas GROSSIN¹, Florent AUGER², Frederic TESSIER³,
Celine NIQUET-LERIDON³, Nicolas DURIEUX²,
Rodrigo LORENZI¹, Maite DAROUX¹, Eric BOULANGER¹ (1. *Aging
Biology, Lille2 University, France*; 2. *Imaging Platform/IMPRT,
Lille2 University, France*; 3. *Unite de Recherche EGEAL, Institut
Polytechnique Lasalle-Beauvais, France*)

Introduction : Arterial aging is accelerated by endogenous but also exogenous factors. Advanced glycation end-products (AGEs) are endogenously produced but are also present in food. N ϵ -Carboxymethyllysine (CML) is described as a potent endogenous endothelial activator but is also a major dietary AGE. The present work aimed at investigating the effects of dietary CML intake on aortic aging in a mouse model. Method : C57Bl/6j male mice were fed with an unglycated bovine serum albumin (BSA)-enriched standard diet (controls) or received CML-glycated BSA diets (50, 100 or 200 μ gCML/g) for 3, 6 or 9 months. Aortic endothelium-dependent and -independent relaxation was measured in isolated organ chambers. CML deposition, receptor for AGEs (RAGE) and vascular cell adhesion molecule-1 (VCAM-1) expression were measured. Arterial stiffness was quantified by aortic pulse wave velocity (PWV) measurement via magnetic resonance imaging (MRI). Aortic wall surface (Masson's trichrome) and elastin disruption (orcein) were analyzed. Results : Endothelial dysfunction was evidenced after 9 months of CML-diet (200 μ gCML/g) by reduction of endothelium-dependent relaxation ($p < 0.05$), by CML deposition ($p < 0.01$), and by RAGE and VCAM-1 ($p < 0.05$) overexpression in the aorta wall. Compared to control diet, CML-diet exposure during 9 months was followed by a dose-dependent increase of PWV ($p < 0.05$) and by a decrease of endothelium-independent relaxation ($p < 0.05$). The aortic wall was thickened and elastin disrupted to a greater extent in all the CML-fed mice ($p < 0.05$). Conclusion : Chronic CML ingestion induced endothelial dysfunction and arterial rigidity, and it is concluded that its dietary intake is associated with accelerated arterial aging. Keywords : Glycation, Nutrition, Vascular aging

OP26 119-B-3 CONJUGATE REDOX SYSTEM, PROTON FLOWS AND MECHANISM OF OXIDATIVE STRESS IN AGING© 2012

Elena TERESHINA, Sergey IVANENKO (*Gerontology, WWMA AG,
Switzerland*)

Introduction : Emerged evidence argues mitochondrion role as a trigger of oxidative stress. Method : Searching for a mechanism responsible for the cellular redox balance in aerobic organisms allowed us to reveal a conjugate redox system (CRS) consisted of three components: methyl group oxidation as a proton donor, oxygen molecule as proton acceptor and an amino group as bifunctional donor-acceptor. Results : CRS controls one-carbon compounds transfer system and methylation, arginine-ornithine cycle, glutathione redox state, mitochondrion functioning, phosphate group and oxygen molecule distribution. Glucose is a main proton donor in the human cell. Protons obtained in pentose phosphate cycle are distributed among CRS and fatty acid synthesis. The last is a major proton accumulator. Aging is followed by the diminishing of water/fat ratio in tissues that indicates the process of intracellular fatty acids and proton accumulation. The more fatty acids accumulate the less is the rotation of CRS that leads to inactivation of mitochondrion proton pump, switching from respiration to glycolysis, disturbances in bioamines and polyamines production, nitric oxide/peroxide balance, demethylation and deacetylation, and finally to rejection of glucose penetrating into the cell. Conclusion : The aim of investigation was screening of metabolites capable to influence CRS for maintaining its "rotation". The CRS modeling allowed us to consider the "detoxification" pathway and its components as candidates for possible therapeutic action. Their efficacy as immunomodulators, anticancer and antiatherogenic agents was verified in the laboratory and clinical trials. Keywords : proton flow, fatty acids, ageing

OP26 119-B-4 GENOTOXIC AND EPIGENETIC MODIFICATIONS IN BLOOD LYMPHOCYTES EXPOSED IN VITRO TO URBAN AIR POLLUTION PARTICULATE MATTER: INFLUENCE OF AGE

Bertrand FOUGERE¹, Sylvain BILLET², Capucine LEPERS²,
Perrine MARTIN², Lucie ARMAND², Helene BULCKAEN¹,
Francoise ROY SAINT-GEORGES³, Anthony VERDIN²,
Pierre GOSSET⁴, Pirouz SHIRALI² (1. *Service de Geriatrie, Groupe
Hospitalier de l'Institut Catholique de Lille, France*; 2. *Unite de
Chimie Environnementale et Interactions sur le Vivant (EA4492),
Universite du Littoral Cote d'Opale, France*; 3. *Service de
Pneumologie, Groupe Hospitalier de l'Institut Catholique de Lille,
France*; 4. *Laboratoire d'Anatomie Pathologique, Groupe Hospitalier
de l'Institut Catholique de Lille, France*)

Introduction : The fine air pollution Particulate Matter (PM2.5) is of public health concern. However, even if everybody can suffer the consequences of chronic exposure to atmospheric pollution, some populations are more fragile. Among them, the elderly are suspected to have a greater sensitivity to chemicals. The mechanisms usually described in PM2.5 toxicity can not explain all of the early events involved in carcinogenesis. Some genotoxic and epigenetic events are implied in both cellular aging and carcinogenesis such as telomere shortening or aberrant methylation of genes promoters. Method : To enhance the knowledge about the influence of age in biological response, blood lymphocytes were sampled from three age classes: 25-30, 50-55, and 75-80 years. Early markers participating in multistep process of carcinogenesis were then analyzed. 90 blood samples were collected (30/age class). The lymphocytes were isolated by Ficoll,

stimulated by phytohemagglutinine, and exposed to urban PM2.5. Results : Oncogenic markers, that may also be implicated in senescence, like telomerase activity and methylation of P16INK4A promoter, were modulated in the lymphocytes exposed to PM2.5. Even if telomerase activity increase was constant between the three age classes, methylation of P16INK4A promoter was significantly higher in 75-80 years group. Conclusion : Age influences biological response to some environmental factors. In this study, several markers of tumorigenicity of airborne PM seemed to be exacerbated in the oldest age class, possibly due to less efficient repair mechanisms. This could contribute to explain the greater sensitivity of the elderly previously described in epidemiological studies. Investigations in the role of ageing have to be deepened. Keywords : Epigenetic ; Cancer ; Geriatrics

OP26 119-B-5

THE EFFECT OF AGEING ON PARACETAMOL PHARMACOKINETICS AND TOXICITY IN FISCHER 344 RATS

John MACH¹, Aniko HUIZER- PAJKOS², Himesha VANDEBONA³, Victoria C COGGER⁴, Catriona MCKENZIE⁵, David G LE COUTEUR⁴, Brett JONES⁶, Sarah N HILMER¹ (1. Laboratory of Ageing and Pharmacology, Kolling Institute of Medical Research, Royal North Shore Hospital and University of Sydney, Australia; 2. Laboratory of Ageing and Pharmacology, Kolling Institute of Medical Research and Royal North Shore Hospital, Australia; 3. Laboratory of Liver and Digestive diseases, Kolling Institute of Medical Research and Royal North Shore Hospital, Australia; 4. Centre for Education and Research on Ageing and Anzac Research Institute, Concord Hospital and University of Sydney, Australia; 5. Dept of Tissue Pathology and Diagnostic Oncology, Royal Prince Alfred Hospital, Australia; 6. Laboratory of Liver and Digestive Diseases and Gastroenterology, Kolling Institute of Medical Research, Royal North Shore Hospital and University of Sydney, Australia)

Introduction : In paracetamol overdose, conjugation pathways that form non-toxic products are saturated, leading to formation of a toxic metabolite N-acetyl-p-benzo-quinone imine (NAPQI) by Cytochrome P450 2E1 (CYP2E1). With excessive NAPQI levels, NAD(P)H quinone oxidoreductase (NQO1) activity and glutathione stores are exhausted resulting in hepatotoxicity. The effect of ageing on this process has not been well characterised. We assessed age-related changes in the degree of hepatotoxicity and hepatic metabolism following a toxic dose of paracetamol in ageing male Fischer 344 rats. Method : Young (6±1 months) and old (26±2 months) rats were treated with 800mg/kg paracetamol (young n=8, old n=5) or saline (young n=9, old n=9) intraperitoneally four hours before euthanasia. Serum alanine aminotransferase (ALT) and liver histology were assessed to indicate the degree of hepatotoxicity. Serum metabolites, creatinine and hepatic CYP2E1 protein expression and activity, NQO1 activity, UDP-glucuronosyltransferase 1A6 (UGT1A6) mRNA expression and glutathione were measured. Results : Paracetamol treated old rats had less elevation of serum ALT and higher serum paracetamol and paracetamol glucuronide levels than young (p<0.05). Old control rats had 2 fold lower CYP2E1 activity and 4 fold higher NQO1 activity than young (p<0.05). The same trends were observed in paracetamol treated animals. Hepatic glutathione was 50-60% lower in paracetamol treated rats (p<0.05), with no difference with age. UGT1A6 mRNA expression did not change with age or treatment. Compared to other groups, paracetamol treated old rats had higher serum creatinine (p<0.05). Conclusion : Our results suggest pharmacokinetic changes occur in old age that decrease susceptibility to paracetamol-induced hepatotoxicity but may increase risk of

nephrotoxicity. Keywords : Paracetamol, Pharmacokinetics, Toxicity

OP26 119-B-6

ACCELERATED IMMUNOLOGICAL AGEING INDUCED BY IONIZING RADIATION AND ITS MODULATION BY NOVEL COMPOSITIONS OF MEDICINAL HERBS

Sung-Kee JO, Hae-Ran PARK, Uhee JUNG (Radiation Biotechnology Research Division, Korea Atomic Energy Research Institute, Korea)

Introduction : The imbalance of helper Th1- and Th2-related immune responses is the most interesting ageing-related change in immunity. Although ionizing radiation (IR) is known to induce senescence, there have been little data on IR-induced immunological ageing. Method : We investigated chronic effects on immune responses after ionizing radiation (IR) exposure (5Gy) in C57BL/6 mice in comparison with those of old mice. Also we evaluated the modulation of IR-induced immunological ageing by herbal compositions. Results : At 6 months after irradiation, spleen lymphocyte proliferation declined similarly to that of 18-months-old mice. In irradiated mice, Th1-related response (IFN- γ , IgG2a) was lower and Th2-related response (IL-4, IL-5, IgG1, IgE) was higher compared to the normal control mice of same age, showing similarity to those of old normal mice. The levels of IL-12p70, IL-12 receptors, and p-STAT4 were lower in the irradiated mice. The decrease of NK cell activity was noticeable in the irradiated mice showing lower values than those of old mice. Next herbal compositions were evaluated for the modulation of IR-induced immunological ageing. HemoHIM, developed to protect the immune system against acute IR, ameliorated the persistent immunological imbalance in fractionated-IR exposed mice by regulating IL-12/pSTAT4/SOCS3 pathway. WAH-2, designed to reduce IR-induced senescence, also restored NK cell activity, enhanced Th1 responses and suppressed Th2 responses. Conclusion : IR accelerated the immunological ageing with respect to immune cell activity and Th1/Th2 balance. Herbal compositions (HemoHIM, WAH2) modulated IR-induced immunological ageing and could be good recommendations to alleviate the long-term complications after radiotherapy and the immunomodulation for the elderly and the weak. Keywords : radiation, immune, ageing, medicinal herbs

OP26 120-S

SPIRITUALITY AND RELIGION

OP26 120-S-1

GEROTRASCENDENCE AND THE ROLE OF SPIRITUALITY IN LATE LIFE

Loretta BREWER (Social Work, Arkansas State University, USA)

Introduction : The theory of gerotranscendence articulated by Tornstam, uses the term transcendence, to convey the concept of "breaking through old boundaries...when moving on to a new stage of life" (2005, p. 46). Indicators associated with gerotranscendence have distinctly spiritual connotation and include feelings of cosmic communion with the spirit of the universe; a redefinition of time, space, life, and death; and a redefinition of the self as well as decreased interest in social interaction and material things. Tornstam maintains that the movement toward gerotranscendence is continuous and that the degree of transcendence increases throughout the life span. Method : This paper draws examples of gerotranscendence from a qualitative study conducted in Okinawa, Japan. Results : It may be that the elders of Okinawa have experienced gerotranscendence in greater numbers than other cultures due to the extended life span among that population. They serve as living links in a chain that connects past, present, and future generations. This important role

contributes not only to their individual strength and stability in late life, but also to that of their families and communities. Conclusion : Spirituality and religious beliefs can serve as sources of great comfort and hope in late life. Health and human services professionals as well as pastors, priests, and other spiritual leaders have a responsibility to help elders maximize these benefits. Spiritual assessment can assist in understanding the role of spirituality in the daily lives of elders and reveal strengths that can be used to assist younger generations as they strive to cope with developmental challenges. Keywords : gerotranscendence, spirituality, elders

OP26 120-S-2

GEROTRASCENDENCE, GENERATIVITY, RELIGIOSITY, AND SPIRITUAL WELL-BEING IN OLD AGE

Takeshi NAKAGAWA¹, Yukie MASUI², Yasuyuki GONDO¹, Megumi TABUCHI³, Madoka OGAWA², Yoshiko ISHIOKA¹, Yukiko TATSUHIRA¹, Marina KOZONO¹, Kazunori IKEBE⁴, Kei KAMIDE⁵, Yasumichi ARAI⁶, Ryutaro TAKAHASHI⁷ (1. Graduate School of Human Sciences, Osaka University, Japan; 2. Human Care Research Team, Tokyo Metropolitan Institute of Gerontology, Japan; 3. Department of Psychological Science, Kwansai Gakuin University, Japan; 4. Graduate School of Dentistry, Osaka University, Japan; 5. Graduate School of Medicine, Osaka University, Japan; 6. School of Medicine, Keio University, Japan; 7. Research on Social and Human Sciences, Tokyo Metropolitan Institute of Gerontology, Japan)

Introduction : Little is known about whether a spiritual development occurs in old age. Recent theorists suggest that the developmental constructs of Erikson's generativity and Tornstam's gerotranscendence could bridge psychosocial and spiritual development. However, previous studies indicate generativity rather than gerotranscendence is related with religiosity. This study examined the relationship among gerotranscendence, generativity, religiosity, and spiritual well-being in old age. Method : 973 participants aged 78 - 82 years were interviewed at sites near their home. Gerotranscendence was measured with the Japanese Gerotranscendence Scale Revised, generativity was assessed with the Loyola Generativity Short Scale, and spiritual well-being was measured with the Spiritual Well-being Scale. Aspects of religiosity included church/synagogue attendance, prayer or meditation, and temple/shrine attendance. Responses to items of religiosity were yes or no. Results : Among the eight subfactors of gerotranscendence, four factors mostly related with the cosmic dimension of gerotranscendence were significantly predicted by generativity and religiosity, whereas the remaining factors mostly related with the self-dimension were not. Next, the former factors of gerotranscendence, generativity, and religiosity were chosen as independent variables, and multiple regression analyses on spiritual well-being showed that the interaction between prayer or meditation and basic affirmation was marginally significant, and that the interaction between temple/shrine attendance and awareness of "arigatasa" and "okage" was significant. The subfactors were positively related with spiritual well-being among religious people, whereas the relationship was not significant among non-religious people. Conclusion : The study indicates that part of the cosmic dimension of gerotranscendence can be promoted by religiosity. Predictors of the self-dimension should be further examined. Keywords : gerotranscendence, generativity, religiosity

OP26 120-S-3

TESTING THE FAMILY SPIRITUALITY-PSYCHOLOGICAL WELL-BEING MODEL

Suksun KIM (Nursing, George Mason University, USA)

Introduction : There is growing evidence of the benefits of spirituality for elders. However, few researchers have examined the extent to which spirituality in elders and their caregivers many have reciprocal benefits on psychological well-being in the context of family caregiving. The purpose of this research was to test the newly developed family spirituality-psychological well-being model to explore how spirituality influences psychological well-being between elders and caregivers in the context of Korean family caregiving. Method : 157 Korean, elder-family caregiver dyads were participated in this cross-sectional, correlational design study. The ICC and APIM linear mixed modeling were used for data analysis. Results : Hypotheses derived from the family spirituality-psychological well-being model were tested. There is a significant interdependence within elder-caregiver dyads in terms of spirituality and psychological well-being. The person's own spirituality is a strong predictor of psychological well-being for both elders and caregivers (i.e., actor effects). However, partner effects were partially supported in that a higher level of caregivers' spirituality was positively associated with elders' greater psychological well-being (presence of a partner effect), but a higher level of elders' spirituality did not influence caregivers' greater psychological well-being (lack of a partner effects). Conclusion : Understanding spirituality within a family provides insights into developing holistic nursing interventions that may enhance the well-being of both elders and caregivers. Future research should explore the family interdependence effect to search for the best way to improve the well-being of elderly individuals as well as their family caregivers because elders' well-being is influenced by caregivers' well-being and vice versa. Keywords : Family Interdependence, Spirituality, Psychological Well-Being

OP26 120-S-4

THE EFFECT OF MEDITATION ON QUALITY OF LIFE AND MENTAL HEALTH OF MONGOLIAN OLDER PEOPLE

Zandi NYAMJAV¹, Soyolmaa PUNTSAG², Oyunkhand RAGCHAA³, Chimedragchaa CHIMEDTSEREN⁴ (1. Department of Training, Research and Foreign Affairs, National Gerontology Center, Mongolia; 2. Department of Healthcare Service, National Gerontology Center, Mongolia; 3. Administration, National Gerontology Center, Mongolia; 4. Administration, Corporation of Traditional Medicine, Science, Technology and Production, Mongolia)

Introduction : In Mongolia, due fertility fall and increase of population aged 60 and over in the next 20 years (2007-2025) the percentage share of older persons will be increasing from 5.8% to 10.8%; thus, the increase may be reaching 25.1% in 2050. In today's ageing accelerating world, it is significantly important to improve the quality of life and mental health of older persons and find out tools which will promote to maintain them. Method : In this study were chosen 2000 elderly from 5 regions of Mongolia, aged 60 and above for men and 55 and above for women. The outcome measures were estimated by internationally recognized GDT (Geriatric Depression Test) to assess depression, Spielberg Hanin test to reveal anxiety, Mini Mental State examination test to evaluate the cognitive status and Short-Form Health Survey (SF-36) to assess the quality of life (QOL) of older persons. Results : Before the meditation class, people with low level of anxiety occupied 10.0 percent, people with medium level - 76.0 percent, and people with high level - 14.0 percent. But after meditation class the percentage of people with low level of anxiety increased to 46.0, people with medium level of anxiety reduced to 54.0 percent, while people with high level of anxiety were not identified. Meditation gives direct effect on reduction of anxiety level. ($r=0.593$; $p<0.001$). Conclusion : Meditation gives positive effect on mental health of people, indirectly improves their quality of life. In particularly it reduces anxiety level by 29.8 percent (Determination coefficient

=0.298). Keywords : anxiety, meditation, mental health

OP26 120-S-5

RELIGIOUS INVOLVEMENT AS A PREDICTOR OF SOCIAL AND PSYCHOLOGICAL WELL-BEING IN OLDER PEOPLE. RESULTS FROM THE CRACOW STUDY ON THE RELATIONSHIP BETWEEN RELIGIOUS PRACTICES AND QUALITY OF LIFE IN OLDER

Barbara WOZNIAK, Katarzyna ZAWISZA (*Chair of Epidemiology and Preventive Medicine, Jagiellonian University Medical College, Poland*)

Introduction : Religious involvement may reduce psychological distress and increase physical, psychological and social well-being in several ways, e.g. by generating high levels of social resources and by providing specific cognitive resources that are useful in coping with stressors. The aim of presented research was to verify hypotheses on the relationship between religiosity and social and psychological well-being in older age. Method : The sample population consisted of 367 randomly selected older Roman Catholics. Data was collected using a structured questionnaire. Religiosity was measured by assessing religious practice, beliefs, experiences, coping and support. Components of health were assessed including physical and mental health as well as social functioning. In the statistical analyses Hierarchical Cluster Analysis and regression analysis were performed. In the second stage of the study semi-structured in-depth interviews were conducted. Results : Significant relationships were observed between analyzed dimensions of religiosity and each of the studied aspects of health status in older age. Relationships were significant mainly in women. In-depth interviews showed that religion is an important strategy of adaptation to older age, particularly with respect to coping with stressful life events and age-related losses. Religious coping and provision of meaning resulted in better adaptation to illness, disability and bereavement. Prayer and daily spiritual experience buffered individuals from psychological stress. Surprisingly, church-based social support didn't play a role in supplementation of social resources in the population under study. Conclusion : Religious involvement is a significant determinant of certain health status dimensions, first of all mental health. Keywords : older people, religiosity, health

OP26 121-S

LONG TERM CARE X

OP26 121-S-1

THE INFLUENCE OF CAREGIVING ON SLEEP QUALITY IN MID AND LATER LIFE

Sara ARBER¹, Robert MEADOWS² (*1. Centre for Research on Ageing and Gender (CRAG), University of Surrey, United Kingdom; 2. Sociology, University of Surrey, United Kingdom*)

Introduction : The impact of providing care for older or disabled relatives has been widely studied, but limited attention has been paid to how caregiving influences the sleep quality of carers using large-scale nationally representative surveys. This paper examines how caregiving is associated with sleep quality in mid-life and in later life. Method : The paper analyses the British 'Understanding Society' survey for 2009 to compare of older people (n=7200, aged >65) with those aged 45-64 (n=13100). We analyse how number of hours of co-resident and non-resident caregiving per week is associated with self-reported sleep quality using nested logistic regression models that included gender, age, marital status, hours of caregiving, education, income, housing tenure, employment status, self-perceived health and

health limitations. Results : Co-resident caregiving is strongly linked to poor sleep. In mid-life, there is a linear association of hours spent caregiving with poorer quality sleep, which becomes attenuated following adjustment for employment status and health status of caregiver. However, above age 65, primarily those caregiving for more than 100 hours per week have worse sleep compared to non-caregivers, which is barely moderated following adjustment for co-variants. Women's sleep was more adversely affected by caregiving than men's, especially in mid-life. Non-resident caregiving was not associated with sleep quality. Conclusion : Practitioners need to recognise the adverse effects of co-resident caregiving on the sleep of caregivers, and provide support to facilitate sleep or assist caregiving at night. 1. 'SomnIA, Sleep in Ageing', New Dynamics of Ageing initiative, supported by AHRC, BBSRC, EPSRC, ESRC and MRC (RES-339-25-0009). Keywords : Impact of care-giving, sleep quality, UK

OP26 121-S-2

A TALE OF TWO STUDIES OF DEMENTIA AND THE BENEFITS OF EXERCISE

Christine NEVILLE¹, Linda TERP¹, Timothy HENWOOD¹, Elizabeth BEATTIE³ (*1. School of Nursing and Midwifery, The University of Queensland, Australia; 2. School of Nursing, University of Washington, USA; 3. School of Nursing and Midwifery, Queensland University of Technology, Australia*)

Introduction : The trajectory of dementia makes it difficult for affected persons to maintain adequate levels of physical activity. Physical inactivity is associated with decline in cognitive, functional and physical health which in turn complicates care provision and increases mortality. These studies report on how two exercise programs improved health outcomes. Method : Study 1 was a randomized controlled trial of 153 people with dementia who resided in their family home. Participants were assigned to either a combined exercise and caregiver training program or routine medical care. Study 2 was a smaller scale, longitudinal design for 25 people with dementia who resided in aged care facilities and participated in an aquatic exercise program. Both studies involved family members with physical performance, depression and behavioural and psychological symptoms of dementia (BPSD) evaluated. Rate of institutionalization due to BPSD (Study 1) and level of psychological distress (Study 2) were also examined. Focus groups elicited participant experiences. Results : Both studies reported improvement in physical performance (p=.01) and depression (p=.02). The frequency of BPSD was reduced [Chi Square(3, n=10) = 16.91, p=0.001] and caregiver reaction to BPSD improved [Chi Square (3, n=10) = 16.86, p=0.001]. In Study One there was less institutionalization due to BPSD (19% vs 50%). In Study Two, the participants had reduced psychological distress [Chi Square (3, n=8) = 8.66, p<0.05]. Participants related that the benefits outweighed the effort required. Conclusion : Dementia presents many challenges and innovative interventions are required for effective responses. Dementia-specific exercise interventions that produce positive health outcomes are one such response. Keywords : dementia, exercise, long term care

OP26 121-S-3

QUALITY OF CARE IN LONG-TERM CARE FACILITIES IN BANGKOK AND METROPOLIS

Siriphan - SASAT¹, Miel W. RIBBE², Carol O. LONG³ (*1. Faculty of Nursing, Chulalongkorn University, Thailand; 2. Department of Nursing Home Medicine, VU University Medical Centre, Netherlands; 3. College of Nursing and Healthcare Innovation, Arizona State University, USA*)

Introduction : The number of care-dependent older persons residing in Thailand is expected to increase in the coming decades. The quality of care in long-term facilities (LTCF) is unknown. The aims of this study were to describe the demographic information of LTCFs and their administrators and to assess the quality of care in LTCF in Bangkok, Thailand, and surrounding metropolis. **Method :** Thirty-seven administrators out of 118 LTCs in Bangkok and metropolis representing a wide range of care settings agreed to participate in this study. Research instruments consisted of demographic information about LTCFs' administrators, a Facilities Questionnaire, and the Quality of Care Assessment Instrument. This descriptive study analyzed the primary characteristics of these facilities, their administrator and quality of care. **Results :** The findings revealed that 81 percent of facilities administrators were female with primary responsibility for overall facility administration and development. Sixty-five percent of facilities (n=24) were private nursing homes ranging in bed size from 3-338 (=60.3; SD=78.5) and costing from 13,000-60,000 baht/month (=24,166.7; SD=11,392.7). The average number of residents in each facility was 36.6 (SD=51.4) and 62.8 percent of the residents were female. The number of staff ranged from 3- 568 (=67.4; SD=194.1) providing an array of services. The quality of care in LTCFs was reported to be 'good' (=3.83; SD=1.18). Structural indicators were found to have the highest average score, follow by outcome and process. **Conclusion :** These findings provide a foundation of the existing quality of care for care improvement in further research and policy planning. **Keywords :** Quality of Care, Long-term Care Facilities

OP26 121-S-4

CULTURAL COMPETENCY AND LONG-TERM CARE

Judy BERRY¹, Im Ja CHOP (1. *Executive Director, Lakeview Ranch, Inc. and Dementia Care Foundation, USA*; 2. *Executive Director and Foundation, Penn Asian Senior Services, USA*)

Introduction : "Cultural Competency and Long-Term Care" examines the long-term caregiver training project between Penn Asian Senior Services (PASSi) and the Dementia Care Foundation to offer Asian immigrants caregiver trainings on Dementia. We will discuss cross-culture barriers in delivering long-term care to Asian immigrants and how collaborative trainings can overcome these barriers, enhance health outcomes, and improve elderly immigrants' quality of life. Founded in 2004, PASSi is a nonprofit home healthcare and vocational training agency in Pennsylvania focused on Asian immigrants. PASSi currently serves over 360 clients in 7 Asian languages. Judy Berry founded Lakeview Ranch Inc. in 1999 where she developed the Lakeview Ranch Model of Specialized Dementia Care.™ This nationally recognized model restores dignity, choice and quality of life to Dementia/Alzheimer's patients, eliminates dementia related aggressive behavior, and reduces psychotropic drug use. Im Ja Choi, founder and Executive Director of PASSi, and Judy Berry, founder of Lakeview Ranch, Inc., are national winners of the Robert Wood Johnson Community Health Leader Award. **Method :** PASSi received funding from Independence Blue Cross Foundation in August 2012 to launch an Alzheimer caregiver training program based on the Lakeview Ranch Model of Specialized Dementia Care.™. Judy Berry taught 141 home health aides and family caregivers in 5 Asian languages. PASSi's multilingual community coordinators and nurse educators were key to facilitating the caregiver training. **Results :** The trainings improved caregivers' understanding of Alzheimer/dementia symptoms and changed their initial approach and interaction with patients. **Conclusion :** We will discuss how the trainings improved long-term care for elderly Asian immigrants with Alzheimer's/dementia. **Keywords :** long-term care, care-giving,

dementia

OP26 122-S

LONG TERM CARE XI

OP26 122-S-1

RECONCILING WORK AND ELDER CARE: IMPACTS ON HEALTH

Fiona ALPASS, Christine STEPHENS, Brendan STEVENSON
(*School of Psychology, Massey University, New Zealand*)

Introduction : Unpaid family carers are an essential yet overlooked part of the health care system. Caregivers save billions in health care expenditure each year, improve patient outcomes, and reduce unnecessary re-hospitalisations and residential care placements. There are 480,000 individuals in New Zealand who provide care for someone who is ill or disabled and 65% of these carers are also in paid employment. Care of elders in particular is a key factor in determining whether older workers are able to remain in the workforce. The reconciliation of paid work and informal elder care is problematic for many carers and impacts on their health status and well-being. **Method :** This study examines the impact of combining paid work and care of older family members on the health of carers over time using four waves of data from the Health, Work and Retirement study (N=1853, aged 55-70 at baseline). **Results :** Involvement in caregiving for an older family member at any one time over the six-year survey period was generally related to poorer health. Overall workers were in better health than non-workers. However, there was mixed support for an interaction between caregiving and work on health outcomes. Health trajectories are presented and discussed in relation to work and care transitions over time. **Conclusion :** Understanding the impact of work and elder care on carer health outcomes is important as a first step for the development of interventions at carer, employer, and policy levels. **Keywords :** caregiving work health

OP26 122-S-2

PATIENTS' EXPERIENCES AND THEIR SATISFACTION WITH HOME HEALTH CARE NURSING IN JAPAN

Yasuko OGATA¹, Kayo OTOSAKA², Michio HASHIMOTO³
(1. *Department of Gerontological Nursing and Health Care System, Graduate School of Health Care Sciences, Tokyo Medical and Dental University, Japan*; 2. *Kouhoku, Home-Visit Nursing Care Station, Japan*; 3. *Department of Medical Risk Management, Yokohama City University Hospital, Japan*)

Introduction : In Japan, home-visit nursing care station (Station) is an important resource to care for the elderly. However, there are no common tools/quality indicators based on patients' experiences of care to evaluate this care quality. We examined the relationship between care recipients' experiences and their satisfaction with home health care nursing. **Method :** A postal mail survey was conducted using our original questionnaire regarding patients' care experiences. The questionnaire was sent to 423 patients receiving nursing care in 6 Stations. In the questionnaire, patients or their family members were asked the frequencies and satisfaction of their care experiences. Descriptive statistics and statistical relationships between patients' care experiences and the satisfaction were calculated. **Results :** 229 patients or family members (54.1%) from 6 Stations responded. Only 17% of the participants were patients. The average age of 229 patients was 77.7 years old and 54.1% of them were women. The average satisfaction score was 91.1. The satisfaction score was significantly higher in those who were frequently well cared for than in those who were less frequently well cared for or those with no well care

experience group. Conclusion : Patient experiences of care were related to patient outcome such as satisfaction. Patients' care experience can be used to evaluate care quality. A common tool to evaluate patients' experience of home health care in Japan is needed in future studies. Keywords : patients' experience, quality evaluation, home health nursing

OP26 122-S-3

THE DEVELOPMENT AND IMPLEMENTATION OF ACCREDITATION OF RESIDENTIAL CARE HOMES - A TEN YEAR EXPERIENCE IN HONG KONG

Edward M.F. LEUNG¹, Yuk Har Stella CHEUNG¹, Alice Dick Wah CHIU² (1. Research and Development Division, Hong Kong Association of Gerontology, Hong Kong; 2. Quality Development Division, Hong Kong Association of Gerontology, Hong Kong)

Introduction : Hong Kong Association of Gerontology (HKAG) initiated the 2-year Pilot Project on Accreditation System in 2002 in which formulated a set of culturally appropriate service standards and accreditation mechanism for aged care homes after studying international systems through overseas visits, literature review and 39 aged care homes joined in pilot study. The Pilot Project was completed in October 2004. Afterward the Residential Aged Care Accreditation Scheme (RACAS) was launched on a self-financing basis in March 2005 with the aim to improve the quality of residential homes. Method: Under the Scheme, residential homes participate on a voluntary basis, peer review, and process-and-outcome-focused. They would be impartially accredited on-site based on 40 objective criteria by professional assessors. Apart from assessing the quality of the services rendered by the aged homes, assessors would give suggestions for improvement and follow-up the implementation of such suggestions. RACAS runs for five years cycle. In the first year, an overall assessment would be performed and annual reviews in the interim to maintain their quality. Results : In the 10 years from 2002, over 100 aged care homes, which were about 14% of the 700 aged care homes in Hong Kong, had joined and completed accreditation under RACAS, which is evidence that accreditation could improve the quality of their services and this serves as a benchmark for the public in identifying reliable elderly homes. Conclusion : In May 2008, the service standards of RACAS were granted accreditation status by the International Society for Quality in Health Care to the work of RACAS. Keywords : accreditation , quality, aged

OP26 122-S-4

AN ANALYSIS ON DEMENTIA CARE IN AGED CARE HOMES UNDERGOING ACCREDITATION IN HONG KONG

Edward M.F. LEUNG¹, Yuk Har Stella CHEUNG¹, Alice Dick Wah CHIU², Polly Po Yee PAU³ (1. Research and Development Division, Hong Kong Association of Gerontology, Hong Kong; 2. Quality Development Division, Hong Kong Association of Gerontology, Hong Kong; 3. Accreditation Division, Hong Kong Association of Gerontology, Hong Kong)

Introduction : As the population ageing, there is an increasing the number of dementia elders worldwide. According to Report of Census and Statistics carried out by Hong Kong Government in 2009, 31.6% of residents in aged home were reported with dementia. A small scale study done in 40 residential homes during March to April in 2012 by Residential Aged Care Accreditation Scheme (RACAS) reported that 1632 residents (total: 4796) were diagnosed of dementia, that is 34%. Including other suspect cases or cases without properly diagnosis of dementia, the percentages could increase to 46.9%. It definitely showed that there is a great demand. Method : RACAS has been

launched since 2005 with the aim to improve quality care of aged homes. For the past 7 years, a retrospective study was done to analyze 74 accredited homes which joined accreditation from 2005 to 2012 that accreditation could help them to improve their care by setting up dementia care protocol, environment modification, safe medication management, least restraint policy, safe environment, wandering prevention facilities and making referral to specialist when necessary. Results : 74 aged homes showed satisfactory performance in above five aspects mentioned. However, there are two areas need to pay more attention namely; prevention of residents missing and maintaining a safe environment for cognitive impaired residents and emotional residents. Conclusion : Therefore, aged homes should be more aware to equip themselves to face increasing demand of dementia elders and accreditation can help operators of aged home to continue to improve quality care to safeguard our frail elders. Keywords : Dementia, aged, home

OP26 122-S-5

THE EFFECT OF ACCREDITATION (RACAS) ON QUALITY IN AGED CARE HOMES IN HONG KONG

Edward M.F. LEUNG¹, Yuk Har Stella CHEUNG¹, Alice Dick Wah CHIU² (1. Research and Development Division, Hong Kong Association of Gerontology, Hong Kong; 2. Quality Development Division, Hong Kong Association of Gerontology, Hong Kong)

Introduction : The Residential Aged Care Accreditation Scheme (RACAS) was devised by Hong Kong Association of Gerontology in 2005 with the aim is to raise the service quality of aged care homes through education, construction of a conceptual framework, and actual practice. A 5- year review project was carried out in 2010 to assess the effectiveness of accredited homes quality improvement measures. Method : The review by means of literature review in international trends in long term care services, collect and analysis of comments from stakeholders and review opinion survey results from accredited homes. Also, the aim of this study is to review the achievements of accredited residential homes between 2005 and 2010, and the degree of compliance of 19 aged homes, which had completed the 5-year accreditation cycle, to the monitoring 7 selected performance indicators by drawing reference to local and international monitoring instruments on nursing care as follows: toilet training, incidents of falls and related injuries, weight loss, use of restraints, incidents of bedsores, mishaps in dispensing medicine, and provision of rehabilitation plans. Results : The majority of the accredited aged homes considered that accreditation could help greatly in improving their service quality especially in service and care process. Conclusion: Studies have shown that good quality control measures delivered in Aged homes can promote and enhance residents' quality of life. Keywords : quality, care , accreditation

OP26 122-S-6

CLIENTS AND INFORMAL CAREGIVERS' PERSPECTIVES OF HOME CARE SAFETY IN RELATION TO SELF-CARE AND CAREGIVING ACTIVITIES

Winnie SUN, Diane DORAN (Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, Canada)

Introduction : In an era of a rapidly increasing number of older people who require home care services, clients must possess or develop therapeutic self-care ability in order to manage their health safety in their homes. Therapeutic self-care is the ability to take medications as prescribed, to recognize and manage symptoms that may be experienced such as pain, to perform and adjust regular activities of daily living, and to manage changes in condition. Method : This

qualitative research study utilized one-on-one, in-depth, semi-structured interviews with the clients and their informal caregivers recruited from one home care agency in Ontario, Canada. The goal of the interviews was to gain a better understanding of the relationship between client's self-care ability and home care safety outcomes, and the role of self-care and caregiving activities in supporting home care safety in relation to chronic disease management. Results : Older home care clients (over the age of 65) and their informal caregivers were asked to describe the safety challenges and concerns in their homes, and to identify the role for home care services to provide support for self-care and disease management. Qualitative description was the method of approach used to guide the interviews that generated themes about clients and their caregivers' perspectives of home care safety in relation to self-care and caregiving activities. Conclusion : The study findings provided insight into the safety problems related to therapeutic self-care, and the role of home care services in improving client's self-care ability to reduce safety related risks and burden for older home care recipients. Keywords : Home Care Safety

OP26 123-C

FUNCTION AND EXERCISE

OP26 123-C-1

HAND GRIP STRENGTH AS A PREDICTOR OF LOSS OF FUNCTIONAL CAPACITY AND MALNUTRITION AMONG GERIATRIC PATIENTS IN KELANTAN, MALAYSIA

Sze Lin TAN¹, Syamimi AHMAD², Sakinah HARITH¹ (1. *Dietetics Programme, School of Health Sciences, Universiti Sains Malaysia, Malaysia*; 2. *Nutrition Programme, School of Health Sciences, Universiti Sains Malaysia, Malaysia*)

Introduction : Impaired muscle strength is associated with many detrimental outcomes in geriatric patients. This study aimed to identify the relationship between the hand grip strength and the functional capacity and nutritional status among geriatric medical patients in general hospitals of Malaysia. Method : A cross-sectional study was conducted at the medical wards of two government hospitals in Kelantan, Malaysia from February to June 2012. A questionnaire-based interview was used to obtain patient's information on sociodemographic characteristics and health condition information. The hand grip strength (HGS) was measured with a grip strength dynamometer. The Barthel Index of Activities of Daily Living (ADL) was used to assess functional status. The nutritional status was assessed by anthropometric measures included weight, height, body mass index (BMI), mid-upper arm circumference (MUAC) and calf circumference (CC). Results : A total of 157 geriatric patients (male, n = 78; female, n = 79) aged 60 years and above (mean age = 70.21±6.09 years) were recruited. The maximum HGS of males and females were 25.00±7.12 kg and 14.26±4.91 kg respectively (p<0.001). The HGS was positively correlated with ADL, BMI, MUAC and CC, while negatively correlated with age for both gender (p<0.05). Multivariable analysis revealed that lower HGS predicted a decline in both ADL and BMI. Conclusion : Hand grip strength is a good predictor for the decline in functional capacity and malnutrition among geriatric medical patients during their hospital stay. Keywords : hand grip strength, functional capacity, malnutrition

OP26 123-C-2

FINGER TAPPING TASK AS AN INDEPENDENT PROGNOSTIC FACTOR FOR POOR FUNCTIONAL OUTCOME IN KOREAN ELDERLY POPULATION

Jae-Seong SHIM¹, Kwang-II KIM², Jae-Young LIM¹, Ki-Woong KIM³, Nam-Jong PAIK¹ (1. *Department of Rehabilitation and Physical*

Medicine, Seoul National University Bundang Hospital, Korea; 2. *Division of Geriatrics, Department of Internal Medicine, Seoul National University Bundang Hospital, Korea*; 3. *Neuropsychiatry, Seoul National University Bundang Hospital, Korea*)

Introduction : The decline in physical performance has been documented as a risk factor for death and disability. Although the age-related changes in finger tapping ability have been described, no studies on the prognostic implications of finger tapping task have been reported among community-dwelling elderly people. Method : Total of 433 participants (227 men and 206 women) aged over 65 years were enrolled who participated in the Korean Longitudinal Study on Health and Aging (KLoSHA). According to the finger tapping task result, participants were divided into two groups (fast tapping group and slow tapping group). We analyzed the interaction between delay in motor speed measured by finger tapping task and 5-year poor functional outcome, defined as short physical performance battery (SPPB) scores of 9 or less or mortality over the follow-up period. Results : Significant increase in risk of poor functional outcome was observed in slow tapping group, compared with fast tapping group, even after covariate adjustment using multiple logistic regression analysis (odds ratio, 2.211; 95% CI, 1.367 to 3.575). Moreover, survival analysis showed significant difference between slow and fast tapping groups (p=0.002, log rank test). Conclusion : We conclude that finger tapping task is an independent prognostic factor for poor functional outcome in the elderly population. Keywords : Finger Tapping Task, Functional outcome, Physical Performance

OP26 123-C-3

AN INNOVATIVE ELASTIC BAND EXERCISE PROGRAM FOR THE WHEELCHAIR-BOUND SENIORS

Kuei-Min CHEN¹, Wei-Shyuan TSENG², Ya-Hui CHANG¹, Hsin-Ting HUANG¹, Chun-Huw LI³ (1. *College of Nursing, Kaohsiung Medical University, Taiwan*; 2. *Center for Continuing Education and Social Resources, Kaohsiung Medical University, Taiwan*; 3. *Department of Nursing, Yuhing Junior College of Health Care and Management, Taiwan*)

Introduction : Progressive resistance exercise using elastic bands can increase muscle strength and size in seniors. This study aimed to develop and appraise the feasibility of an elastic band exercise program for the wheelchair-bound seniors. Method : Descriptive evaluation survey was applied. Phase I (expert consultation): a program evaluation survey was sent to 12 experts to develop an elastic band exercise program, called the Wheelchair-bound Senior Elastic Band (WSEB). Phase II (user appraisal): a feasibility appraisal survey was administered to 10 wheelchair-bound seniors through individual interviews after four weeks of the WSEB. Participants rated the level of simplicity, safety, appropriateness, and helpfulness of the program on a 10-point Cantril ladder scale. Further, they reflected on their experiences with the WSEB through four open-ended questions. Results : Experts had consistent and positive feedback about the WSEB, and only minor changes were made to the program. The average ratings of the participants on the four evaluation criteria ranged from 9.22 to 9.78, indicating that the program was feasible, safe, appropriate, and helpful to the wheelchair-bound seniors. Participants suggested practicing the WSEB three times per week and 40 minutes per session in a group of 15-20 people. Conclusion : The finalized WSEB has two levels: the basic and the advanced WSEB. It is suggested that the basic level to be taught first, practice it until participants are familiar with those exercises, and then move on to the advanced level. The WSEB is feasible to the wheelchair-bound seniors. Keywords : Complementary therapy, Elastic band,

Wheelchair-bound seniors

OP26 123-C-4

A POST-HOSPITAL HOME EXERCISE PROGRAM IMPROVED MOBILITY BUT INCREASED FALLS IN OLDER PEOPLE: A RANDOMISED CONTROLLED TRIAL

Catherine SHERRINGTON¹, Stephen LORD², Constance VOGLER³, Jacqueline C.T. CLOSE⁴, Kirsten HOWARD⁵, Catherine DEAN⁶, Lindy CLEMSON⁷, Elizabeth BARRACLOUGH¹, Elisabeth RAMSAY², Sandra O'ROURKE¹, Robert CUMMING⁵ (1. *The George Institute for Global Health, University of Sydney, Australia*; 2. *Neuroscience Research Australia, University of New South Wales, Australia*; 3. *Royal North Shore Hospital, University of Sydney, Australia*; 4. *Prince of Wales Clinical School, University of New South Wales, Australia*; 5. *School of Public Health, University of Sydney, Australia*; 6. *Department of Health Professions, Macquarie University, Australia*; 7. *Discipline of Occupational Therapy, University of Sydney, Australia*)

Introduction : This study aimed to investigate the effects of a home-based exercise program on mobility and falls among older people after recent hospital stays. **Method :** A randomised controlled trial with intervention and usual-care control groups was conducted. Participants were 340 older people after recent hospital stays who had completed all hospital-related treatments and were cognitively and physically able to safely complete a home exercise program. For the intervention group, an individualised home exercise program, based on the Weight-bearing Exercise for Better Balance (WEBB) program, was established and progressed during ten home visits from a physiotherapist. Participants were asked to exercise at home 3-6 times per week for the 12-month study period. **Results :** Participants had an average age of 81.2 years (SD 8.0), an average of 6.8 health conditions (SD 2.7), were prescribed an average of 7.5 medications (SD 3.3) and 70% had fallen in the past year. At 12-months, performance-based mobility measured on lower extremity Summary Performance Score (primary outcome, n=312) was significantly better in the intervention group than the control group (between-group difference after adjusting for baseline performance 0.13, 95% CI 0.04 to 0.21, p = 0.004). During the 12-month study period, 168 people (49% of participants) experienced 300 falls. The intervention group had a higher fall rate than the control group (incidence rate ratio 1.43, 95% CI 1.07 to 1.93, p = 0.017, primary outcome, n=340). **Conclusion :** This approach to home exercise prescription in people after recent hospital stays improved mobility but increased falls. **Keywords :** exercise, falls, mobility

OP26 123-C-5

EFFECTIVENESS OF FASTING CALORIE RESTRICTION IN IMPROVEMENT OF METABOLIC, NUTRITIONAL AND PSYCHOSOCIAL PARAMETERS AMONG HEALTHY OLDER ADULTS MEN

Suzana SHAHAR¹, Nur Islami Fahmi TENG¹, Norlela Mohd HUSIN¹, Che Suhaili CHE TAHA¹, Norfadilah RAJAB², Zahara Abdul MANAF¹, Sai Krupa DAS³, Wan Zurinah WAN NGAH⁴ (1. *School of Healthcare Sciences, Universiti Kebangsaan Malaysia, Malaysia*; 2. *School of Diagnostic and Applied Science, Universiti Kebangsaan Malaysia, Malaysia*; 3. *Jean Mayer USDA Human Nutrition Research Center on Aging, Tuft University, USA*; 4. *Biomedical Science, Universiti Kebangsaan Malaysia Medical Centre, Malaysia*)

Introduction : Calorie restriction and intermittent fasting are two dietary interventions that can extend lifespan and improve aging. Religious fasting also suggested having similar benefit; however, such studies are still scarce. Thus, an intervention study on the FCR

(Fasting and Calorie Restriction) was carried out on 25 healthy older adult men [50-70 years, body mass index (BMI) 23.0-29.9 kg/m²] in Klang Valley, Malaysia. **Method :** Subjects were randomized into either FCR (a reduction of 300-500 kcal/day combined with two days/week of Muslim Sunnah Fasting) or Control (CO). Metabolic, nutritional, mood and depression assessments were ascertained at baseline, weeks 6 and 12. Blood samples were analyzed for lipid profile, DNA damage and malondialdehyde (MDA). **Results :** Energy intake, body weight, BMI, % body fat, blood pressure, total cholesterol, LDL-C and MDA decreased significantly in FCR group as compared to CO. The ratio of TC/ HDL-C and DNA rejoining cells improved significantly in FCR (p<0.05 for all parameters). Analysis of Healthy Eating Index (HEI) showed a significant main effect (p<0.05) for the score of fat, saturated fat and cholesterol, with food variability also decreased in FCR group. Significant decreased in tension, anger, confusion and total mood disturbance and improvements in vigor were observed in participants in the FCR group compared to those in the control group (p<0.05 for all parameters). **Conclusion :** There is a need to further examine the mechanism of FCR and its long term effect on food variability and micronutrient status. **Keywords :** Fasting, Metabolic, Nutritional

OP26 123-C-6

MOBILIZING OLDER ADULTS IN ACUTE CARE: EVIDENCE-BASED CARE AND PERSPECTIVES ON IMPLEMENTATION

Janet Prvu BETTGER¹, Yvette WEST², Angela ADAMS³ (1. *School of Nursing, Duke University, USA*; 2. *Advanced Clinical Practice, Duke University Health System, USA*; 3. *Adult Health Medicine and Psychiatry, Durham Regional Hospital, Duke University Health System, USA*)

Introduction : More than 50% of complications experienced by older adults after an acute hospitalization are mobility-related. Evidence of effective multidisciplinary strategies is unclear. This study's purpose was to conduct a systematic review of the literature of hospital-based interventions that addressed the broader concept of mobility (bed-level to ambulation) and examine acute care nurses' perspectives of the barriers/facilitators to implementing evidence-based mobility protocols. **Method :** Three databases (CINAHL, MEDLINE, and Cochrane) were searched to identify studies that examined the benefits and harms of multidisciplinary strategies that addressed mobility among hospitalized older adults. Findings were disseminated as part of training for the Duke-NICHE program (Nurses Improving Care of Healthsystem Elders) and 43 nurses reported barriers/facilitators to implementing evidence-based protocols. Nurses' perspectives were compared to related literature published in the last decade. **Results :** Fifteen interventions that included ≥2 disciplines and examined outcomes of older adults were identified. Published mobility protocols or interventions without process or outcome data were reviewed for content and comparison of strategies. Nursing and physical therapy were the most common disciplines for implementation. Few studies used the same physical function/mobility outcome measure. A trend toward improved ambulation/physical function and decreased length of stay was found for intervention recipients. Barriers most commonly reported by nurses included documentation of care, time and personnel. Patient motivation was reported as an important aspect of increasing mobilization. **Conclusion :** Moderate evidence exists for multidisciplinary strategies to increase mobilization and decrease length of hospital stay for older adults. Nurse-reported barriers will take creative strategies and support from hospital leadership to overcome. **Keywords :** mobility, nursing, evidence-based practice

OP26 210-R
FAMILY AND CARE GIVING

OP26 210-R-1
BURDEN, SOCIAL SUPPORT, OBLIGATION OF FILIAL PIETY AND PSYCHOLOGICAL WELLBEING AMONG CHINESE CAREGIVER OF FRAIL ELDERLY

Yong TANG (*Social Work Department, Law School, Shen Zhen University, China*)

Introduction : The number of oldest old people in China has increased in recent years, which has been a challenge to family structure and government budget. Specifically, the purpose of the current study is twofold. Firstly, the author will explore the possible linkage between the caregiver burden and the psychological wellbeing of the adult child caregiver. Secondly, the study seeks to identify the key factors affecting the relationship between caregiver burden and psychological wellbeing. Method : The sampling frame was adult child caregivers whose parents aged over 80, resided permanently in the urban districts of Guangzhou. A total of 316 adult children respondents completed interviews. The study used four scales: OFPS, RISS, ZBI and ABS. Results : There are three main findings. Firstly, as predicted, caregiver burden affects psychological wellbeing negatively. Public assistance is urgently needed to ensure that the family will not be overstrained by the burden of old age support. Secondly, the analysis shows that there is no association between obligation of filial piety and psychological wellbeing of caregivers. Thirdly, as predicted, obligation of filial piety has positive impact on caregiver burden. Conclusion : The primary purpose of the current study was to explore the subjective and culturally specific meaning of caregiver burden, with specific focus on filial piety. As an adult child caregiver, he/she might have to shoulder many aspects of stressors and burden. The conflicts might be arising between filial value and filial practice among adult child caregivers. Gender issues of caregivers also need to be paid attention in the study. Keywords : Psychological wellbeing, caregiver burden, adult child caregiver

OP26 210-R-2
PERSONALISED SOCIAL CARE SUPPORT AND FAMILY CARERS - WHOSE NEEDS, WHOSE RIGHTS, WHOSE SUPPORT?

Caroline GLENDINNING, Wendy MITCHELL, Jenni BROOKS (*Social Policy Research Unit (SPRU), University of York, United Kingdom*)

Introduction : English adult social care aspires to give older people choice and control so they can receive flexible, personalised care. Family carers also have rights, to assessment of their needs and support for care-giving roles. A newly completed study examines how current practice recognises the separate needs and rights of older people, and family carers, while at the same time supporting the interdependencies on which care-giving rests. It also investigated whether practice is consistent with the (possibly different) wishes of older people and carers, regarding the latter's roles. Method : The study involved: A survey of local authority policies and practice. Interviews and focus groups with managers and practitioners responsible for conducting assessments and arranging social care support. Separate, simultaneous interviews with 'pairs' of older people and their family carers. Results : The study will generate evidence of how managers and practitioners balance and reconcile the different needs and interests of older people and family carers. It will also illustrate how far practice is consistent with the wishes of older people and carers regarding the latter's roles and responsibilities. Conclusion :

The study will generate evidence of how managers and practitioners balance and reconcile the different needs and interests of older people and family carers. It will also illustrate how far practice is consistent with the wishes of older people and carers regarding the latter's roles and responsibilities. Keywords : family care, choice

OP26 210-R-3
GRANDPARENT CAREGIVERS: AN AFRICAN FAMILY CARE MODEL

Robert Martin CHAZIN, Manoj PARDASANI (*Graduate School of Social Service, Fordham University, USA*)

Introduction : An estimated 2.5 million people are living with HIV in Tanzania today (UNDP, 2009). Orphans International Tanzania (OIT) operates a unique family preservation and support program (the Family Care Program) which aims to maintain orphaned children in home environments with access to education, basic medical care and good nutrition. Utilizing a strategic international agency-community NGO partnership and an internationally recognized family support model, comprehensive services are provided to children and their caregivers. Nearly all of the caregivers of the orphaned children served by this program are elderly, kinship related grandmothers. This presentation will describe the program and our qualitative approach in evaluating the grandparent caregivers' assessment of the program's strengths and limitations. We will describe our study findings concerning the grandparents' perceptions of the effectiveness of this family preservation program, in supporting their ability to provide family care to the orphans and other children in their families. We will describe specific ways in which the grandparent caregivers perceive the program as helping their children and themselves. We will conclude with a discussion of Implications for replication in other communities impacted by HIV/AIDS with elderly relations caring for orphaned and or vulnerable children. Method : Qualitative study of a unique Family Care Program designed to support grandparents' care of biologically related grandchildren orphaned by AIDS. Results : Study supported the effectiveness of this program in maintaining grandparent caregivers and their families. Conclusion : Program evaluation supported the effectiveness of this program in the goal of contributing to grandparent and family maintenance. Keywords : grandparent family AIDSj orphans

OP26 210-R-4
THE EFFICACY OF SUPPORT GROUPS FOR KINSHIP CAREGIVERS

Deborah June MONAHAN, Carrie Jefferson SMITH (*Social Work, Syracuse University, USA*)

Introduction : Grandparent kinship caregivers are often instrumental in reducing the number of children who enter the foster care system as a consequence of providing family care. This caregiving reinforces emotional bonds between the generations and reinforces positive gains in children whose lives aren't disrupted by out-of-home placement. Support groups are often used by grandparent kinship caregivers to learn how to provide supportive care to their grandchildren, in the absence of the parent care. Method : In this study funded by the Children's Bureau, U.S. Dept. of Health and Human Services, grandparent kinship caregivers were surveyed (N=92) to assess the efficacy of their support group experience. Their perception of burden as also assessed to determine the hours per day care was provided, whether they had 'time for themselves', and the clarity of their caregiving role in the family. Results : The mean age of kinship caregivers was 59.93 years, 95% were female, 62% were non-White, 33% were married, 35% had at least a high school education, and 46%

reported Social Security as their income. Seventy-five percent of the sample attended at least three support group sessions and were satisfied with their experiences. Sixty-five percent reported that they didn't have enough time for themselves as a result of the care they provided and 46% reported that they had role strain. Conclusion : Support group attendance helped kinship caregivers understand their care responsibility and network with others to develop resources to provide care. Support groups are useful in providing knowledge about community resources and sustaining family relationships. Keywords : kinship caregivers

OP26 210-R-5

ISSUES GAY MEN FACE AT TIMES OF BEREAVEMENT: A CASE STUDY OF AN OLDER GAY MAN'S NARRATIVE OF LOSING HIS PARTNER

Yiu Tung SUEN (*Department of Sociology, Chinese University of Hong Kong, Hong Kong*)

Introduction : The specific issues gay men face when they experience bereavement are often ignored. Even when such issues are discussed, they often remain largely theoretical and there is a lack of detailed first-person accounts. This paper addresses this gap, and presents a case study of an older gay man, Sam's, narrative of losing his partner. Through Sam's story, this paper illustrates and raises awareness of some specific issues gay men face at times of bereavement. Method : The data presented in this paper are drawn from a qualitative study into older gay men's experience of singlehood in England. Sam was one of the participants in the study. He was 56 at the time of interview and lived on his own in the north of England. Results : A life course perspective is applied to understand Sam's narrative, touching upon such issues as a hidden past shadowed by the criminalization of homosexuality, disenfranchised grief, a sudden need to come out of the closet, and the perceived difficulty of re-entering a relationship. Conclusion : This paper illustrates how a heteronormative model of conceptualizing bereavement is inadequate. Academic theorizing of bereavement and those who provide bereavement services need to take into account the specific needs of gay men. Keywords : older gay men, sexualities, diversity

OP26 210-R-6

WIDOW DISCRIMINATION AND FAMILY CARE-GIVING IN INDIA

Yoshihiko KADOYA, Ting YIN (*Institute of Social and Economic Research, Osaka University, Japan*)

Introduction : The purpose of this research is to address the lack of a region-wide view analysis of widow discrimination in India, the home of 47 million widows. Method : This study analyzed the household data collected in face-to-face interviews from January to March of 2011 in six major Indian cities including Delhi, Mumbai, Bangalore, Chennai, Kolkata, and Hyderabad. Results : It was revealed that widow discrimination does not prevail across the nation. That is, this research did not deny the existence of traditional widow discrimination in some areas, but demonstrated that this phenomenon does not represent the whole nation if we focus on the widow's old age and the treatment by their family. Conclusion : Certainly, this research has some limitations, including the fact that the observations came only from cities. However, this is pioneering research, and more significantly, it addresses the lack of a region-wide view analysis of widow discrimination in India with an aging population. Further research may be needed to understand how widows are treated in families in rural India. Keywords : Widow discrimination, Family Care-Giving, Micro-data Analysis

OP26 211-R

INTEGRATED MODELS OF CARE I

OP26 211-R-1

TEACHING FUNCTIONAL ASSESSMENT TO MEDICAL STUDENTS: WHY NOT PLAYING GAMES?

Philippe HUBER, Abdelmalek SABER, Yves SCHNELLMANN, Gabriel GOLD (*Internal Medicine, Rehabilitation, and Geriatrics, University Hospitals of Geneva, Switzerland*)

Introduction : Nowadays, most physicians take care of a growing aging population suffering from multiple chronic diseases and disabilities. Therefore, a good knowledge of functional assessment is required, and this topic should be addressed in the pregraduate medical curriculum. Method : We report our 10-year experience with a seminar on functional assessment using an "aging game" as a pedagogic vector. This seminar is organized by geriatricians, occupational therapists and physiotherapists. First, medical students are exposed to various situations where they experiment disabilities and try to elaborate compensatory strategies. Then, they reflect on a challenging discharge project by analyzing a written clinical case. This written case gives the opportunity to reflect on functional assessment, on the importance of a multidisciplinary approach, and on the implication of various actors of the health care system in the community. Finally, students are introduced to the use of validated functional assessment instruments. Results : Evaluation indicated that this pedagogical approach is much valued by the students and foster the acquisition of knowledge in functional assessment. Conclusion : This seminar shows a good efficacy in introducing medical students to the difficult concept of functional assessment. Moreover, this seminar can easily be adapted to the training of other health care professionals. Keywords : medical education, functional assessment, multidisciplinary approach

OP26 211-R-3

ENABLING GREATER ACCESS TO IT FOR THE ELDERLY IN SINGAPORE: LOCATING BOURDIEU'S PRACTICE THEORY IN GERONTOLOGICAL RESEARCH

Kevin Siah-Yeow TAN (*School of Human Development & Social Services, SIM University, Singapore*)

Introduction : In a rapidly globalizing world where the Internet and accompanying forms of information technology and social media have now become accessible to many, it also important to note that such accessibility has not been uniform nor equal. This is often the case among members of the elderly population who possess lower levels of education and income. At the same time, such seniors may also experience ergonomic challenges to the use of information technology when interacting with onscreen user interfaces on websites and other e-services online. Method : This paper seeks to examine the applicability of Pierre Bourdieu's Practice theory for the purposes of further theoretical contributions towards the discipline of gerontology. The concepts of habitus and field, as employed by Bourdieu's Practice Theory, will be introduced as viable concepts in comprehending and elucidating how the elderly, particularly the less privileged, experience challenges in their access to information technology as a result of their differential access to cultural, social, economic and bodily capital. Results : Based on an ongoing multidisciplinary research project on e-service usability design for the elderly in Singapore, this paper will situate the relevance and effectiveness of Pierre Bourdieu's practice theory in an applied and contextualized setting for future gerontological research and theory-building. Conclusion : This paper proposes that Pierre Bourdieu's Practice Theory can enable a useful and systematic theoretical framework to understand the social-cultural,

economic and corporeal factors that influence the accessibility of information technology for the elderly. Keywords : e-services, theory, Bourdieu

OP26 211-R-4

PALLIATIVE CARE LAW AND CAR INSURANCE LAW IN LUXEMBOURG : A MODEL OF BETTER INTEGRATED CARE FOR ELDERLY

Jean-Claude LENERS¹, Nathalie RAUSCH² (1. *LTCF, Geriatrics and Hospice Care Unit, Luxembourg*; 2. *CEO Long Term Care Insurance Luxembourg, Head of CEO Department, Luxembourg*)

Introduction : The aim of this first national study was to find out where and how often palliative care and care insurance plans were applied to senior residents regardless their living situations. The physician must compulsory fill out the main medical reason for all elderly clients receiving both. Method : Complete results have been collected through the Ministry of Social Affairs including all people above 70 years over a period of 2 years . The results have been categorized in 4 domains: home, hospital, long term care facilities and home. Results : The number of allocated specific palliative and dependency care plans was 2024. These plans included 16,4 hours of assistance per elderly patient and per week. Less than 10% were delivered in the hospice (12 beds unit), 35 % in nursing homes and the remaining at home . Mean age was 75,3 years; the gender ratio was 2,9 versus 1 (comparing female and male) and the overall first diagnosis was neuro-psychiatric disorders (41%) , followed by cardio-pulmonary pathologies, cancer diseases . Statistical data on lengths and types of care plans showed 69% lasting less than one year; 26% for 18 months and the remaining for more than a 1,5 years. (details will be shown in the graphics). Conclusion : In conclusion, a new double care plan for dependent and palliative elderly residents was a major cornerstone in their quality of life . But only 4% of this population cohort had a deposed living-will, which by law has been fully legitimized and stands above ethical considerations of the physicians. Keywords : palliative care plans

OP26 211-R-5

COST OF HEALTHCARE SERVICES OF ELDERLY ADULTS WITH CANCER IN THEIR LAST SIX MONTHS

Netta BENTUR¹, Shirli RESNIZKY¹, Sophia EILAT-TSANANI², Ran BALICER³ (1. *Center for Research on Aging, MYERS-JDC Brookdale Institute, Israel*; 2. *North District, Clalit Health Services, Israel*; 3. *Research and Planning Center, Clalit Health Services, Israel*)

Introduction : Although studies have demonstrated the contribution of palliative care to the quality and lower cost of end-of-life care, only a small minority of cancer patients received it. To demonstrate its advantages to decision-makers and service suppliers, we conducted a study examining the quality and cost of care of patients who received and did not received home-hospice care. This presentation shows the difference in cost of care between recipients of home hospice (RHH) and non-recipients (NRHH). Method : An analysis of the administrative data on 429 deceased people with metastasized cancer in one district of an Israeli HMO. Results : The average age of the deceased patients was 70, 67% were 65+, 56% were men. In the last six months of life, the average cost of care per patient was 15,700\$ and in the final two months 6,380\$ - 47% of the total average cost in the last six months. About 68% of the expenses in the last six months were incurred for general hospitalization, and the remainder 32% for community care, home-hospice, medication, day-hospital treatments and inpatient-hospice. The cost for the RHHs was 26% lower than for NRHHs; 42% lower in the last two months. Hospitalization contributed 24% to the cost for RHHs and 64% for NRHHs.

Conclusion : Every effort should be made to expand home-hospice services especially during that last two months of life in order to improve the quality of their care and reduce costs. Keywords : End-of-Life, Cost-of-Care, Hospice-Care

OP26 211-R-6

IDENTIFYING BEST PRACTICES OF COMMUNITY CARE DELIVERY ACROSS 6 EUROPEAN COUNTRIES FOR CARE-DEPENDENT COMMUNITY DWELLING ELDERLY BY BENCHMARKING THE COST-EFFECTIVENESS, DESIGN OF A FP7 PROJECT

Henriette VAN DER ROEST¹, Graziano ONDER², Anja DECLERCQ³, Vjenka GARMS-HOMOLOVA⁴, Palmi JONSSON⁵, Harriet FINNE-SOVERI⁶, Jan SMIT⁷, Jeni BREMNER⁸, Hein VAN HOUT⁹ (1. *General Practice and Elderly Care Medicine, VU Univesity Medical Center, Netherlands*; 2. *Centro Medicina dell'Invecchiamento (CEMI), Universita Cattolica del Sacro Cuore, Italy*; 3. *LUCAS, KU Leuven, Belgium*; 4. *Health Service Research, Hochschule fur Technik und Wirtschaft Berlin, Germany*; 5. *Icelandic Gerontological Research Institute, Landspítali University Hospital, Iceland*; 6. *RAI registers, National Institute for Health and Welfare, Finland*; 7. *Department for Research and Education, Stichting GGZinGeest, Netherlands*; 8. *Directotote, European Health Management Association, Ireland*; 9. *General Practice and Elderly Care Medicine, VU University medical center, Netherlands*)

Introduction : CONTEXT The need for cost effective health systems is imperative in the context of increas-ing care demands of a rapidly aging population and a shrinking working force. High quality community care may prevent costly institutionalisation. There is ample evidence on what type of community care provides best outcomes against reasonable costs. AIM: to identify best practices of community care for care-dependent elderly by benchmarking their cost-effectiveness, taking into account costs of care utilisation and quality of care of European community care organisations. Method : APPROACH IBenC capitalises on a standardised instrument (interRAI-HC) that is widely used across Europe in routine care to assess patient outcomes, care use and quality of care. Building on existing patient data from the FP5 project AdHOC (n=4010) and new data (n≥2750) a novel method to benchmark community care organisations will be established: a summary measure for quality of care is developed and care utilisation registration in inter-RAI-HC is validated to estimate costs from a societal perspective. These measures are inte-grated into the cost-quality of care ratio, enabling benchmarking of community care practices on country and organisation levels. To enable an in-depth interpretation of best practices, the contexts and characteristics of community care organisations will be described rigorously. Results : CONSORTIUM 8 partners from 6 EU coutries. Conclusion : IMPACT The results will support policymakers in health care on evidence based decision-making regarding best practice models of cost effective community care delivery. IBenC may contribute to public health by enabling longer independent living of the elderly. Keywords : benchmarking, best community practice

OP26 211-R-7

ISSUES IN MIXED METHOD RESEARCH IN AGING WITH RACIAL/ETHIC ELDERS

Colette V. BROWNE¹, Noreen K. MOKUAU¹, Kathryn L. BRAUN², Lana S. KA`OPUA¹, Bum Jung KIM¹ (1. *School of Social Work, University of Hawaii at Manoa, USA*; 2. *Office of Public Health Studies, University of Hawaii at Manoa, USA*)

Introduction : Mixed method research design often involves some combination of qualitative and quantitative approaches to research. Mixed methods can be especially useful with racial/ethnic older adult populations as we strive to better identify, understand, and alleviate/eliminate the serious social and health disparities some groups continue to face in the US. Researchers use mixed methods to enrich the understanding of an experience or issue through the confirmation of conclusions, the extension of knowledge, or by initiating new ways of thinking about the subject. **Method :** This oral panel discussion will present a research model developed by Ha Kupuna, National Resource Center for Native Hawaiian Elders, at the University of Hawaii in Honolulu. We used a mixed method design to investigate the health and long-term care needs and preferences of a Native Hawaiians, the indigenous people of Hawaii. The rationale for this study design is presented, along with a number of definitional, paradigmatic and methodological issues. **Results :** The research model is described along with the advantages and disadvantages of study approaches, which included a Systematic Data review, a Key Informant study, Secondary Data analysis of the US Census and State of Hawaii Department of Health, and focus group study of elders (kupuna), and family caregivers. **Methods used for the integration of data,** along with key results, and the challenges of this method, are presented. **Conclusion :** Mixed method designs such as the one presented by this panel are viewed as being able to generate more complete data and enhanced insights than with the use of one research method. **Keywords :** Racial/Ethnic elders, quantitative and qualitative research design, health disparities

OP26 219-B
CALORIC RESTRICTION AND DIETARY RESTRICTION

OP26 219-B-1
A STUDY OF CHANGES IN BODY COMPOSITION, METABOLIC PROFILE, MORPHOLOGY AND SECRETORY STATUS OF ISLET β/α CELL DURING MIDDLE ADULTHOOD AND LATER ADULTHOOD WITH HIGH-FAT AND CALORIE RESTRICT DIET

Qian Qian SUN, Shuang WANG (*Department of Geriatrics, West China Hospital, Sichuan University, China*)

Introduction : To observe the changes of body composition, metabolic profile and islet morphology and secretory status of islet β/α cell with high-fat diet (HFD, 5.86Kcal/kg) and calorie restrict diet (CRD, 1.6 Kcal/kg) from 14-16mon to 18-20mon. **Method :** Male SD rat (14-16 months, n=15 each) was divided into normal diet (ND), HFD and CRD. At 0, 8, 16week, body weight (BW), visceral fat, body fat ratio were measured as body composition, blood was collected to detect TG, TC, FFA, FBG and insulin. HOMA-IR, HOMA- β and ISI were calculated according to fasting glucose and insulin level. Level of insulin and glucagon in islet were assessed by immunohistochemistry, and the area of α/β -cell was measured by MOD. **Results :** 1. At 16 weeks, BW, visceral fat, body fat ratio, TG, FFA, fasting glucose and insulin were significantly increased in group of HFD, HOMA-IR increased while ISI decreased. Insulin within islet was increased, (P<0.05). 2. Comparing with ND and HFD, BW, body composition (P<0.05), FFA, TC, HOMA-IR, ISI were improved at 16 weeks in CRD. Levels of glucagon within islet were dramatically decreased at 8week (P<0.05). **Conclusion :** 1. FFA was the earliest and strongest impact factor in both HFD and CRD which connected with insulin sensitivity tightly from middle adulthood to later adulthood. 2. Change of TC, and glucagon within islet was earlier in group of CRD than HFD. While insulin level in both serum and islet were increased by

HFD.3.It was speculated that β cell was influenced firstly by HFD, whereas α cell by CRD. **Keywords :** High-fat-diet; Caloric restricted diet; insulin resistance; FFA; glucagon; insulin

OP26 219-B-2
A STUDY OF HIGH-FAT OR CALORIE RESTRICT DIET INDUCED AUTOPHAGY IN ISLET CELLS DURING MIDDLE ADULTHOOD AND LATER ADULTHOOD

Qian Qian SUN¹, Wang SHUANG² (*1. Geriatric, West China Hospital, China; 2. Department of Geriatrics, West China Hospital, Sichuan University, China*)

Introduction : To observe the changes of autophagy and apoptosis in islet with high-fat diet (HFD, 5.86Kcal/kg) and calorie restrict diet (CRD, 1.6 Kcal/kg) from middle adulthood to later adulthood. **Method:** male SD rat (14-16 months, n=15 each) was divided into normal diet (ND), HFD and CRD. At 0, 8, 16week, body weight (BW), visceral fat(vF), body fat ratio were measured as body composition, blood was collected to detect TG, TC, FFA, FBG and insulin. HOMA-IR, HOMA- β and ISI were calculated according to fasting glucose and insulin level. Level of insulin, glucagon, apoptosis index in islet were assessed by immunohistochemistry, expression of LC3B and LAMP2 were assayed by western blot. **Results :** 1. At 16 weeks, BW, vF, body fat ratio, TG, FFA, fasting glucose, insulin and AI, LC3B and LAMP2 were significantly increased in HFD group, HOMA-IR increased while ISI decreased. 2. Comparing with ND and HFD, BW, vF, body fat ratio (P<0.05), FFA, TC, HOMA-IR, ISI were improved at 16 weeks in CRD. Levels of insulin, glucagon and AI index within islet were dramatically decreased, whereas LC3B and LAMP2 were significantly increased (P<0.05). **Conclusion :** 1. Both HFD and CRD can activate autophagy in rat islet, but only HFD induced autophagy accompanied with high level of apoptosis. 2. FFA was the earliest and most common initial factor which impact on apoptosis and autophagy in islet in both HFD and CRD, as well as the high level of insulin and glucagon. **Keywords :** apoptosis, autophagy, islet cell

OP26 219-B-3
THE EFFECT OF AN ENTERAL FORMULA CONTAINING PREBIOTICS ON INTESTINAL ENVIRONMENTS IN AGED F344 RATS

Kinya ASHIDA¹, Saori OGAWA¹, Tomoko HAYAKAWA², Takenori MATSUDA², Taketo YAMAJI¹, Takeshi TAKAHASHI¹, Hiroyasu AKATSU³, Mitsuo MARUYAMA² (*1. Food Science Research Laboratories, R&D Division, Meiji Co., Ltd., Japan; 2. Department of Mechanism of Aging, Research Institute, National Center for Geriatrics and Gerontology, Japan; 3. Choju Medical Institute, Fukushima Hospital, Japan*)

Introduction : Elderly patients on enteral nutrition are generally known to have less number of bifidobacteria in their intestines and consequently worse intestinal environments than healthy adults. Therefore, we studied the effects of an enteral formula containing two types of prebiotics, galacto-oligosaccharides and Profec(R) (bifidogenic growth stimulator derived from milk whey culture with Propionibacterium freudenreichi ET-3) on intestinal environments in aged 24-mo-old F344 rats. **Method :** Two-mo-old and 24-mo-old male F344 rats fitted gastric feeding tubes were divided into the control and prebiotics groups and fed on the standard formula (Meiji MEIBALANCE(R) 1.0) and the prebiotics formula (Meiji YH-Flore), respectively, for 13 days. The formulas were infused at the dose of 30 kcal/day/head on the first feeding day and 60 kcal/day/head on the following days. The quantitative characterization of fecal bacteria was

determined by real-time PCR analysis. The cecal short-chain fatty acids (SCFAs) were analyzed by HPLC. Results : The feeding of the control formula decreased the concentrations of bifidobacteria to one hundredth in aged rats but not in young rats. On the other hands, the prebiotics formula increased the concentrations of bifidobacteria in both young and aged animals. Additionally, the prebiotics formula increased the concentrations of total SCFAs in the cecal contents and cecal wall weight and decreased the pH value of the cecal contents compared to the control formula regardless of their aging. Conclusion : These data potentially indicate the intervention of prebiotics could be beneficial for the improvement of intestinal environments in elderly patients. Keywords : prebiotics, bifidobacteria, aged rats

OP26 219-B-4

EFFECT OF ALTERNATE DAY DIET FROM OLD ON THE CHANGES OF MUSCLE WEIGHT AND FIBER SIZE

Keiko ODERA, Ryoya TAKAHASHI (*Department of Biochemistry, Faculty of Pharmaceutical Sciences, Toho University, Japan*)

Introduction : Dietary restriction (DR) from weaning or young adult stages in rodents throughout their usual life span has been shown to prolong longevity and lower or delay the occurrence of many late-onset diseases. However, the effects of DR performed at middle age or later have not been well investigated. We previously found that DR initiated even relatively late in life can restore animal's youthful conditions. Dietary restriction, however, might increase the risk of loss of muscle mass associated during aging, especially in old age. We therefore investigated the effects of DR from old on the change of muscle weight and fiber size. Method : DR was performed by every-other-day (EOD) feeding on weekdays. The regimen was started at 28 months of age and continued for about 3 months. Results : The body weight of the old rats was reduced by about 35% at the end of the experiment. Although the weights of soleus (SOL) and gastrocnemius (GC) muscles in control rats were decreased during the three-month DR, no effect of DR was observed in the weights of these muscles. The number and area of type II fibers of SOL and GC muscles were also decreased with age but again DR did not affect these changes. Conclusion : DR from old was shown to have no apparent negative effect on the age-associated degenerative loss of skeletal muscle mass (sarcopenia) in rats. Keywords : dietary restriction, sarcopenia, myosin

OP26 219-B-5

EFFECTS OF AGING AND LIFELONG DIETARY RESTRICTION ON HISTONE MODIFICATIONS AND GENE EXPRESSION IN RAT KIDNEY

Kyojiro KAWAKAMI, Hideko NAKAMOTO, Shizuo KATAMOTO, Sataro GOTO (*Inst. of Health and Sports Sci. & Med., Juntendo Univ. Grad. Sch., Japan*)

Introduction : Histone modification is important mechanism of epigenetic that regulates gene expression, DNA replication, DNA repair and so on. Possible implication of epigenetics in aging has remained unclear. Method : We have studied effect of aging and dietary restriction (DR) on histone modification and mRNA expression in rat kidney. Histone modification was analyzed by Western blot using specific antibody against acetyl-histone H3 at lysine 9 (H3K9). Messenger RNA expression was analyzed by real-time quantitative RT-PCR. In addition, the relationship between histone modification and active chromatin was studied by chromatin immunoprecipitation and quantitative PCR (ChIP-qPCR) method. Results : Acetylation of H3K9 was increased with aging. While young DR rats showed higher level of the modification than ad libitum (AL) fed animals, but old DR animals showed lower level than AL fed ones. We found mRNA level

of transforming growth factor beta 1 (Tgfb1) a cytokine was increased with aging but DR lowered the change. ChIP-qPCR analysis with acetyl-H3K9 antibody and amplified Tgfb1 promoter region showed that young DR is higher than other 3 groups, whereas the level for old AL animals was higher than the young AL animals. Conclusion : It is known that aged rats often suffer from nephropathy, and inflammation is considered as one of the causes of its pathology. Messenger RNA expression of Tgfb1 was increased only in old AL, however, ChIP-qPCR of acetyl-histone H3 lysine 9 didn't relate to mRNA expression. Further analysis is needed to make possible causal link of histone modification and mRNA expression. Keywords : histone, dietary restriction, epigenetics

OP26 219-B-6

TRANSCRIPTIONAL BIOMARKERS OF AGING AND MODULATION BY DIETARY INTERVENTIONS

Jamie L. BARGER (*LifeGen Technologies, LLC, USA*)

Introduction : Studies using whole-genome transcriptional profiling have identified thousands of genes that are changed in expression with age. However, most of these age-related changes are not universal, but instead are specific to the genetic background of the organism being studied. Thus, there is great interest in identifying robust transcriptional biomarkers of age as these genes can be used to screen for interventions which slow the aging process. Method : We used gene expression profiling to identify transcripts that were consistently changed in expression with age in mice (5 vs. 28-30 months of age). The effect of aging was measured in seven strains of mice and in three tissues (brain, heart, and skeletal muscle). Following RTPCR confirmation of the microarray data, 10-12 genes were identified as robust transcriptional biomarkers (depending on the tissue). Results : Interestingly, there was minimal overlap of the biomarkers among the tissues, suggesting that the effects of aging are tissue specific at the individual gene level. However one gene was consistently changed with age in all three tissues studied. We then used these panels of biomarkers as screening tools to assess if dietary interventions (including a calorie restricted diet or natural compounds) were able to oppose age-related changes in these biomarkers. Conclusion : The results show that calorie restriction is able to oppose aspects of aging in some tissues and that consumption of specific natural compounds may oppose the aging process in other tissues. Keywords : aging nutrition calorie restriction nutrigenomics biomarkers

OP26 220-S

HEALTH PROMOTION VI

OP26 220-S-1

STATE OF AGED HEALTH AND ITS SOCIAL DETERMINANTS IN URBAN INDIA

Sanjeev MAHAJAN (*Sociology, N.A.S. Post-graduate College, Meerut-250001 (India), India*)

Introduction : Aging is a normal, natural, physiological, psychological and social process and has been a source of curiosity and fear from time immemorial. This has not only profound personal implications for the individual but also implications for the society. Aging processes, though are inherent and inevitable, they are independent of stresses, trauma, or diseases and are neither identical nor do they progress at the same pace in all persons. Rapidly growing population of the aged in India, their health status and problems has made this section of society highly vulnerable. Hence, a major issue of societal concern is the health status of the aged. The present paper aims to find out the state of health of the aged and its social determinants. Method : Empirical

evidence collected from 300 aged by administering a interview schedule in a metropolitan city, named Meerut in Uttar Pradesh state of India. Results : Females have better state of health than males. Social determinants are found to affect the health status of the aged. Conclusion : Marital status is not found to affect the health status of the aged. However, factors like income (both of the aged and that of family), type and size of family, caste, religion and residential background that matter in the state of health of the aged. Those with comparatively high income, living in joint families of medium size, belonging to high or middle range caste, Hindus and having rural background are found to have excellent/very good health. Keywords : Aged care, Geriatric sociology, Social determinants

OP26 220-S-2

ARE HEALTH EXAMINATIONS USED MORE FREQUENTLY BY HEALTHY ELDERLY INDIVIDUALS THAN BY UNHEALTHY ELDERLY INDIVIDUALS?

Hui-Chuan HSU¹, Wen-Chiung CHANG², Dih-Ling LUH³, Ling-Yen PAN⁴ (1. Department of Health Care Administration, Asia University, Taiwan; 2. Institute of Health Policy and Management, National Taiwan University, Taiwan; 3. School of Public Health, Chung Shan Medical University, Taiwan; 4. Bureau of Health Promotion, Department of Health, Taiwan)

Introduction : This study examined the use and the trajectory of general health examinations and the relationships among health, healthy lifestyles, and general health examinations among elderly Taiwanese. Method : The study evaluated a 5-wave panel set of elderly Taiwanese and included 2,984 respondents (for a total of 11,936 observations) in the analysis. Health was defined as the lagged (previous wave effect) and the changes in chronic diseases and physical function difficulties. Healthy lifestyle was defined as the collection of healthy behaviors, including not smoking, drinking alcohol in moderation, and engaging in regular exercise. We applied a hierarchical linear model with repeated measurements and controlled the time-constant and time-varying covariates. Results : The use of health examinations increased over time. Elderly with more chronic diseases were more likely to undergo health examinations, but the rate of change declined over time. Having physical function disabilities was not a significant factor in the frequency of health examinations. Elderly subjects who engaged in regular exercise were more likely to undergo health examinations, but other health-related behaviors did not have a significant effect on the rate. Conclusion : For elderly Taiwanese, the use of health examinations is more likely to be a response to poorer health rather than a part of a healthy lifestyle. Taiwan's healthcare policy should encourage older adults to monitor their own health by undergoing routine general health examinations before morbidity becomes severe. Keywords : health examination, health behavior, preventive medicine

OP26 220-S-4

HEALTH AND FUNCTIONING OF COMMUNITY DWELLING OLDER ADULTS IN CHINA AND KOREA

Eun-Kyoung Othelia LEE¹, Jungui LEE², Qingwen XU³ (1. Social Work, University of North Carolina Charlotte, USA; 2. Division of Policy Research, Gyeonggido Family & Women's Research Institute, Korea; 3. Social Work, Tulane University, USA)

Introduction : Population aging is occurring at an unprecedented pace in China and Korea. The purpose of this study is to describe the state of health and functional limitations of community dwelling older persons in China and Korea, to explore the factors that are associated with functional limitations. Method : Community dwelling adults aged

65 and older (n=11,449) were drawn from Chinese Longitudinal Healthy Longevity Survey. The comparable Korean sample (n=4,152) was drawn from Wave I of the Korean Longitudinal Study on Aging. Hierarchical multiple regression analysis was undertaken to assess the unique explanatory contribution of socio-demographics, chronic health conditions, cognition, lifestyle factors (e. g., smoking, drinking, and exercise), and social engagement on functional limitations. Results : Common predictors of ADL and IADL limitations in both Chinese and Koreans were being old, being women, having more years of schooling, being currently unmarried, reporting more number of chronic diseases, and manifesting lower cognition. Income and employment status is significant for Koreans only. Lifestyle factors of drinking and absence of exercise were significant predictors of poor ADL and IADL for Koreans, while prevalence of smoking and social/leisure activities were more significant for Chinese. The final model explained 31% of ADL and 38% of IADL in Korean sample. The final model for Chinese explained only 24% of ADL (R²=.24, F=208.3, p<.001) but explained twice that amount (55%) of IADL (R²=.55, F=805.4, p<.001). Conclusion : Our comparative approach explained how the potential demand for care and support varies between two countries regarding the prevalence of functional limitations. Keywords : Functioning, lifestyle, health, South Korea, China

OP26 221-S

PSYCHOLOGICAL ASPECTS OF AGEING (ATTITUDE)

OP26 221-S-1

IS IT POSSIBLE TO BE A MIGRANT AND HEALTHY AT THE SAME TIME?

Suzan YAZICI¹, Nilufer Korkmaz YAYLAGUL¹, Anne Leonora BLAAKILDE², Allan KRASNIK², Signe Gronwald PETERSEN², Signe Smith NIELSEN², Caglar ARSLANER¹ (1. Gerontology, Akdeniz University, Turkey; 2. Gerontology, Center for Healthy Aging, Denmark)

Introduction : The "healthy migrant effect" is unfortunately not seen anymore. On the contrary, many studies show that the health status of the migrants is worse than the native population. Health promotion initiatives aiming an active lifestyle among the elderly are becoming more frequent as obesity and other lifestyle related problems become more prominent in developed countries. As the immigrants are less active, they become overweight and have more diseases compared to the native population; their need to access health promotion activities is much more evident. Barriers such as language and communication, lack of knowledge about the system and cultural factors are some of the reasons affecting the migrant's access to available services. Method : 20 semi structured interviews with first generation migrants have been conducted each in Denmark and UK. Results : In general the Turkish immigrant had a sedentary life style and many health problems. They were blaming their previous work and living conditions, the country of residence basically as a reason for this. Conclusion : Being an immigrant and spending the life in an other country than the country of birth might be a predictor of poor health even in the absence of any previous illness. Keywords : health, immigrant elderly, activity

OP26 221-S-2

PERSONAL ANXIETY IN OLDER WOMEN AND ITS ASSOCIATION WITH AWARENESS AND ATTITUDE TOWARDS THE HEALTH: WHO "MONICA" EPIDEMIOLOGICAL STUDY

Valery GAFAROV, Dmitriy PANOV, Elena GROMOVA, Igor

GAGULIN, Almira GAFAROVA (*Laboratory of Psychological and Sociological Issues of Internal Diseases, Institute of Internal Medicine SB RAMS, Russia*)

Introduction : We aimed to study prevalence of personal anxiety and its association with awareness and attitude towards the health in female population aged 25-64 years in Russia. **Method :** Under the third screening of the WHO 'MONICA-psychosocial' program random representative sample of women aged 25-64 years (n=870) were surveyed in Novosibirsk in 1994. Levels of personal anxiety were measured at the baseline examination by means of Spilberger's test. **Results :** High level of personal anxiety (HLA) in female population of 25-64 years was 60.4 %. Women in older group 55-64 years have lower prevalence of HLA (57.1%) compared to those in younger groups as 25-34 and 35-44 years (64% and 69.5%, respectively; $\chi^2=15.05$, $p=0.02$). There was growth of poor health assessments as «not quiet well» and «sick» in 1.5-3 times in women with HLA. More than 92% of women with HLA have complaints to health ($\chi^2=38.33$, $p<0.001$), but consider their care about the health is not enough. There was a higher share of women with HLA who tried unsuccessfully to quit smoking compared to lower level of anxiety (10.7% and 3.9%, respectively; $\chi^2=11.25$, $p<0.05$). Women with HLA in 2-times less likely to follow the diet ($\chi^2=20.87$, $p<0.001$). Individuals with HLA assess their physical activity for their age more passive ($\chi^2=18.13$, $p<0.01$) and rarely spend their leisure time physically actively. **Conclusion :** Despite high prevalence of anxiety in Russian female population older women have lower HLA rates compared younger ones. HLA more likely associated with poor self-rated health, higher rates of health complaints and negative behavioral habits. **Keywords :** anxiety, awareness, women

OP26 221-S-3

EFFECTIVENESS OF YOUNG POLES' EDUCATION IN RESPECT OF VIEWING OLD AGE AND ATTITUDES TOWARDS THE ELDERLY

Alina ZUREK, Tomasz FRACKOWIAK (*Dept. of Psychology, University of Wroclaw, Poland*)

Introduction : Preparation of children for old age occurs in the natural educational environment, a family. However, the model of a Polish family changing from the multigenerational family to a family of two generations often does not allow a young person to experience a closer contact with an elderly person and become acquainted with the specificity of old age. In this situation it's necessary to acquire knowledge about old age and gain experience through intergenerational meetings. Such an opportunity was created by a campaign addressed at Polish children and young people, the subject of which was old age and aging. The aim of this paper is to assess the effectiveness of the educational program in the respect of positive perception of old age and positive attitudes of the younger generation of Poles towards the elderly. **Method :** The participants of the research comprised more than 150 children and young people and their parents taking part in the program. The research was conducted before the beginning of the campaign and after its ending. The tools used were created by the authors of this paper with a view to evaluate the effectiveness of the educational activities on the perception of old age and attitudes of the younger generations towards the elderly. **Results :** The paper presented shows the results of the ex-ante, mid-term, and ex-post evaluation. **Conclusion :** Benefits of the educational program are positive attitudes of children and young people to age and ageing. **Keywords :** education, attitude, ageing

OP26 221-S-4

SELF BODY IMAGE AS AN INDICATOR OF HEALTH AND QUALITY OF LIFE AMONG WOMEN IN A GERIATRICS CLINIC OF A UNIVERSITY HOSPITAL IN BRAZIL

Laura Brenner ROCHA, Irenio GOMES, Newton Luiz TERRA (*Institute of Geriatrics and Gerontology, IGG PUCRS, Brazil*)

Introduction : Body image is a perception that the individual has towards its own appearance and body functioning and it may vary along the lifespan. A better body image perception is associated with a lesser frequency of overweight and obesity in the elderly. **Method :** The sample contained 58 patients of the Geriatrics clinic from May to August 2010. BMI was calculated using Quetelet Index. Body image satisfaction was measured through Stunkard Nine Figure Scale(SNFS). **Results :** The prevalence of overweight/obesity was 62.1%. The age of the sample was from 60 to 94 (average age of 74 ± 7.8) and 31% over 80. Figures 4 and 5 of SNFS were the most frequently chosen (24.1% and 25.9%) as their real appearance. Figures 3 and 4 were the most chosen for ideal body figure (29.3% and 25.9%). The score obtained most frequently was 0, 1 and 2 (29.3%, 27.6% and 29.3% respectively). Almost fifty-one percent (50.9%) of the patients were not satisfied with their weight. 29.9% of the patients were satisfied with their body image. 51.9% said they were satisfied with their weight but not with their image. 13% of the overweight the normal weight patients were satisfied with their weight, whereas 10% and 11% of the overweight and obese patients respectively were not satisfied. There was a significant association between these two variables with a $p\leq 0.05$. **Conclusion :** Self Body image showed a significant association with BMI. Body image instead of body weight should be analyzed for well being and health perception specially in the elderly. **Keywords :** body image elderly nutrition

OP26 221-S-5

THE EFFECTS OF SERIOUS GAME ('PALDOGANGSAN 2') ON THE KOREAN ELDERLY IN SOUTH KOREA: THE ROLE OF AGE AND HEALTH STATUS

Joonhee AHN¹, Kyungsik KIM², Seongsuk OH², Jinho AHN³ (*1. Dept. of Social Welfare for the Elderly, Hoseo University, Korea; 2. Dept. of Game Engineering, Hoseo University, Korea; 3. Dept. of Electrical Engineering, Hoseo University, Korea*)

Introduction : Research has maintained that playing games via internet or video games can be utilized as a major leisure activity among the elderly and help improve their certain cognitive functions. However extant research studies have not considered how the effects of playing games can be different depending on the age groups (the young old (65-75 years old), the old old (75-85 years old), the oldest old (85 years old and older)) and various health status. A serious game for the elderly named 'Paldokangsan2' has been developed in Korea in 2012, a walking game for two people using controllers of armrests and footboards with PC. In 'Paldokangsan 2', walking while remembering/choosing healthy food was implemented as main game activities. This preliminary research aimed to examine the multifarious effects of playing 'Paldokangsan2' among the Korean elderly in Korea. **Method :** Data were collected from a survey of approximately 219 community-dwelling Koreans (age ≥ 65) who agreed to play the game (10-25 minutes) and complete a survey questionnaire post-game play. **Results :** Results showed that the young old and the old old perceived that playing the game would assist their memory functions more than the oldest old. The old old participants evaluated that the game play would improve their levels of concentration more than the young old or the oldest old. Physically healthy participants expressed that their sense of vitality improved after playing the game more than their counter part. **Conclusion :** It is critical to specify the targeted

group with age or health status when developing serious games for the elderly. Keywords : serious game, cognitive effects, Korean elderly

OP26 308-C DEMENTIA III

OP26 308-C-1 IMPACT OF HIGH RISK MEDICINES ON HOSPITALISATION AND MORTALITY IN PEOPLE WITH AND WITHOUT ALZHEIMER'S DISEASE

Danijela GNJIDIC¹, Sarah HILMER², Sirpa HARTIKAINEN³, Anna-Maija TOLPPANEN³, Heidi TAIPALE³, Marjaana KOPONEN³, Simon BELL⁴ (1. Faculty of Pharmacy, University of Sydney, Australia; 2. Royal North Shore Hospital, University of Sydney, Australia; 3. Kuopio Research Centre of Geriatric Care, University of Eastern Finland, Finland; 4. Quality Use of Medicines and Pharmacy Research Centre, University of South Australia, Australia)

Introduction : There is a lack of data in relation to possible negative outcomes associated with use of anticholinergic and sedative medicines in older persons with Alzheimer's disease (AD). This study aimed to investigate the relationship between use of anticholinergic and sedative medicines and hospitalisation and mortality in persons with AD in Finland. Method : Community-dwelling people (n=16,603) with AD on December 31, 2005 were identified by the Social Insurance Institution. For each person with AD, a comparison person matched in terms of age, sex, and region of residence was identified. Records of reimbursed medicines purchased from 1st September-31st December 2005 were extracted from the Finnish National Prescription Register. High-risk prescribing was defined using the Drug Burden Index (DBI), a dose-normalised measure of exposure to anticholinergic and sedative medicines. Mortality and hospitalisation data over one-year were extracted. Cox and logistic regression analyses were used to investigate the relationship of DBI exposure with outcomes. Results : For every unit increase in DBI, the adjusted hazard ratio (HR) for mortality was 1.20 (95% confidence intervals [CI]: 1.09-1.32) among persons with AD, and 1.43 (95%CI: 1.27-1.62) for persons without AD. For every unit increase in DBI, the odds ratio (OR) for being hospitalised in persons with AD was 1.38 (95%CI: 1.31-1.46) compared with an adjusted OR of 1.83 (95%CI: 1.71-1.95) among persons without AD. Conclusion : These data imply a dose-response relationship of higher DBI exposure with hospitalisation and mortality in both persons with and without AD, with a greater relative risk among persons without AD. Keywords : drug utilisation, Alzheimer's disease, clinical outcomes.

OP26 308-C-2 DEMENTIA DISORDERS AND DRUG THERAPY IN THE SWEDISH DEMENTIA REGISTRY (SVEDEM): A NATIONWIDE STUDY OF OVER 7 000 PATIENTS

Kristina JOHNELL¹, Dorota RELIGA², Maria ERIKSDOTTER³ (1. Aging Research Center, Karolinska Institutet, Sweden; 2. Alzheimer's Disease Research Center, Karolinska Institutet, Sweden; 3. Section of Clinical Geriatrics, NVS Department, Karolinska Institutet, Sweden)

Introduction : We aimed to study whether there are differences between dementia disorders and the use of anti-dementia drugs and antipsychotics (neuroleptics) in a large population of dementia patients. Method : Information about dementia disorders was obtained from the national Swedish Dementia Registry (SveDem) 2007-2010 (n=7 570). Multivariate logistic regression analysis was performed to investigate the association between dementia disorders and the use of

anti-dementia drugs and antipsychotics, after adjustment for age, sex, residential setting, living alone, MMSE score and number of other drugs (a proxy for overall co-morbidity). Results : More than 80% of the Alzheimer's disease (AD) and 86% of dementia with Lewy bodies (DLB) patients used anti-dementia drugs. Women were more likely than men to be treated with cholinesterase inhibitors. A higher MMSE score was positively associated with use of cholinesterase inhibitors, but negatively associated with NMDA receptor antagonists and antipsychotics. The use of antipsychotics in all dementia patients was 6%, but in DLB, the use of antipsychotics was higher (16%), with an adjusted odds ratio of 4.2 compared to AD patients. Conclusion : Use of anti-dementia drugs in AD was in agreement with Swedish guidelines. However, use of antipsychotics in patients with DLB was high, which might be worrying given the susceptibility of DLB patients to antipsychotics. Keywords : dementia, national dementia registry, drug treatment

OP26 308-C-3 ANTI-PSYCHOTIC MEDICATION USE IN RESIDENTS WITH DEMENTIA: CORRELATES OF SUCH USE IN 8 COUNTRIES

Andrea D. FOEBEL¹, Rossella LIPEROTI², Graziano ONDER³, Givoanni GAMBASSI², Roberto BERNABEI² (1. School of Public Health and Health Systems, University of Waterloo, Canada; 2. Centro Medicina dell'Invecchiamento, Università Cattolica del Sacro Cuore, Italy)

Introduction : Among people with dementia, use of both conventional and atypical antipsychotic (AP) medications has been linked to increased risk of stroke and death. These findings led to new recommendations that AP use be avoided in such populations. However, AP use continues to be a mainstay in the treatment of the behavioural and psychological symptoms in these patients. The potential correlates of such continued use has not been well studied. Method : This cross-sectional study used data from the SHELTER study. This study used the interRAI Long-Term Care Facility instrument to collect comprehensive resident data from over 4,000 older individuals in 57 long-term care facilities in 7 European countries and Israel. Multivariate logistic regression analysis was used to identify potential correlates of any AP use among residents with dementia. Results : Among the 2,091 residents with dementia, the prevalence of AP use was 32% (n=662) and varied by country. Those with no AP use were younger, less functionally impaired, had fewer psychotic symptoms and delirium, and were less physically restrained. The strongest correlate of AP use was the presence of behavioural problems, and other factors found to be associated to AP use were: moderate functional impairment, severe cognitive impairment, presence of psychotic symptoms, concurrent use of anxiolytics and hypnotics, and presence of a geriatrician in the facility. Conclusion : This study systematically shows that AP use is still prevalent among residents with dementia and may be largely driven by behavioural symptoms. Reconciling such use with current recommendations for this vulnerable population deserves clinical and policy attention. Keywords : Anti-Psychotic Medications, Dementia, Long-Term Care

OP26 308-C-4 HYPOVITAMINOSIS D AND COGNITIVE FUNCTION: THE PAVULLO STUDY

Alberto CASTAGNA¹, Andrea TOSCHI¹, Simona MOSCARDINI¹, Andrea FABBO², Andrea SPANO¹ (1. Distretto Di Pavullo Nel Frignano, Ausl Di Modena, Italy; 2. Progetto Demenze, Ausl Di Modena, Italy)

Introduction : Aging is associated with a large increase in the

prevalence of hypovitaminosis D. Hypovitaminosis D is associated with cognitive decline in the elderly, but the issue of causality remains unresolved. The aim of the present study is to examine the association between 25-hydroxyvitamin D (25(OH)D) and cognitive function (MMSE) in Italian elderly participating in the Pavullo Study. Method : We studied the association between 25(OH)D and cognitive function (MMSE) in 38 (F 79% age 80,7± 6,21 years) consecutive elderly patients attending our Geriatric Outpatient Clinic reporting memory impairment. We performed a comprehensive cognitive assessments, medical examinations, physical performance measures and provided blood samples. Results : In our population hypovitaminosis D was present in 100%; 35 patients (92,1%) had a serum 25(OH)D less than 20 ng/ml; 3 (7,9%) patients between 20 and 30 ng/ml. After adjustment for age, gender, systolic blood pressure, education level, cardiovascular diseases, and antihypertensive therapy, a significant association was observed between 25(OH)D and cognitive status ($r=0,341;P=0,036$). MMSE appears significantly higher in subjects with 25(OH)D >10 ng/ml than in those with 25(OH)D <10 ng/ml (21,23±7,07 vs 16,3±6,15; $P=0,028$). Conclusion : Our results showed a relationship between 25(OH)D and cognitive impairment, suggesting that 25(OH)D could be involved in the onset of dementia. Clearly, an association between low 25(OH)D status and cognitive impairment does not establish that 25(OH)D inadequacy causes cognitive deterioration. Additional investigation of this clinical observation, particularly with intervention studies, is clearly desirable. Keywords : Vitamin D, Dementia, Older Adults

OP26 308-C-5

DISCLOSURE OF A DIAGNOSIS OF DEMENTIA; A SYSTEMATIC REVIEW ON PREFERENCES OF PERSONS WITH AND WITHOUT DEMENTIA

Pim VAN DEN DUNGEN (*General Practice and Elderly Care Medicine, VU University Medical Center Amsterdam EMGO+ Institute for Health and Care Research, Netherlands*)

Introduction : It is not clear whether the reluctance to disclose a dementia diagnosis that many physicians experience is in accordance with their patients' preferences. What are preferences regarding disclosure of the general population, individuals with dementia, their relatives and physicians? Our objective was to review preferences of individuals, with and without dementia, regarding disclosure of a (potential future) diagnosis of dementia, and to explore arguments in favour of, and against disclosure. Method : Systematic search in Pubmed, Embase and Psycinfo. Two authors assessed relevance and quality, and independently extracted data of retrieved studies. Results : We included 23 articles: the median percentage in favour of disclosure was 92% (range 76%-98%) in the 8 studies investigating preferences of the general population. The median percentage in favour of disclosure was 88% (range 69%- 100%) in 8 studies in patients with dementia or referred to a memory clinic. The median percentage in favour of disclosure was 92% (range 58%-98%) in 8 studies on preferences of relatives of individuals with dementia. The 2 studies among physicians, showed 72% respectively 77% favouring disclosure if they were to develop dementia. Main reasons for disclosure were 'to plan the future' and 'the right to know'; the main reason against was 'fear of getting upset'. Conclusion : The vast majority of individuals, regardless of the presence of cognitive impairment, preferred to be informed about a diagnosis of dementia. Physicians preferred not to know relatively often. Early openness about possible dementia may help people to prepare for what is to come. Keywords : dementia, disclosure, patient preferences

OP26 308-C-6

THE SYSTEM COMPLEXITY THEORY AND INTERVENTION OF VARIOUS KINDS OF COGNITIVE IMPAIRMENTS

Yongxing MA, Yue ZHU, Zhanshun WANG, Chuanfu WANG, Peifang LU, Yue-Di GU (*Department of Aging, Antiaging and Cognitive Function, Shanghai Institute of Gerontology and Geriatrics, Affiliated Huadong Hospital, Shanghai Medical Collage, Fudan University, China*)

Introduction : 1. The Various Kinds of cognitive Impairments($n=2666$, ≥ 65 yrs) were as following: AAMI:860 cases, 32. 26%; MCI: 782 cases, 29. 33%; Dementia: 157 cases(AD 88, VD 39 and MD30) 5 89%; Normal cognitive function (NCF): 867 subjects, 32. 52%; 2. We found that cognitive impairment in the aged and presaged is intimately correlated with free radical metabolism, microcirculatory disturbance, hyperlipemia, arteriosclerosis, hypertension, coronary heart disease, diabetes mellitus, cerebrovascular disease, chronic bronchitis and emphysema, chronic renal failure, lower PaO₂, and quantitative MRI of hippocampal formation, etc. Method : 3. The frequency of APOE ϵ 4 of: (1) AAMI: No significant difference between the allele frequency of APOE ϵ 4 in AAMI (6. 89%, 58/842) and control group (7. 04%, 56/796). (2) MCI : ①APOE ϵ 4 in MCI9.12% (56/614), control group 6.44% (87/1350) ($X^2=4.48,P<0.05$);②APOE ϵ 2: MCI7.33% (45/614), control group 5.26%(71/1350) ($X^2=3.25,P>0.05$);③APOE ϵ 3: MCI83.55% (513/614), control group88.30%(1192/1350) ($X^2=8.30,P<0.01$)④APOE ϵ 4, APOE ϵ 2, APOE ϵ 3 allele frequency: $X^2=8.31,P<0.05$; (3)AD: APOE ϵ 4 allele frequency of AD and controls were 21. 0% (86/410)and 7. 75%(31/400), The allele frequency of APOE ϵ 2, 3 and 4 in the AD group was 6. 8%, 72. 2% and 21. 0% respectively and 6. 3%, 86. 0% and 7. 7% in controls, $X^2=29. 5, P<0. 001$. Results : 4. We have performed double blind trail of huperzine (702 cases), aniracetam (622 cases),R. S. C. (sea products; 700 cases) and certain other traditional Chinese drugs to treat cognitive impairment including VD (MID), AD and "VD+AD". Huperzine and aniracetam were found to be effective to increase the MQ score in memory impairment in the aged and presaged and mild or moderate dementia (VD, AD, VD+AD). Conclusion : 5. The mechanisms of cognitive impairment in the aged is multiple and complex. The measures for intervention of cognitive impairment in the aged must be comprehensive too. Keywords : Cognitive Impairment AAMI MCI Dementia Normal Cognitive Function

OP26 308-C-7

AMINOFF SUFFERING SYNDROME AND ANTI-ENTROPY DEFICIENCY PHENOMENON IN ADVANCED DEMENTIA

Bechor Zvi AMINOFF (*Geriatrics, Geriatric Division, Sheba Medical Center, Tel-Hashomer & Minerva Center at Tel-Aviv University, Israel*)

Introduction : To study possible interrelations between Aminoff Suffering Syndrome (ASS) and anti-entropy deficiency in advanced dementia. Method : A cohort study of 71 patients (28 females, 43 males), with very advanced dementia, who died in our ward during the study period. The intense suffering level of these end-stage dementia patients was evaluated by the Mini-Suffering State Examination (MSSE) scale (1999). Results : On the last day of life 71.8% of dying dementia patients with ASS were not calm, 71.4% had decubitus ulcers, 94.4% suffered from malnutrition, 95.8% had eating disorders, 90.1% experienced invasive procedures, and 90.1% were in an

unstable medical condition. Suffering level in advanced dementia has a significant correlation with short survival, advancing age, more severe illness, malnutrition, the existence of decubitus ulcers, and the administration of medications. Conclusion : Established correlations between ASS and advanced dementia could be explained by anti-entropy deficiency. A decreased level of human anti-entropy is a measure of disorder, a process of aging, and a source of torment to the patient. Keywords : Suffering, anti-entropy, dementia

OP26 310-R EDUCATION

OP26 310-R-1 USE OF THE CORNELL SCALE FOR DEPRESSION IN DEMENTIA (CSDD) IN NURSING HOMES

Yun-Hee JEON¹, Zhixin LIU², Lee-Fay LOW², Daniel O'CONNOR³, Lynn CHENOWETH⁴, Henry BRODATY⁵, Elizabeth BEATTIE⁶, Tanya DAVISON⁷ (1. Nursing, The University of Sydney, Australia; 2. Dementia Collaborative Research Centre, School of Psychiatry Faculty of Medicine The University of New South Wales, Australia; 3. Department of Old Age Psychiatry, Monash University, Australia; 4. Faculty of Nursing, Midwifery and Health, The University of Technology Sydney, Australia; 5. Dementia Collaborative Research Centre, School of Psychiatry University of New South Wales, Australia; 6. Dementia Collaborative Research Centre (DCRC), Queensland University of Technology, Australia; 7. Aged Mental Health Research Unit, Monash University, Australia)

Introduction : Despite its high prevalence in the elderly, depression is often under-detected, under-diagnosed and under-treated, particularly in nursing homes (NHs), where limited resources and workforce capacity further interfere with adequate assessment and management of depression. The Cornell Scale for Depression in Dementia (CSDD) has been widely utilised for this population, but problems exist concerning the implementation of CSDD in the NH context. Our research aims to identify the best assessment process to ensure appropriate care and management of depression in NHs. This paper focuses on Phase 1 of the study that examined our existing NH databases containing CSDD data. Method : We analysed a total pooled sample size of 556 from four studies, using descriptive statistics and Item Response Theory (IRT), to identify patterns of responses and non-responses for the frequencies of items marked 'unable to score' and 'missing', and patterns of responses (items) that are closely linked to severity of depression. Results : Notwithstanding the uniqueness of the individual studies pooled together, common patterns were identified and, through further analysis using the IRT model, shorter versions of CSDD were developed and validated using a recent nursing home study (n=115). Conclusion : The shorter versions will be tested for validity using data from Phase 2 where we compare newly collected depression assessment results using CSDD and the Geriatric Depression Scale, both rated by NH staff, against a formal diagnosis of depression by expert clinicians (n=100). The results, combined with key stakeholder consultations, will contribute to the development of a suite of recommended best-practices depression assessments in NHs. Keywords : Depression, Assessment, Nursing homes

OP26 310-R-2 WHAT IS THE QUALITY OF END-OF-LIFE CARE OF THOSE SUFFERING FROM ADVANCED DEMENTIA?

Netta BENTUR¹, Shelley STERNBERG², Jennifer SHULDINER¹ (1. Center for Research on Aging, Myers-JDC-Brookdale Institute, Israel; 2. Department of Public Health, Maccabi Health Services, Israel)

Introduction : Patients with dementia have substantial unmet needs including behavioral concerns, pain, difficult decisions regarding treatment, and caregiver burden. Our aim was to examine the quality of end-of-life care in Israel provided for older people with severe dementia living in the community. Method : Face-to-face interviews were conducted with 120 family primary caregivers of older people with severe dementia, about half of them died within the last 6 months. Results : The average age of the caregiver respondents was 61.3±12.5 and 71% were female. The average age of patients with advanced dementia was 86.3±7.6 years (64-101) and 65% were female. Dementia lasted on average for 6.4±5.0 years. About 65% received home medical care that included a visit from either a nurse and/or a doctor. However, in a state of emergency, 48% needed to visit the ER. Two scales were used to measure symptom management and comfort around dying. The mean scores were acceptable, 29 (Range =0-45), and 31 (Range=14-42) respectively with lower scores indicating suffering. Half of the caregivers reported that their relative suffered from pain at least once a day in the last week of life. Advance end-of-life care planning was very limited: 20% used advance directives, 63% had guardians and 22% had power of attorneys. Only 15% of caregivers reported discussing advance care planning tools with the medical team. Conclusion : The quality of end-of-life care for people with advanced dementia in Israel is quite poor. The data supports the need to develop tailored services for dementia patients living in the community. Keywords : Dementia, Palliative Care

OP26 310-R-3 AGREEMENT STUDY BETWEEN SELF-REPORTED DOCTOR-DIAGNOSED ARTHRITIS AND JOINT SYMPTOMS

Thomas LO, Lynne PARKINSON, Julie BYLES (PRCGHA, University of Newcastle, Australia)

Introduction : Objective of this study is to examine the agreement between self-report doctor-diagnosed (SRDD) arthritis and self-report joint symptoms suggesting arthritis. Method : A pilot cross-sectional study was conducted in late 2012. Self-administered surveys were distributed to women aged ≥ 60 years, recruited from the Hunter Medical Research Institute Research Register. SRDD-arthritis cases were women answered positively to: "In the past three year, have you been diagnosed or treated for osteoarthritis, rheumatoid arthritis, psoriatic arthritis, gout, and/or other form of arthritis." Joint symptoms (JS) were assessed with the validated Community Oriented Program for Control of Rheumatic Disease (COPCORD) questions. Agreement was examined using kappa (k) statistics. Sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) were calculated using JS-arthritis as the reference. Logistic regression models examined predictors of agreement. Results : Eighty participants completed the pilot survey. Sixty-seven per cent of respondents self-reported doctor-diagnosed arthritis (95% CI 57.7-79.5%); and 52.9% reported joint symptoms suggesting arthritis (95%CI 41.1-64.7%). Agreement between SRDD-arthritis and JS-arthritis was moderate (k=0.45); sensitivity, specificity, PPV and NPV were 0.89, 0.65, 0.69 and 0.82 respectively. Logistic regression analyses revealed that agreement is influenced by types of arthritis, number of problematic joints, and pain severity. Conclusion : Results suggest that survey data can validly identify cases of chronic disease such as arthritis. This finding will further be tested in a sample of 700 women drawn from the mid-age cohort of the Australian Longitudinal Study on Women's Health. Knowledge gained will benefit researchers who conduct epidemiologic studies of chronic diseases in the ageing population. Keywords : arthritis, health survey, sensitivity and specificity

OP26 310-R-4

PRESENCE OF AND CORRECTION FOR INTERVIEWER ERROR ON AN INSTRUMENT ASSESSING COGNITIVE FUNCTION: A MULTILEVEL ANALYSIS

Rahul MALHOTRA¹, Benjamin A HAALAND², Choy Lye CHEI¹, Angelique CHAN¹, Chetna MALHOTRA¹, David Bruce MATCHAR¹ (1. Health Services and Systems Research, Duke-NUS Graduate Medical School, Singapore; 2. Centre for Quantitative Medicine, Duke-NUS Graduate Medical School, Singapore)

Introduction : Extent of interviewer error on instruments used for assessing cognitive function, often utilized in community-based surveys on the health of the elderly, is not known. The objective of the current analyses is to determine the presence of interviewer error on an instrument used for assessing cognitive function- the Short Portable Mental Status Questionnaire (SPMSQ), identify interviewer attributes contributing to interviewer error, compare prevalence of cognitive status categories before and after adjusting for interviewer error, and identify SPMSQ items sensitive to interviewer error. Method : Data of 4542 older adults from a national survey in Singapore was utilized. Interviewer error (intra class correlation [ICC]) on the SPMSQ, and identification of interviewer attributes (age, ethnicity, education and number of interviews conducted) contributing to interviewer error and of SPMSQ items sensitive to interviewer error were assessed using multilevel modeling. Results : We observed substantial interviewer error (ICC= 0.41) on the SPMSQ. Interviewer ethnicity and educational status contributed to interviewer error. Adjustment for interviewer error resulted in an 'improvement' in the cognitive status of a substantial proportion of those initially classified as moderately or severely impaired. Two of the SPMSQ items were particularly sensitive to interviewer error. Conclusion : Investigators using the SPMSQ, and potentially, other instruments, for assessing cognitive function in surveys of older adults should be cognizant of their sensitivity to interviewer error. Assessment for interviewer error and its correction, using appropriate statistical models, such as multilevel modeling, is warranted. Keywords : Cognition, Interviewer, Multilevel Analysis

OP26 310-R-5

REDUCING ALCOHOL MISUSE AMONG OLDER ADULTS: A PROPOSED TRAINING MODEL FOR COMMUNITY PROFESSIONALS

Nancy BROSSOIE (Center for Gerontology, Virginia Tech, USA)

Introduction : Current efforts to reduce alcohol misuse among older adults have generally focused on training healthcare professionals (e.g., physicians, nurses, therapists) to use the evidence-based Screening Brief Intervention and Referral to Treatment (SBIRT) model. While SBIRT interventions have helped many older adults change their drinking behaviors, reliance on healthcare providers to respond is inadequate. Studies have shown that most healthcare providers do not ask probing questions about alcohol use during health visits and patients are unlikely to disclose their drinking habits, even when asked. However, non-healthcare community professionals (e.g., social workers, police officers, clergy) possess insights into the daily lives of community members and become well acquainted with their habits and routines. Thus, they are well positioned to initiate a brief intervention with individuals they suspect of misusing alcohol and refer them for additional help. Method : To facilitate involvement of community professionals, a brief intervention training model for community professionals is proposed. Adapted from SBIRT, the evidence-based training modules address education and awareness, skill building, participant introspection, and collaborative community

response. Results : The resultant model is based on evidence-based research. Skill-building exercises are informed by client-centered and self-determination theory, the use of motivational interviewing techniques, and enhanced through role-playing opportunities with trainer feedback. Introspection activities address the tension between balancing professional objectives with intervention, personal views on alcohol use in late life, ageist attitudes, social norms and expectations to intervene, and respect for self-determination. Conclusion : Variations among professional responses are embedded in model. Opportunities and methods for individual and collaborative responses are also addressed. Keywords : alcohol misuse, training, brief intervention

OP26 310-R-6

BETWEEN SCYLLA AND CHARYBDIS: ANTIPSYCHOTIC DRUG USE AND ELDERLY PATIENTS WITH DEMENTIA

John HSU¹, Maggie PRICE¹, Vicki FUNG² (1. Health Care Policy, Harvard Medical School, USA; 2. MAPRI, KP, USA)

Introduction : Antipsychotic drug use in elderly patients with dementia is controversial. The US FDA has issued warnings of increased mortality risk, and Medicare is seeking to reduce use in nursing homes. Community-based patients also receive the drugs, and can have comorbid neuropsychiatric conditions or symptoms; moreover, clinical guidelines allow for off-label use in select situations. We examined 2007 outpatient antipsychotic use. Method : Subjects were Medicare Advantage beneficiaries, age 65+ years, with a dementia diagnosis. We examined the clinical, geographic (three-digit zip code), income, and individual characteristics associated with antipsychotic drug use, using multivariate logistic regression models. Results : There were 25,119 subjects with dementia: 73.5% had a comorbid mental health condition; 1.8% had schizophrenia and 2.0% had bipolar disorder, specifically. Overall, 23.2% of beneficiaries with dementia received an antipsychotic; 88% of drug recipients had a mental health diagnosis. The clinical characteristics most strongly associated with receiving an antipsychotic drug were having schizophrenia (OR=23.0; 95%CI: 18.3-28.9) or bipolar disease (OR=11.9; 95%CI: 9.8-14.5). Receiving low-income subsidies also was significantly associated with antipsychotic drug use. The ratio for drug use across zip codes (75th-25th percentile) was 2.8. Conclusion : Both comorbid mental health conditions and antipsychotic drug use are common in patients with dementia living in the community. Most antipsychotic use appears to be among patients with comorbid mental health conditions, though few have FDA-approved indications for use. There is a substantial amount of geographic variation in the frequency of antipsychotic drug use among beneficiaries with dementia, as well as greater use among the poor. Keywords : Dementia

OP26 314-S

HEALTH INSURANCE & EXPENDITURE

OP26 314-S-2

ENHANCING EQUITABLE ACCESS TO MENTAL HEALTH CARE FOR THE OLDER PERSONS IN AFRICAN COMMUNITIES

Oluyinka ADEJUMO¹, Eucebious LEKALAKALA-MOKGELE² (1. School of Nursing, University of the Western Cape, South Africa; 2. School of Health Care Sciences, University of Limpopo, South Africa)

Introduction : Mental health for the elderly population is a neglected public health issue in many African countries. Research in this area has been minimal in the lower and middle income countries (LMIC),

suggesting that elderly mental health issues is of low priority in these countries. The World Health Organization says up to 85 % of mentally ill people in the developing world never get treatment. This is likely to be more true for the elderly in African countries. The paper examines the status of older persons' access to mental health care in African countries. Method : Published articles and policy documents on mental health of the elderly from selected African countries were reviewed. Check list was used to identify specific information on elderly mental health status, recognition of older persons' vulnerability to mental health related problems, situation of mental health policies, and issues related to the older persons access to mental health care. Results : Findings confirm that mental health of the elderly is a neglected public health issue in most countries; 64% of countries lack mental health legislation or have legislation that is out-dated and fails to adequately promote the rights of people with mental disabilities; with resultant poor access to mental health care for the older persons. Some specific cultural beliefs also prevent equitable access to mental health care for the elderly. Conclusion : Inequitable access to mental health care violates the rights of the older persons. Recommendations were made to improve older persons' access to mental health care in the sub-Saharan Africa. Keywords : Equitable access, mental health, older persons

OP26 314-S-3

INEQUALITIES IN ACCESS TO HEALTHCARE IN THE US AND ENGLAND

Alan MARSHALL¹, Kevin FEENEY², Jinkook LEE², James NAZROO¹ (1. *CCSR, University of Manchester, United Kingdom*; 2. *RAND, USA*)

Introduction : In this paper we compare quality of healthcare for hypertension in the USA and England focussing on inequality according to individual wealth and the nature of health insurance. Whilst social inequalities have been documented in terms of quality of healthcare, particularly in relation to the USA, few studies have attempted to compare healthcare outcomes across countries. Method : We analyse data from the English Longitudinal Study of Ageing and the Health and Retirement Survey. We use multinomial logistic regression to predict clinical outcomes of care for hypertension amongst older people (50+) including controlled hypertension, uncontrolled hypertension and undiagnosed hypertension. Results : Whilst similar proportions of the older population had normal blood pressure in England and the USA, levels of controlled hypertension were significantly greater in the USA. Patterns of healthcare outcomes for hypertension were largely consistent across the wealth distribution in England but varied a great deal in the USA. Poorer US people or those holding only government health insurance were much more likely to have controlled hypertension and uncontrolled hypertension compared to their richer or private insurance holding counterparts. Conclusion : That the USA has similar levels of measured hypertension amongst older people compared to the England is attributable to medical care which is most prevalent amongst poorer people reflecting higher levels of hypertension in this group. However, our finding of greater inequality in terms of uncontrolled hypertension in the USA compared to England is of concern. Keywords : Hypertension, health care outcomes, US, England, inequality

OP26 314-S-4

INFLUENCING CHOICE OF BRANDED OR GENERIC STATINS BY OLDER ADULTS IN THE US

Shirley PORTERFIELD¹, Sharon LEVIN², Susan FEIGENBAUM² (1. *Social Work & Gerontology, University of Missouri-St. Louis, USA*; 2. *Economics, University of Missouri-St. Louis, USA*)

Introduction : Spending for prescription drugs has been one of the fastest-growing components of national health expenditures in many countries. In the US, generics accounted for 78 percent of all retail prescriptions in 2010, up from 63 percent in 2006. While the trend towards generic drug use is promising, insurers and government health agencies continue to focus on ways to steer even more patients away from high-priced branded drugs. Method : In this study we use multivariate analysis to examine a number of factors that may influence switching from branded to generic statins, a class of drugs primarily used by older adults. We use data from five panels of the Medical Expenditure Panel Study (MEPS), covering 2005-2010. Each panel contains medical information on each prescription filled for members of a representative sample of US households for all major categories of insurance coverage and pharmaceutical drug vendors along with socio-demographic information, at 5 points in time over a 2 year period. Results : Preliminary results suggest that switching is more likely to occur among older adults who report high out-of-pocket costs for statins, and significantly lower costs are reported post switch. Switching is also more likely to occur among those who have prescriptions filled in drugstores or other stores (where it is possible to speak with a pharmacist in person), and among those who report good communication with their physician, in their native language. Conclusion : Price and provider consultation both influence the choice between branded or generic pharmaceuticals by older adults in the US. Keywords : pharmaceuticals, switching, insurance

OP26 314-S-5

CATEGORIZATION OF CONSUMPTION EXPENDITURE AND ANALYSIS OF THE FACTORS AFFECTING IT

Namhee YUN¹, Min-Suk YOON² (1. *Ph. D Course, Columbia University, Korea*; 2. *Department of Future and Social Policy Research, The Seoul Institute, Korea*)

Introduction : This study was conducted for the purpose of exploring how the consumption expenditure of elderly household can be classified based on their demographic characteristics, economic characteristics, and consumption patterns, and of determining the factors that affected the classification of the consumption expenditure of the 1,000 participants in the Employment Promotion Project for the Elderly in 2011. Method : we conduct the study with 1,000 participants Employment Promotion Project for the Elderly in 2011. By use cluster analyze. Results : First, households with elderly members can be classified into three types through cluster analysis. Cluster I is the basic-living-expenditure-centered type whose living and housing expenditures account for high portions of its total expenditure, whose members have an average age of about 70, and which consist of middle-school graduates living in big cities. Cluster II has much higher consumption expenditure than the other clusters; the elderly in Cluster II were also evenly distributed in the big, medium-sized, and small cities and rural areas, and there seemed to be more of them who were living together with their children than in the other clusters. As for Cluster III, its medical expenditure was relatively higher than its other expenditures. Conclusion : It was proven in this study that both the motives for participation and the economic status of the participants (whether they were poor or not) influenced the results of the survey on the elderly who participated in the Employment Promotion Project for the Elderly by consumption type. Keywords : elderly household, consumption expenditure, cluster analysis

OP26 319-B

CELLULAR AND MOLECULAR BIOLOGY OF AGING I

OP26 319-B-1

SUMOYLATION RECIPROCALLY STIMULATES PHOSPHORYLATION AND INHIBITS DEGRADATION AND UBIQUITINATION OF TAU

Xiaochuan WANG (*Pathophysiology, Tongji Medical College, Huazhong University of Science and Technology, China*)

Introduction : The intracellular accumulation of the phosphorylated tau is a characteristic pathology of Alzheimer's disease (AD), but the mechanism leading to tau accumulation is not fully characterized. SUMO-1, a protein that can stabilize proteins, co-localizes with the phosphorylated tau, suggesting an intrinsic link of tau phosphorylation and SUMOylation. **Method :** To test this, we studied here the effects of SUMOylation on degradation and phosphorylation of tau. **Results :** We found that up-regulation of tau SUMOylation significantly inhibits tau degradation. Furthermore, SUMOylation of tau promotes its phosphorylation at multiple AD-associated sites, whereas mutation of tau at K340R (the SUMOylation site) or simultaneous treatment of the cells with ginkgolic acid, an inhibitor of protein SUMOylation, abolishes the effect of SUMO-1. Alternatively, hyperphosphorylation of tau induced by inhibiting protein phosphatase-2A or activating glycogen synthase kinase-3 promotes tau SUMOylation. We also found that SUMOylation inhibits tau ubiquitination and expression of K340R mutant tau restores the ubiquitination of tau proteins. **Conclusion :** These findings disclose a reciprocal stimulation of tau SUMOylation and phosphorylation, and an inhibitory effect of tau SUMOylation on its ubiquitination and degradation. We conclude that SUMOylation at K340 may cause tau accumulation via stimulating the phosphorylation and inhibiting the ubiquitination/degradation. **Keywords :** Alzheimer's disease (AD), tau, phosphorylation, SUMOylation, ubiquitination, degradation

OP26 319-B-2

REGULATION OF LONGEVITY BY A RGS PROTEIN, LOCO/RGS14

Yuh-Ru LIN, Hardik PARIKH, Zachary KOPP, Yongkyu PARK (*Cell Biology and Molecular Medicine, UMDNJ-New Jersey Medical School, USA*)

Introduction : Although several conserved signaling pathways such as IGF-1 are known to regulate stress resistance and longevity in various organisms, the mechanism by which the RGS (regulator of G-protein signaling) protein affects the aging process is not understood yet. **Method :** Stress resistance, lifespan, iTRAQ, Phos-tag. **Results :** Our data exhibited that 1) reduced expression of a RGS protein, Loco, resulted in a longer lifespan of flies, with stronger resistances to stressors, higher MnSOD activity and increased nutrient storage. 2) In contrast, overexpression of the loco gene shortened lifespan significantly with lower stress resistance and reduced nutrient content. 3) Interestingly, the expressional changes of yeast RGS2 and rat RGS14, homologues of the fly Loco, also affected oxidative stress resistance and longevity in the respective species, which suggests that the Loco/RGS14 signaling pathway is evolutionarily conserved in various organisms for the regulation of longevity. Notably, proteomic iTRAQ screening and Phos-tag gel analyses revealed that reduction of Loco signaling decreases phosphorylation levels of Rpd3 protein (HDAC1, histone deacetylase 1) which is consistent with a previous report that the reduced expression of Rpd3 extends lifespan in *Drosophila*. We also found that fat body-specific downregulation of the loco gene enhances stress resistance and lifespan systematically. The fat body, which is equivalent to mammalian liver and adipose tissue, is known to function in metabolic homeostasis, stress tolerance, growth and longevity in *Drosophila*. **Conclusion :** Here we propose that the Loco/RGS14, a RGS protein, regulates stress resistance and

longevity by modulating the phosphorylation level of Rpd3/HDAC1 protein in a tissue (fat body)-specific manner. **Keywords :** stress resistance, longevity, regulator of G-protein signaling

OP26 319-B-3

AGEING-DEPENDENT TGF BETA1 SIGNALLING IN THE NEUROPROTECTION AGAINST AN OXIDATIVE STRESS

Kyoji OHYAMA, Kunihiko YASUDA, Kazuko ONGA, Nozomu MORI (*Department of Anatomy and Neurobiology, Nagasaki University School of Medicine, Japan*)

Introduction : Ageing is a risk factor for neurodegenerative diseases. Many previous studies focused on uncovering cell signalling of ageing-related declines in brain functions such as memory deficits. As yet, it remains unclear whether a self-defense mechanism of the brain operates in an ageing-dependent manner and prevents neurodegeneration. Emerging evidence suggested that TGF beta1 expression is upregulated after brain injury and ischemia. These studies led us to hypothesize that TGF beta1 may act as a self-defense signal to prevent neurodegeneration induced by brain insults such as oxidative stresses during ageing. **Method :** We deployed long-term culture (up to 6 months) of hippocampal neurons and examined whether TGF beta1 can protect mature neurons against H2O2-induced oxidative stress. We also monitored the expression of downstream components of TGF beta1 signalling during neuronal ageing, together with the analysis of their expression patterns in vivo. **Results :** TGF beta1 protects mature hippocampal neurons against H2O2-induced oxidative stress in vitro. Both pp38MAPK and Smad7 were upregulated during the ageing of hippocampal neurons. Further, TGFbeta1-p38MAPK pathway is required for the accumulation of Nrf2, a transcriptional regulator of an anti-oxidant responsive gene, in the cell nucleus. Overexpression of Nrf2 can prevent the degeneration of hippocampal neurons in the absence of TGF beta1 signal. **Conclusion :** TGF beta1-pp38MAPK-Nrf2 cascade may operate as an ageing-dependent self-defense signal against oxidative stresses. **Keywords :** TGF beta1, p38 MAPK, Nrf2

OP26 319-B-4

ROLE OF FOXO3A ON REGULATION OF ROS AND DNA REPAIR DURING CELLULAR AGING

Jeong-Hyeon KIM, Jee-In HEO, Seong-Hoon PARK, Hong-Jun KANG, Jae-Bong PARK, Jaebong KIM, Sung-Chan KIM, Jae-Yong LEE (*Hallym university, Medical School, Department of Biochemistry, Korea*)

Introduction : Since the detailed function of FOXO3a in DNA damage and DNA repair during mammalian cellular aging has not been elucidated yet, the role of FOXO3a in replicative senescence of HEF (human embryonic fibroblast) was examined. **Method :** Promoter activity assay CHIP assay Measurement of DNA repair activities. **Results :** When HEF cells were aged, FOXO3a was inactivated and APE1 expression level and BER activity were decreased. Overexpression of FOXO3a in aged HEF cells up-regulated APE1 and activated BER activity. Knock-down of FOXO3a by siRNA in young HEF cells down-regulated and inactivated BER activity. The deletion and point mutants in FOXO3a binding sites of APE1 promoter decreased promoter activity. CHIP (Chromatin Immunoprecipitation) assay showed that APE1 binding to FOXO3a binding sites of APE1 promoter was decreased in aged HEF cells, indicating that APE1 is a transcriptional target gene of FOXO3a. Deacetylation and dephosphorylation of FOXO3a (activation of FOXO3a) by various treatments resulted in up-regulation of APE1 and activation of BER as expected. Human fibroblast obtained from skin of young age group

(younger than 10 years old) had higher FOXO3a and APE1 levels and higher BER activity when compared to human fibroblast obtained from skin of old age group (older than 60 years old), confirming that aging-related correlation of FOXO3a, APE1 and BER activity exists in fibroblast of skin tissue. Conclusion : Our result showed that APE1 (a BER factor), XRCC4, a NHEJ (a factor of non-homologous end-joining) and XPC (a component of nucleotide excision repair) are transcriptional target genes of FOXO3a to mediate the decreased. Keywords : FOXO3a, Reactive oxygen species, DNA repair

OP26 319-B-5

INSULIN SIGNALING AND ITS ROLE IN LONGEVITY OF C. ELEGANS

Eun-Soo KWON (*Aging Research Center, KRIBB, Korea*)

Introduction : The Insulin/IGF-1 Signaling (IIS) pathway plays diverse roles from metabolism to longevity. In *C. elegans*, the single Forkhead Box O (FOXO) homolog DAF-16 functions as the major target of the IIS pathway. One of two isoforms, DAF-16a, is known to regulate longevity, stress response and dauer diapause. However it remains unclear how DAF-16 achieves its specificity in regulating these various biological processes. Here we identify a new DAF-16 isoform as the major isoform regulating longevity of long-lived IIS mutants. DAF-16 isoforms functionally cooperate to modulate IIS-mediated processes through differential tissue enrichment, preferential modulation by upstream kinases, and regulating distinct and overlapping target genes. Promoter swapping experiments reveal both the promoter and the coding region of DAF-16 are important for its function. Importantly, in mammals, four FOXO genes play overlapping and different functions, and in *C. elegans*, a single FOXO/DAF-16 uses distinct isoforms to fine-tune the IIS-mediated processes. Method : The *C. elegans* IIS is an evolutionarily conserved pathway that plays a central role in the regulation of longevity, development, stress response, and metabolism. Using *C. elegans* as a model system, I generated daf-16/FOXO family transcription factor ortholog transgenic worms. And I analyzed four major biological processes controlled by IIS in worms. Results : I identified a new isoform of DAF-16 protein and showed that this isoform regulates the lifespan in *C. elegans*. Therefore, multiple isoforms from the single daf-16 gene, convert diverse upstream signals into the proper regulation of its numerous target genes, in turn various phenotypes in *C. elegans*. Conclusion : DAF-16f regulate lifespan. Keywords : *C. elegans*, aging, daf-16, daf-2

OP26 319-B-6

PROTECTIVE ROLE OF SIRT1 IN UVB-INDUCED SKIN FIBROBLASTS SENESCENCE: SUPPRESSION OF OXIDATIVE STRESS AND DEACETYLATION OF P53

Ki Wung CHUNG¹, Dae Hyun KIM¹, Yeon Ja CHOI¹, Chan Hum PARK¹, Min Hi PARK¹, Eun Ji JANG¹, Daewi PARK¹, Jun Sik LEE², You Jung KIM³, Sung Jin BAE¹, Chung HAE YOUNG¹ (*1. Molecular Inflammation Research Center for Aging Intervention (MRCA), Department of Pharmacy, Pusan National University, Korea; 2. Department of Biology, College of Natural Sciences, Chosun University, Korea; 3. Department of Cosmetology, Pusan Women's College, Korea*)

Introduction : Stresses such as UV are widely known to cause premature cellular senescence, characterized by growth arrest, morphological changes, and altered gene expressions. It is also known that UV irradiation-induced cell senescence is likely due to oxidative stress and damaged DNA resulting from oxidative stress. Method : In the present study, we report that the overexpression of SIRT1

attenuates UVB-induced cell senescence by suppression of oxidative stress and deacetylation of p53 using various biochemical and histochemical analyses. Results : Under our in vitro experimental conditions, exposure to a sub-cytotoxic dose of UVB enhanced the senescence of human dermal fibroblasts (HDFs). Senescent cells showed broadened morphology as well as increased β -galactosidase activity. Adenovirus mediated overexpression of SIRT1 significantly protected HDFs from UVB-induced cellular deterioration. Evidence showing the protection of senescent cells by overexpressed SIRT1 was documented by various biochemical and histochemical analyses. UVB irradiation increased oxidative stress as well as induced the disruption of the cell cycling process, which was attenuated by SIRT1 overexpression. DNA damage from oxidative stresses caused by UVB, measured by 8-OHdG, were attenuated by SIRT1, while SIRT1 overexpression boosted anti-oxidative catalase levels. Our molecular analysis data demonstrated that deacetylation of FOXO3a by SIRT1 changed FOXO3a's transcriptional activity, leading to reduced oxidative stress. In addition, SIRT1 also suppressed UVB-induced p53 acetylation and its transcriptional activity, which directly affects cell cycle arrest induced by UVB. Conclusion : Based on these findings, we conclude that overexpression of SIRT1 exerts a protective action against UVB-induced cell senescence through suppression of oxidative stress and deacetylation of p53. Keywords : SIRT1, senescence, ultraviolet

OP26 320-S

HEALTH PROMOTION VII

OP26 320-S-1

TEMPORAL AND STRUCTURAL DIFFERENCES IN THE CARE OF OBESE AND NON-OBESE PEOPLE IN NURSING HOMES

Gerda APELT¹, Vjenka GARMS-HOMOLOVA² (*1. Institute for Medical Sociology, Charite-Universitätsmedizin Berlin, Germany; 2. Department of Economics, HTW Berlin, University of Applied Sciences, Germany*)

Introduction : Obesity is a common disease in Germany. Although care facilities are confronted with an increasing number of obese people, the care of them in nursing homes is barely investigated. The study examines the amount of work using the example of the activity of dressing obese and non-obese nursing home residents and discloses with its temporal and structural differences. Method : In five nursing homes in Berlin a fully structured observational study based on a convenience sample was conducted. 48 nurses were observed while performing the activity of dressing 70 residents aged 65 years and older. The residents' demographic data and medical diagnoses were taken from the nursing records. Information about the functional/cognitive status and pain events were collected by using the interRAI Contact Assessment. Further data regarding the nurses were obtained through face-to-face interviews. Results : We found a significant correlation between Body Mass Index and the required time of dressing. No correlations exist between age, qualifications and nurses' level of education and the time of dressing. Structural differences in the care of obese and non-obese residents appear by changes of, single activity sequences. The care of the obese residents is associated with increased time requirements and structurally differs from the care of the non-obese residents. Conclusion : The care of the obese residents is associated with increased time requirements and structurally differs from the care of the non-obese residents. This should lead to further research because it has implications for staffing in nursing homes. Keywords : Obesity, Nursing home, Care

OP26 320-S-2

AN OBESE PERSON IS FAT -AND THAT'S IT. 'NURSES' ATTITUDES TOWARDS OBESE CLIENTS IN NURSING CARE

Gerda APELT¹, Vjenka GARMS-HOMOLOVA² (1. Institute for Medical Sociology, Charite-Universitätsmedizin Berlin, Germany; 2. Department of Economics, HTW Berlin University of Applied Sciences, Germany)

Introduction : This qualitative study examines nurses' attitudes towards obese people in nursing care. **Method :** 16 guideline-based interviews with professional caregivers of an ambulatory care facility in Germany were conducted. The analysis was done using case-related coding. **Results :** The results show that nurses have predominantly negative attitudes towards obese people. In general society anchored prejudices and Social stigmas, were taken over from nurses, although they reject every form of discriminations in their professional role. The problem consciousness for obesity is limited and chances for the implementation of intervention measures are hardly seen by nurses. **Conclusion :** To promote a knowledge-based nursing care of obese people, nurses should be familiar with the causes and consequences of obesity. Future research should examine the consequences of negative attitudes to the care of those who are affected **Keywords :** obesity, attitudes, nursing staff

OP26 320-S-3

THE ASSOCIATION OF SELF BODY IMAGE PERCEPTION, WEIGHT PERCEPTION, BODY COMPOSITION AND DEPRESSION IN GERIATRIC COMMUNITY DWELLERS IN SOUTHERN BRAZIL

Laura Brenner MARIANO DA ROCHA, Eduardo Lopes NOGUEIRA, Irenio GOMES, Newton Luiz TERRA (*Geriatrics and Gerontology, IGG PUCRS, Brazil*)

Introduction : There are few studies on self body image perception (SBIP) in the elderly. There are even fewer studies dealing with SBIP and depression among the aged. The purpose of the present study is to evaluate SBIP, weight perception and body composition with depression in an elderly population. **Method :** The sample was composed by 236 elderly community dwellers. SBIP was measured through the Stunkard Scale and body composition was verified by BMI. Depression was assessed through a screening question. **Results :** 53.4% were women and 46.6% were men; 31.8% were widow, 37.7% were married, 15.3% were single. The mean age was 67.57 ± 6.72 years. The prevalence of overweight/obesity was 51.7% and normal weight was 36.9%. 66.5% were not satisfied with their body image and 40.3% were not satisfied with their weight. 30.5% had a positive screening for depression. Among the depressed 75.0% were not satisfied with their body image; 55.6% were overweight/obese and 30.6% had normal weight; 55.6% were not satisfied with their weight. Among the non depressed 62.8% were not satisfied with their body image; 50.0% were overweight/obese and 39.6% had normal weight and 10.4% were underweight; 33.5% were not satisfied with their weight. We found a statistically significant association between screening for depression and weight satisfaction (P=0.001) and no statistically significant association between screening for depression and body composition or SBIP. **Conclusion :** We found a high prevalence of body image dissatisfaction, overweight/obesity, weight dissatisfaction and positive screening for depression. We found an association between screening for depression and weight dissatisfaction. **Keywords :** depression, body image, weight satisfaction, obesity, aged.

OP26 320-S-4

NUTRITION SCREENING USING MNA-SF DETECTS ELDERLY WITH POOR NUTRITION

Josefa KACHEL¹, Felicia STERN², Dorit NITZAN KALUSKI³, Lital KEINAN-BOKER² (1. Department of Nutrition, Ministry of Health, Israel; 2. Center for Disease Control, Ministry of Health, Israel; 3. Food and Nutrition Administration, Ministry of Health, Israel)

Introduction : Elderly people are at increased risk of malnutrition. The objective of the survey was to ascertain whether a modified form of the short Mini Nutritional Assessment (MNA-SF) tool correctly identifies elderly at risk of malnutrition by evaluating their food groups and nutrient intake. **Method :** A cross-sectional study was conducted in 1,067 free-living Jewish elderly, sampled from two major Health Insurance Funds in Israel. Nutritional screening was carried out, using modified MNA-SF. To evaluate food intake, a 24-hour dietary recall was carried out. **Results :** Based on the MNA-SF score for the 'at risk for malnutrition' category (≤ 11), 36.0% of the elderly were at risk of malnutrition. Elderly 'at risk of malnutrition' compared to those with normal nutritional status, consumed significantly less portions of some food groups. Significant differences were found for energy, macronutrients, calcium, magnesium and selected micronutrients, with a lower consumption in the elderly at risk. With the modified full MNA being utilized as a gold-standard, the modified MNA-SF sensitivity (for 'risk of malnutrition' vs. 'normal nutritional status') was 87% and its specificity, 96.6%. **Conclusion :** The modified MNA-SF accurately captures elderly at risk for malnutrition. Thus, health systems should adopt MNA-SF as a screening tool and use it within the comprehensive geriatric assessment. **Keywords :** MNA-SF, 24-h dietary recall, elderly

OP26 320-S-5

PREVALENCE AND DETERMINANT OF OBESITY AMONG AGING AT JAKARTA

Charles SURJADI, Regina Satya WIRAHARDJA (*Public Health and Preventive medicine, Atmajaya Catholic University Indonesia Faculty of Medicine, Indonesia*)

Introduction : Realizing that obesity is a risk factor of Non Communicable Disease, we looked for problem of obesity among aging using data of basic health research in the year of 2007. **Method :** Respondent consisted of a total of 1,671 person of 55 years old and more selected using random sample. We collected data through questions about their age character, sex, number of household members, socio economic status etc. and do measurement of BMI. Bivariate analysis was performed using chisquaretest test ($p < 0.05$) to obesity status and multivariate logistic regression was performed to look for the best model to explain factors relate to obesity among aging. **Results :** prevalence of obesity among elderly persons were 31.29% (BMI). There were 11.6% belongs to under weight (BMI), about 25.2% smokers and 30 % household mothers. Further analysis using multivariate logistic regression gave the result that elder person with age 65 - 74 year (OR = 2.001; CI 95%= 1.284 - 3.118;) age 55-65years (OR= 1.891CI 95% 1.2-2.7), work as household mother (OR = 1.728; CI 95% = 1.261 - 2.368), higher social economy (OR = 1.788; CI 95% = 1.249 - 2.558), mild physical activity (OR = 1.874 ; CI 95% = 1.310 - 2.681;), and regularly smoking (OR = 1.605; 95% CI = 1.194 - 2.157; $p = 0.002$) were more likely to obese. **Conclusion :** This study called for attention on obesity prevention program to elderly persons concentrated on household mothers, smokers and facilitate higher social economic groups to actively did physical activities. **Keywords :** Nutrition, obesity aging

OP26 320-S-6

NECESSITY OF NUTRITIONAL EDUCATION AT THE DAY CARE CENTER FOR OBESE ELDERLY

Keiko ENDO (*Section of Oral Health Care Science for Community, Tokyo Medical and Dental University, Japan*)

Introduction : We conducted the subpopulation analysis from the nationwide survey for the more than 600 Day Care Centers throughout Japan in 2009 and 2010. Preventative care for elderly is performed by The Nursing Care Insurance system in Japan, in which nutritional intervention is programmed for underweight elderly. The overweight elderly have been left out regarding their dietary education and/or intervention. The aim of this research is to verify the necessity of a new nutrition guidance program for the overweight elderly who are receiving the day-care services. **Method :** For the purpose of examining their mental wellbeing, several questions were asked such as their judgment of present physical status, their awareness of weakening ability, their daily diet, and their request for the better services at the Day Care Center. The elderly at the Day Care Center was divided into five groups by BMI for the analysis; BMI below 18, 18-21, 22-24, 25-29, and more than 30. Overweight is categorized with BMI over 25, and various characteristics were compared with low weight group whose BMI is below 18. **Results :** Daily diet and their feeling of contentment induced by the food showed the significant correlation between each BMI group's physical activities, nursing care necessity, and the services they were receiving. A strong correlation between the overweight and the necessity for a further nursing care, especially in remedy for nutrition balance. **Conclusion :** A new nutrition guidance should be adopted at the Day Care Center to support the quality of life for the overweight elderly now and in the future. **Keywords :** Obese elderly, nutritional care, Day Care Center

OP26 321-S

RETIREMENT LIFE & RETIREMENT PREPARATION

OP26 321-S-1

RETIREMENT AND MENTAL HEALTH - A STUDY OF 237,218 AUSTRALIANS AGED 45 YEARS AND OLDER IN NEW SOUTH WALES

Kha VO¹, Julie E BYLES¹, Peta FORDER¹, Bryan RODGERS², Meredith TAVENER¹, Emily BANKS³, The Seef Project (Social, Economic And Environmental Factors) INVESTIGATORS⁴ (*1. Priority Research Centre for Gender, Health and Ageing, University of Newcastle, Australia; 2. College of Arts and Social Sciences, Australian National University, Australia; 3. College of Medicine, Biology and Environment, Australian National University, Australia; 4. New South Wales 45andUp Study, The Sax Institute, Australia*)

Introduction : In 2011, it was estimated that around 36% of Australians aged 45 years and older were retired. Due to population ageing, there is a need to examine the impact of retirement on mental health. The study sought to evaluate the associations between mental health and retirement status for men and women, and investigate reasons for retirement at different ages (<65 years versus ≥65 years). **Method :** Data from 237,218 participants within the New South Wales 45andUp Study were included in the analysis. Logistic regression was used separately for men and women at different ages (<65 years versus ≥65 years) to examine the association between mental health (measured by Kessler 10 score), retirement status and reasons for retirement, while adjusting for demographics, lifestyle behaviours and other health factors. **Results :** For participants aged less than 65 years, retirement was associated with greater chance of having high psychological

distress (K10 of 22-50) for men (OR = 1.29, 95% CI: 1.16 - 1.43), but lower chance of having high psychological distress for women (OR = 0.87, 95% CI: 0.80 - 0.95), compared to not retired participants. Participants who retired because of job redundancy or ill health were more likely to have high psychological distress, compared to those who retired due to reaching retirement age. **Conclusion :** Retirement appears to have different impacts on mental health of men and women, and is influenced by reasons for retirement and age at retirement. Retirement policies should focus on people who retired prematurely due to ill health or job redundancy. **Keywords :** Kessler 10, Retirement, Job redundancy

OP26 321-S-2

WHAT DO THEY GAIN AFTER RETIREMENT? RETIREES' LEARNING EXPERIENCES IN BRIDGE JOBS

Chih Ying HUANG¹, Ya-Hui LEE² (*1. Graduate Institute of Adult & Continuing Education Department, National Chung Cheng University, Taiwan; 2. Department of Adult & Continuing Education, National Chung Cheng University, Taiwan*)

Introduction : Bridge employment has been increasing among many developed counties under global aging trends. **Method :** The authors present a qualitative study that explored the learning process of retirees who participate in bridge employment before they retire completely. The authors conduct semi-structured interview with 6 older workers to understand: (1) what they gain from bridge jobs, (2) how they learn through bridge jobs, and (3) how such gain impact their retirement life. **Results :** The result of this study are (1) Older adults who participate in bridge employment find that bridge employment can contribute to their financial need, help them enjoy their work, bring their skills and talents into full play, fulfill their interest, and keep social contact with other people. (2) They experience learning from bridge job by the work itself and through the environment, taking lessons related to work, and reading religious books. (3) They found out that from bridge employment the reconstructing of their daily life in retirement improves, their lives become more meaningful as they achieve their goals, they have high self-esteem, they can share life experiences with others, and fully adapt to the retirement life style. **Conclusion :** Bridge employment can help older workers have a smooth transition from full time job into retirement completely. The authors then present the findings of the study, the recommendations for older adult educators, and the implications for future research. **Keywords :** bridge employment, phased retirement, older adult learning, retirement life

OP26 321-S-3

WORK AND FAMILY EXPERIENCES IN MIDLIFE AND JOINT RETIREMENT EXPERIENCES IN LATER LIFE AMONG MARRIED AMERICAN WOMEN

Jeong-hwa HO (*Sociology, Ajou University, Korea*)

Introduction : We examined associations between married American women's work and family experiences in midlife and synchronization of retirements with their husbands in later life. **Method :** We used panel data from the Wisconsin Longitudinal Study (1975-2004), an ongoing study on American men and women who graduated Wisconsin high schools in 1957. Study sample is limited to female respondents. We estimated multinomial regression models for joint retirement experiences where wives retiring before or after retirement of their husbands. **Results :** Wives who were not working in their mid-30s are more likely to retire jointly with their husbands. Wives who preferred to retire by their mid-60s and wives with lower degrees of work and family conflict at their mid-50s were more likely to retire jointly. Experience of career interruption due to family reasons during

one's midlife (mid-30s ~ mid-50s) did not significantly predict joint retirement experiences. Conclusion : Early and midlife work and family experiences continue to shape couple-level retirement decisions in later life. Joint retirement is more prevalent among wives with lower preference of continued work in later life. It suggests that joint retirement, for this age cohort, is a preferred way of labor force exit for women with traditional work and family role division throughout their life course. Keywords : retirement, life course, work and family experiences

OP26 321-S-4

THE FUTURE OF RETIREMENT IN KOREA

Edward PARK (*Institute of Insurance and Financial Research, Samsung Life Insurance Company, Korea*)

Introduction : Retirement is a complex phenomenon, one that occurs where labor market dynamics, demographics and welfare (pensions) legislation intersect. In South Korea, a country whose rapid industrialization in the latter half of the twentieth century is often held up as a model of successful economic development, the path to modernization come at a price, and population aging and limited institutional resources compete for attention with increased social welfare requirements and a pension system that is still evolving. As a result, effective preparation for retirement is still very much an uncertain proposition for a large part of the working population. In our presentation, we take another look at the unique forces that helped shape the state of Retirement in Korea today, one that may offer a glimpse into the future not only of Korea, but of the development of Asia as a whole. Conclusion : Pension and retirement issues pose unique difficulties for emerging and rapidly expanding economies. As the Korean economy matures, the focus is shifting from accumulation of assets to effective decumulation for the aging population. Keywords: Korea, Retirement, Pensions

OP26 324-C

PARKINSON'S DISEASE & STROKE

OP26 324-C-1

THE CAREGIVER EXPERIENCE IN PARKINSON'S DISEASE: FACTORS RELATED TO CAREGIVER DISTRESS IN HOME CARE SAMPLES FROM ONTARIO AND FINLAND

Andrea FOEBEL¹, Harriet FINNE-SOVERI², Matti MAKELA², Anja NORO², John HIRDES¹ (*1. School of Public Health and Health Systems, University of Waterloo, Canada; 2. Older Persons Services Unit, National Institute for Health and Welfare, Finland*)

Introduction : Parkinson's disease (PD) is the second most common neurodegenerative disorder after Alzheimer's disease. PD risk increases with age and prevalence will increase substantially with population ageing. Managing PD among individuals who remain at home can be difficult for caregivers and a better understanding of factors related to caregiver distress is needed. Method : This cross-sectional, retrospective analysis used data from interRAI's Resident Assessment Instrument - Home Care (RAI-HC) to explore caregiver characteristics in samples of home care clients with PD from Ontario (Canada) and Finland. Using these comprehensive databases, multivariate logistic regression analysis was used to identify correlates of caregiver distress in both samples. All analyses were performed using SAS, Version 9.2. Results : The prevalence of PD in Ontario was 4.3% (n=4169), and in Finland was 3.2% (n = 414). In Ontario, more clients with PD had a caregiver (99%), who was most likely a spouse. In Finland, 71% of clients had caregivers, who were most commonly children. Caregiver stress was higher in Ontario (32%) than

Finland (20%). In both samples, the factors most strongly correlated with caregiver distress were whether the caregiver lived with the client, and whether the client with PD had a recent change in behaviour. Other factors related to caregiver distress were caring for male clients, depression, but not age. Conclusion : These results show that identification of caregivers at risk for distress may be possible. Interventions designed to support caregivers of home care clients with PD could help with overall disease management and reduce health service use and institutionalization. Keywords : Parkinson's disease, caregivers, home care

OP26 324-C-2

A STUDY OF FACTORS PREDICTING THE EFFICACY OF STN-DBS FOR ELDERLY PARKINSON'S DISEASE

Yutaka SUZUKI¹, Katsuhiko OGAWA¹, Hiroshi SHIOTA¹, Satoshi KAMEI¹, Hideki OSHIMA², Chikashi FUKAYA³, Takamitsu YAMAMOTO³, Yoichi KATAYAMA² (*1. Division of Neurology, Department of Medicine, Nihon University School of Medicine, Japan; 2. Department of Neurological Surgery, Nihon University School of Medicine, Japan; 3. Division of Applied System Neuroscience, Department of Advanced Medical Science, Nihon University School of Medicine, Japan*)

Introduction : Subthalamic nucleus deep-brain stimulation (STN-DBS) effectively improves motor function in Parkinson's disease (PD) patients who respond poorly to pharmacological management. Generally, an age of 65 years or less is thought to be an indication for surgery; however, STN-DBS is also feasible in the elderly. The efficacy of STN-DBS varies from patient to patient. We studied the factors predicting the rate of improvement following STN-DBS in elderly PD patients. Method : The Nihon University Itabashi Hospital has been performing STN-DBS for PD patients 70 years of age or older. Expert neurologists evaluated patients before and after STN-DBS. These patients were classified into the following four groups using the rate of improvement assessed by the off-period Unified Parkinson's Disease Rating Scale (UPDRS) part III score (post-operative score / pre-operative score): Group A (up to 10%: no change) (6 cases), Group B (between 10% and 25%: mild improvement) (8 cases), Group C (between 25% and 35%: moderate improvement) (9 cases), and Group D (over 35%: marked improvement) (17 cases). Age, pre-operative LED, morbidity duration, and pre-operative UPDRS part II and III scores were used as criteria. Results : Group D showing marked improvement following STN-DBS had a shorter duration of morbidity than group A (no change), and had lower on-period pre-operative UPDRS part II and III scores. Conclusion : These results suggests that shorter duration of morbidity, and lower on-period pre-operative UPDRS part II and III scores could be predictors of the rate of improvement following STN-DBS in elderly PD patients. Keywords : predicting factor, STN-DBS, elderly, Parkinson's disease

OP26 324-C-4

ELDERLY AND REHABILITATION OUTCOMES IN POST-STROKE PATIENTS

Maria Panagiota PANOURGIA¹, Alberto MALOVINI², Caterina PISTARINI¹ (*1. Neurorehabilitation, Salvatore Maugeri Foundation, Italy; 2. Statistics Department, University of Pavia, Italy*)

Introduction : Stroke is a leading cause of disability and as a result of the increasing of life-span, older people have a greater incidence and prevalence of stroke, thus is important to examine the outcomes in terms of functional disability and neurological conditions after a 2 months of intensive neuro-rehabilitation treatment. Method : We

selected stroke (ischemic or hemorrhagic) affected patients, admitted from an acute ward (Intensive Care, Neurosurgery, Stroke Unit) and with Glasgow Coma Scale ≥ 12 . To define the performances in activities of daily living at admission, Barthel Index (BI) has been considered. We used the National Institutes of Health Stroke Scale (NIHSS) to evaluate neurological status and Functional Independence Measure (FIMTM) to assess functional disability. Results : 122 patients have been selected (age range 20-89 years). Age has been dichotomized using a cut off value corresponding to 65 years ($n \geq 65$ years = 76 patients; $n < 65$ = 46 patients). Patients < 65 y.o. had worst neurological conditions comparing to the ≥ 65 y.o. at admission and at discharge ($p=0.07$). Elderly patients were more independent at admission (< 65 y.o. median BI = 65, ≥ 65 y.o. median BI = 85) even though this difference was not statistically significant ($p > 0.05$). Regarding FIM scale, younger patients became significantly more independent after hospitalization period ($p < 0.05$). Conclusion : Even though younger patients seem to better recuperate in terms of functional disability, older patients have a better outcome in their neurological conditions. Consequently, older patients may cope better after a rehabilitation treatment. Keywords : rehabilitation outcomes, stroke

OP26 324-C-5

STATIN USE AMONG ELDERLY PATIENTS WITH NON-CARDIOEMBOLIC ISCHAEMIC STROKE: A TURKISH POPULATION STUDY

Vildan BINAY SAFER¹, Umut SAFER², Ilker TASCI², Fusun KOSEOGLU¹, Huseyin DORUK² (1. *Physical Medicine and Rehabilitation, Ankara Physical Medicine and Rehabilitation Training and Research Hospital, Turkey*; 2. *Geriatrics, Gulhane School of Medicine, Turkey*)

Introduction : Stroke is a major cause of disability and death worldwide. Preventing recurrence is important in reducing the mortality and disability associated with this condition. Lipid lowering therapy is one of the key point in stroke prevention. The aim of this study was to investigate lipid lowering therapy use rate and control of hyperlipidemia among Turkish non-cardio embolic ischemic stroke patients on rehabilitation program. Method : Stroke survivors who were recruited to inpatient rehabilitation program between January 2009 and December 2010 were retrospectively examined in this single center study. Demographic data, etiology of stroke, duration of stroke, acute stroke care center, co morbid diseases and medical data and lipid profile were recorded. Results : 1002 stroke patients' records were screened. 402 elderly non-cardio embolic ischemic stroke patients fulfilled the inclusion criteria and underwent assessment. Mean age was 75.86 ± 6.68 . 51.2% were woman and mean post stroke time was 7.4 ± 18.11 month. 247(61.4%) patients' low-density lipoprotein (LDL) levels were > 100 mg/dl. Statin use rate was 23.6% and 45.3% of these patients' LDL were not at target level. Conclusion : In this study, we found lower rates of statin use among Turkish elderly stroke survivors, particularly among patients; statins were indicated according to existing guidelines Lipid profile and statin use should be, carefully, assessed in elderly non-cardio embolic stroke survivor. Keywords : stroke, Lipid, elderly

OP26 324-C-6

ANALYSIS OF NORMATIVE FINGER FORCE CONTROL CAPABILITIES FOR QUANTITATIVE EVALUATION OF MOTOR INTENTIONAL DISORDERS

Baekhee LEE¹, Hyunji PARK¹, Kihyo JUNG², Byunghwa LEE³, Giltae YANG⁴, Hojun JEON⁴, Duklyul NA³, Heecheon YOU¹ (1. *Department of Industrial and Management Engineering, POSTECH, Korea*;

2. *School of Industrial Engineering, University of Ulsan, Korea*; 3. *Department of Neurology, Sungkyunkwan University School of Medicine, Samsung Medical Center, Korea*; 4. *R&D Research, SEED Technology, Korea*)

Introduction : Motor intentional disorders (MIDs), caused mainly by the impaired frontal lobe, degrade the capabilities of motor functions by damaging the action-intention system. Small-scale studies have found that force control capabilities in four phases (initiation, development, maintenance, and termination) significantly differ between normal controls and patients with MID. The present study was intended to establish a normative database of force control capabilities that can be used for quantitative evaluation of MID. Method : The finger force capabilities of 360 healthy participants (30 males and 30 females from each of age strata 20s to 70s) were measured using a force measurement system. Four-factor mixed-subjects ANOVA and Turkey-Kramer test as post-hoc analysis were conducted to analyze the effects of age, gender, hand (left and right), and location (left and right) on force control capability. Results : The force capabilities of all the phases were found significantly decreased by age. A significant gender effect on force control capability was found only at the initiation and maintenance phases. Based upon the post-hoc analysis results, a normative database of force control capabilities classified into four age groups (20s ~ 30s, 40s ~ 50s, 60s, and 70s) and gender (female and male) were established. Conclusion : The normative database of force control capabilities would be useful for better assessment of MID by considering age and gender. Future research is needed to develop a diagnostic model which evaluates the existence and severity of MID by analyzing the force control capabilities of patients with various MIDs in comparison with the normative database. Keywords : Motor intentional disorder, Force control capability, Normative database

OP26 406-S

GENERATIONAL EQUITY & CONFLICT

OP26 406-S-1

NEW PERSPECTIVES ON INTERGENERATIONAL SOLIDARITY: COMPARING THE VIEWS OF 'ORDINARY' CITIZENS AND POWERBROKERS IN IRELAND

Thomas SCHARF¹, Gemma CARNEY¹, Virpi TIMONEN², Catherine CONLON² (1. *Irish Centre for Social Gerontology, National University of Ireland Galway, Ireland*; 2. *Social Policy and Ageing Research Centre, Trinity College Dublin, Ireland*)

Introduction : Population ageing, combined with the economic recession that has affected many western nations since 2008, has reinvigorated longstanding debates about the distribution of resources between generations. Central to such debates are concerns around the status of intergenerational relations at times of major social and economic transformation. Previous research highlights the continuing strength of intergenerational solidarity amongst 'ordinary' citizens in many western nations and suggests only limited potential for inter-generational conflict. However, the views of 'ordinary' citizens may not be shared by those in positions of power. Method : This paper presents findings from a unique study which explores the potentially contrasting perspectives of 'ordinary' citizens and 'powerbrokers' on intergenerational relations in Ireland. One hundred in-depth interviews were conducted in 2011-12 with a diverse sample of people of all ages living in Ireland. A further twenty in-depth interviews were undertaken in 2012 with powerbrokers representing Ireland's particular welfare mix. Both datasets probe intergenerational relations at individual, family and societal levels. Using constructivist Grounded Theory

techniques to analyse the data, the paper compares and contrasts 'ordinary' individuals' perceptions of intergenerational relations with those of leading public figures drawn from the state, market and community sectors of Irish society. Results : While analysis reveals little evidence to suggest that (potential) conflict between generations represents a major concern in Ireland, the paper highlights important differences between the perspectives of 'ordinary' people and powerbrokers around the distribution of resources within and across generations. Conclusion : The paper concludes by identifying key issues arising from the study for research and public policy. Keywords: Intergenerational solidarity, Constructivist grounded theory, Qualitative research

OP26 406-S-2

GENERATIONAL COMPARISON OF EMOTIONAL WELL-BEING

Yadollah ABOLFATHI MOMTAZ, Tengku Aizan HAMID, Rahimah IBRAHIM (*Social Gerontology, Institute of Gerontology, Universiti Putra Malaysia, Malaysia*)

Introduction : There are several negative stereotypes about older adults, which have negatively influenced people's attitude about ageing. Therefore, it is imperative to do research that may dispel these myths about ageing. The present study was conducted to compare emotional well-being between older adults and young people. Method: Data for this study comprised of 1403 community dwelling elderly persons and 1190 secondary school students, were obtained from two national cross-sectional surveys namely "Patterns of Social Relationship and Psychological Well-Being among Older Persons in Peninsular Malaysia (PSRPWO)" and "Mental and Spiritual Well-Being among Adolescents (MSWBA)", respectively. Emotional well-being was measured using WHO-Five Well-Being Index. Data analysis was conducted using a multivariate analysis of covariance (MANCOVA) with SPSS software version 20. Results : Elderly people significantly scored higher level of emotional well-being ($M=62.3, SD=22.55$) than younger age ($M=57.9, SD=18.46$); ($t=5.32, p\leq.001$). The findings from MANCOVA revealed a significant difference between older adults and younger people in emotional well-being ($F(3, 2587) = 120.21, p\leq.001; \eta^2=.122$), after controlling for gender. Conclusion : Contrary to negative ageist stereotypes of miserable elderly, our findings showed higher level of emotional well-being among older adults compared to younger people. The principal findings of the present research together with previous studies jibe with socioemotional selectivity theory as well as wisdom theory. The findings from the present study can be employed by the media to demonstrate more positive images of older people, which may promote positive attitudes to ageing. Keywords : Ageism ; Well-Being

OP26 406-S-3

AGING IN SINGAPORE: EXPLORING INTERGENERATIONAL RELATIONS

Cindy TAN (*Centre for Governance & Leadership, Civil Service College, Singapore*)

Introduction : Singapore has one of Asia's fastest ageing population. As a small country with human resources as its competitive advantage, encouraging older employees to work longer is key to maintain Singapore's economic progress. The Government recognised the effects of an ageing workforce and enacted the re-employment legislation from January 2012 onwards. This legislation enabled older employees to work beyond the retirement age. In an increasingly multi-generational and team-based work environment, both the older and younger generation of employees collaborate closely at the

workplace. Research studies found that four generations of employees (i.e. Generation Y, Generation X, Baby Boomers and Traditionalists) co-exist at our workplace and often result in intergenerational issues. Within the Public Service of 120,000 staff, more than 10% are currently aged 55 and above, with this percentage rising progressively in future. Method : Literature Review Survey Research. Results : As the largest employer in Singapore, the Public Service offers many opportunities for our young graduates, recruiting them in roles that supervise employees who are much older than them. However, Generation Y employees' lack of generational differences awareness, perceived bias on baby boomers/traditionalists as well as skills and experience in managing and working with older employees can cause tensions at the workplace and undermine effectiveness of our multi-generational workforce. Similarly, baby boomers/traditionalists whose work motivations differ vastly from Generation Y employees, have limited knowledge on the latter's work expectations and styles. Conclusion : The situation of older people working longer in Singapore and the issues arising intergenerational differences are outlined in this research. Keywords : Intergenerational Relations

OP26 406-S-5

A STUDY ON THE CHANGE OF LIFE IN THE BABY BOOMER GENERATION

Yang-Hee KANG¹, Yu-Mi JANG², Carol KIM³ (*1. Department of Nursing, Changshin University, Korea; 2. Department of Social Welfare, Changshin University, Korea; 3. Department of English, Changshin University, Korea*)

Introduction : This study attempts to find how the government policies regarding population aging may affect the life patterns of the baby boomer generation and what factors play a significant role in providing life satisfaction. This study hopes to contribute to the understanding of the baby boomer generation who has been playing major roles in building the nation of South Korea. Method : This study uses the data provided by Korea Welfare Panel Study published between the years 2006 and 2009. The research data consists of the data about the members of households who were born between the years 1955 and 1963. The model selected for this study is Structural Equation Modeling and for the data analysis, AMOS 7.0 is used to verify the variables year by year. Results : First, according to the analysis of the data from Korea Welfare Panel Study in the year 2006, the factors affecting the life satisfaction are family relations, health and social relations. However, in the case of the data from Korea Welfare Panel Study between the years 2007 and 2009, the major factor is not the present income providing security or life satisfaction. Second, the next significant factor in improving the quality of life is family relations after health or occupation. Conclusion : Therefore, the government should provide them with re-employment programs prior to their retirement through which baby boomers can find employment similar or different to their present occupations. In addition, the government should impose structured senior employment policies so that baby boomers can find employment. Keywords : baby boomers (baby boomer generation), senior employment policy, family-friendly policy, life satisf

OP26 412-R

LONG TERM CARE

OP26 412-R-1

THE STUDY ON THE LONG-TERM CARE POLICY?--IN THE CASE OF QIQIHAER CITY

Weimei SHI (*Management School, Minzu University of China, China*)

Introduction : The City of QiQiHar, of Heilongjiang Province in China, as an underdeveloped city, was evaluated to be the unique International Age-Friendly City by WHO in China in 2011. This oral presentation will discuss the advantages upon which QiQiHar City won this honor and the reason why it can compete with many other developed cities. The presenter with other investigators went to QiQiHaer city to conduct a survey in June of 2012 under the support of National Social Science Fund Project (12CRK014). This presentation will show the result of the investigation. It will discuss the role of government, enterprises, nonprofit organizations and families of the elderly using the analytical framework of welfare pluralism. **Method :** The study was conducted in terms of literature analysis, social network and in-depth interviews. **Results :** It finds out that although the financial situation of QiQiHaer city is comparatively underdeveloped in China, the government's policy and its degree of attention to the welfare of the elderly are very important because they will encourage and attract the social funds to invest in establishing the non-profit nursing home, and contributes to motivate the social capital to help the elderly. **Conclusion :** Financial situation is important in providing welfare for the elderly, but the case of QiQiharer city has proved it isn't necessarily the most important factor. Poor financial situation will become comparatively advantageous due to its lower human resource costs in providing service, if the government takes proper responsibilities. **Keywords :** Social Network, Long-term Care Policy, Welfare Pluralism

OP26 412-R-2

HOW TO IMPROVE QUALITY IN NURSING HOME AND LONG TERM CARE FACILITIES WITH PRACTICAL AND EFFECTIVE TOOLS? THE FRENCH EXPERIENCE MO BI QUAL (MOVE TO QUALITY)

Sebastien DOUTRELIGNE¹, Florence DELAMARRE DAMIER², Gilles BERRUT³, Genevieve RUAULT¹ (1. Ile De France, French Society Of Geriatrics and Gerontology, France; 2. Maine Et Loire, French Nursing Home Research Organization (AGREE), France; 3. Geriatrics Department Nantes University Hospital, French Society Of Geriatrics and Gerontology (SGFF), France)

Introduction : The French Society of Gerontology and Geriatrics, and the French health care Authorities have proposed educational and training tools with the aim of improving the quality of care in institutions. These tools are topic based kits that focus on welfare, depression, palliative care, pain, nutrition and Alzheimer's diseases and other dementias. The objective of this study is to demonstrate (with the use of questionnaires pre and post experiment) that using "Mobiqual" tools increase the quality of care in nursing homes and long care facilities. (pain tool). **Method :** 6,020 professionals from 128 different structures have benefited from this tool. (nurses (23%), carers (21%), physicians (21%) health managers (17%), psychologists (7%) and others (10%) 193 POST-training questionnaires were sent to 111 nursing homes on the following items: pain identification, assessment and systematic monitoring of pain, number of professionals involved in "pain evaluation behavior", practices changes in terms of evaluation and monitoring of pain. **Results :** Systematic evaluation of pain are performed during the stay for 86% of the patients, 65% are evaluated at the entrance, 75% of institutions routinely perform follow-up of pain and a tracking sheet is included in the patient file; Scales of self-evaluation and other scales are used for identification and evaluation of pain in almost 64% of the cases. The visual scale is used in only 12% of cases, the numeric scale in 10%. Another 14% say not to use any scale. **Conclusion :** These Mobiqual tools are particularly practical for the quality of care. They help in the approach to patient health and

personal care. **Keywords :** practical tools ,quality ,nursing home

OP26 412-R-3

HOW TO IMPROVE QUALITY IN NURSING HOME AND LONG TERM CARE FACILITIES WITH PRACTICAL AND EFFECTIVE TOOLS? (WELFARE TOOL)THE FRENCH EXPERIENCE MO BI QUAL (MOVE TO QUALITY)

Sebastien DOUTRELIGNE¹, Florence DELAMARRE DAMIER², Gilles BERRUT³, Genevieve RUAULT¹ (1. Geriatrics, French Society of Geriatrics and Gerontology (SFGG), France; 2. Maine Et Loire, French Nursing Home Research Organization (AGREE), France; 3. Geriatrics University Hospital, French Society of Geriatrics and Gerontology (SFGG), France)

Introduction : The French Society of Gerontology and Geriatrics, and the French health care Authorities have proposed educational and training tools with the aim of improving the quality of care in institutions. The objective of this study is to demonstrate (with the use of questionnaires pre and post experiment) that using "Mobiqual" tools increase the quality of care in nursing homes and long care facilities. (WELFARE TOOL). **Method :** 168 different facilities have benefited from this tool. (University hospital (34), local hospital (21), training organization (23) nurses (3), others (2). 250 POST-training questionnaires were analyzed on the following items: does the welfare thematic exist in your structure? How many meetings were organized? Who are the professionals involved? What kind of changes did you observe in your practice? **Results :** 90 % of the structures have a welfare thematic. The tool is used from a quality point of view in 80 % of cases. A average of 6 work meetings were organized (12 hours), 1432 meetings were performed in 232 institutions. 8745 professionals were involved, and the movie was really appreciated (average note 8,5/10), with a debate after the meeting in 82 % of cases. The tool is used mainly by the health professionals (69%) and they believe that the tool had a positive impact on their practice (99%), to prevent welfare risk situations (87%), to help resident (93%) and health staff quality of life (75%). **Conclusion :** These Mobiqual tools are particularly practical for the quality of care. They help in the approach to patient health and personal care. **Keywords :** welfare, training tool, nursing home

OP26 412-R-4

QUALITY OF END-OF-LIFE CARE OF ELDERLY ADULTS WITH CANCER IN ISRAEL

Netta BENTUR¹, Shirli RESNIZKY¹, Sophia EILAT-TSANANI², Ran BALICER³ (1. Center for Research on Aging, MYERS-JDC Brookdale Institute, Israel; 2. North District, Clalit Health Services, Israel; 3. Research and Planing Center, Clalit Health Services, Israel)

Introduction : Although awareness of the quality of care of terminal cancer patient and their palliative needs has grown in Israel, only a small minority receive it. To demonstrate its advantages to decision-makers and service suppliers, we conducted a study examining the quality and cost of care of patients who received and did not receive home-hospice care. This presentation shows the quality of care in both groups. **Method :** Personal interviews with 193 family members of deceased cancer patients in one district of an Israeli HMO. **Results :** The average age of the deceased patients was 69, 65% were 65+, 60% were men. About 95% of patients who received home-hospice care received opiate medication in the severe stage of illness whereas only 68% of patients without home-hospice care received such medication. Far more patients with home-hospice were treated according to the principles of palliative care (receiving explanations on patient rights, including the patient and family members in decision making,

continuity of care, writing advance directives, dying at one's place of choice, foregoing curative medication at the end of life etc.) than patients with no home-hospice. Palliative sedation as part of treatment was much higher among those with home-hospice (45% and 25% respectively). Conclusion : Every effort should be made to increase the number of patients treated by palliative services at the end of life to improve both the efficiency and the quality of their care. Keywords : End-of-Life, QLC, Hospice-Care

OP26 412-R-5

CAN NETWORKS OF RESEARCH ACTIVE CARE HOMES FOR OLDER PEOPLE BE CREATED AND SUSTAINED?

Sue DAVIES¹, Claire GOODMAN¹, Steve ILIFFE², Jill MANTHORPE³, Adam SMITH⁴, Natasha CARRICK⁴ (1. *Centre for Research in Primary & Community Care, University of Hertfordshire, United Kingdom*; 2. *Primary Care and Population Sciences, University College London, United Kingdom*; 3. *NIHR School for Social Care Research, King's College London, United Kingdom*; 4. *NIHR Dementias and Neurodegenerative Diseases Research Network (DeNDRoN), University College London, United Kingdom*)

Introduction : In the UK care homes are one of the main providers of long term care for older people with dementia. Despite the recent increase in care home research, residents with dementia are often excluded (Gordon et al, 2012). Networks of research enabled care homes may increase recruitment of people with dementia (MAGDR, 2009). Internationally, comparable networks of nursing homes focus on education and training. The ENRICH research network is an England wide initiative to promote care home participation in research. Method : The ENRICH care home network was piloted in four regions of England. An evaluation was commissioned to assess the impact of the networks and describe the implementation process. A mixed method approach was used: Phase 1 mapped current care home involvement in research across England using on-line searches, interviews with researchers and care home staff. Phase 2 evaluated the impact of the networks on recruitment to studies, staff engagement, and costs. Results : Thirty three out of 42 research studies identified were confirmed as including care homes (January 2011 to June 2012). Their research focus, methods and numbers varied considerably. Care homes were recruited to the research networks through corporate engagement and individual invitation. Recruitment costs were calculated for individual networks. Care home managers were keen to be involved in research, especially if it provided support for staff or direct benefits for residents. Conclusion : Care home research networks have the potential to increase recruitment to research studies and develop partnerships between health care services and care home providers. Keywords : Dementia Older people Research networks

OP26 419-B

CELLULAR AND MOLECULAR BIOLOGY OF AGING II

OP26 419-B-3

SYSTEMIC TREATMENT BY COLLAGENOLYTIC ENZYME: NEW APPROACH TO THE REJUVENATION PROBLEM

Alexander RABINOVICH¹, Pavel RABINOVICH², Yaffa LERMAN² (1. *Geriatrics, Tel Aviv Sourasky Medical Center, Israel*; 2. *Geriatrics, Sourasky Tel Aviv Medical Center, Israel*)

Introduction : All attempts for systemic rejuvenation of the old mammalian organism were not successful. Aging of connective tissue extracellular proteins (CTEP) colloidal condition is supposed to be the principal timer in aging 'Biological Watch'. Method : The specific

Collagenolytic Agent (CLA) was used for the old CTEP destruction with simultaneous synthesis of new CTEP, as a fibroblasts reaction. CLA was injected in the rat's tail vein twice weekly for 12 weeks. The monitored parameters were: - Urine hydroxyprolin excretion as indicator of the mature/old collagen destruction - Content of mature/old collagen and elastin in the dermis of the skin sections by skin biopsy. - Oxygen consumption as an indicator of all-body metabolic activity. We hope that the improvement of the internal body cells' environment connective Tissue will reverse the aging process. Results : Injection of CLA causes statistically significant increase of the hydroxyprolinuria (1.5 times in average; $p < 0.05$). The distribution and density of mature/old collagen histochemically were significantly lower in biopsies obtained after the course of the injections of CLA and amount of the elastic fibers was in 1.6 times higher ($p < 0.001$). The rate of oxygen consuming by the rats increased after the course of CLA injection in 1.4 times ($p < 0.001$). Conclusion : Injection of CLA resulted in breakdown of old collagen and formation of new (young) collagen matrix. Formation of the elastic fibers significantly increased. All-body oxygen consumption increased too. These data can be interpreted as the signs of CLA systemic anti-aging activity. Keywords: rejuvenation, ageing, collagen, connective tissue

OP26 419-B-4

THE ROLE FOR NON-RECEPTOR TYROSINE KINASE C-ABL IN MESENCHYMAL STEM CELL SENESCENCE AND DEVELOPMENT OF SENILE OSTEOPOROSIS

Huijuan LIU, Lili LI, Baojie LI (*The Bio-X Institutes, Shanghai Jiao Tong University, China*)

Introduction : Tissue stem cells underlie the etiology of aging-related diseases such as osteoporosis, a disorder that is associated with a decrease in the number of mesenchymal stem cells (MSCs) and impeded MSC differentiation into osteoblasts, the bone-forming cells. Yet, how MSC homeostasis is controlled remains a mystery. Method : We analyzed bone remodeling of *c-Abl*^{-/-}, *p16*^{-/-} and *c-Abl*^{-/-}*p16*^{-/-} mice and studied proliferation, differentiation, and aging of the primary MSCs from these mice. Results : We found that proto-oncogene *c-Abl*, a disease gene for chronic myeloid leukemia, plays a critical role in MSC homeostasis and bone remodeling (Li et al, *Nature Genetics*, 2000, Li et al, *Genes and Dev.* 2004). *c-Abl*^{-/-} mice show defects in osteoprogenitor expansion and osteogenic differentiation, leading to decreased bone formation and development of senile osteoporosis. Moreover, *ex vivo* MSC, osteoprogenitors, and MEFs all undergo premature senescence, which is accompanied by upregulation of pro-aging *p16INK4a* and/or *p53* (Kua et al, *Nature Cell Biology*, 2012; Zhang et al, *Age*, 2012; Chau et al, *Nature Communications*, 2012). In MSCs/osteoprogenitors, *c-Abl* regulates *p16INK4a* expression by phosphorylating *BMPRIA* and differentially affecting the canonical and non-canonical pathways of BMPs (major growth factors for bone formation). Mouse genetic studies revealed that *p16INK4a* controls MSC homeostasis and mediates the effects of *c-Abl* deficiency on MSC and bone formation defects. Future studies will focus on how *c-Abl* activity is controlled during MSC homeostasis. Conclusion : These studies help to understand how *Abl* kinases regulate stem cells homeostasis and oncogenic transformation and help to identify drug targets for prevention or treatment of osteoporosis. Keywords : MSC, osteoporosis, senescence

OP26 419-B-5

IDENTIFICATION OF LONG NON-CODING RNAs REGULATED BY ESTROGEN IN OSTEOBLASTIC CELLS

Kotaro AZUMA¹, Kazuhiro IKEDA², Tomohiko URANO³, Kuniko HORIE², Yasuyoshi OUCHI¹, Satoshi INOUE³

(1. Department of Geriatric Medicine, Graduate School of Medicine, The University of Tokyo, Japan; 2. Division of Gene Regulation and Signal Transduction, Research Center for Genomic Medicine, Saitama Medical University, Japan; 3. Department of Anti-aging Medicine, Graduate School of Medicine, The University of Tokyo, Japan)

Introduction : Osteoporosis is one of the menaces in aged society since osteoporotic patients are at high risk of bone fracture which reduces ADL and QOL of elderly people. Effectiveness of hormone replacement therapy indicates a bone protective role of estrogen. Estrogen is shown to have several targets in bone tissue, for example, osteoblast, osteoclasts and bone marrow lymphocytes. Action of estrogen is mediated by estrogen receptor alpha and beta, which function as ligand-dependent transcriptional factors regulating specific target genes. Recently, RNA products which are not translated into proteins have been gradually considered to play biological roles. Such RNAs longer than 200 bp are called long non-coding RNAs. The aim of this study is to investigate the estrogen-regulated transcription of long non-coding RNAs in osteoblastic cells. **Method :** Primary osteoblasts were isolated from calvarias of 4-day-old ER alpha deficient mice and control wild type mice of both sexes. Osteoblasts were stimulated by 100 nM estradiol for 24 h, then RNA was isolated from these cells. Sequencing was carried out with the Illumina Genome Analyzer IIX platform (GAIIX) using 41-bp single read. **Results :** Several long non-coding RNAs were differentially detected in osteoblasts from wild type mice compared with osteoblasts from ER alpha-deficient mice. Among them, we found some novel transcripts which are not involved in the present databases. Induction of some long non-coding RNAs by estrogen stimulation was observed using osteoblastic cell line, ST2. **Conclusion :** Other than transcriptional regulation of protein-coding genes, we propose novel estrogen actions by inducing functional long non-coding RNAs in osteoblasts. **Keywords :** osteoporosis, estrogen, long non-coding RNA

OP26 419-B-6

HIPPOCAMPUS, NEUROGENESIS IN MITOCHONDRIAL AGEING

Michiru D. SUGAWA¹, Hans ROMMELSPACHER², Regine HILL², Norbert A. DENCHER³, Monika FRENZEL³ (1. Clinical Neurobiology, Department of Psychiatry, Charite-Universitaetsmedizin Berlin, Technische Universitaet Darmstadt, Germany; 2. Clinical Neurobiology, Department of Psychiatry, Charite-Universitaetsmedizin Berlin, Germany; 3. Chemistry and Physical Biochemistry, Technische Universitaet Darmstadt, Germany)

Introduction : The aim of our studies is to elucidate the key factors of successful-, healthy-, and smart-ageing, instead of prolongation of solely life span. To gain insight into the molecular mechanisms of ageing we have focussed on the involvement of mitochondria as trigger and/or target of ageing in hippocampus, as compared to other brain regions as well as to heart and liver. The hippocampus plays various important roles such as in learning and memory. Hippocampal perturbation is one of the earliest symptoms of Alzheimer's disease. **Method :** To survey the ambitious aim of understanding the basic mechanisms of ageing, we have studied age-associated alterations in the mitochondrial proteome and of OxPhos enzyme activities of selected rat brain regions, the cortex, striatum, and hippocampus. Currently, the influence of calorie restriction is analysed. **Results :** In respect to mitochondrial bioenergetics and changes in the protein profile, the hippocampi show surprisingly different features. The age-related changes in the amount of intact MFoF1 ATP synthase and in its distribution as oligomers might be a clue for understanding the link between respiration and longevity. The abundance of OxPhos

complexes and supercomplexes, the natural assemblies of the respiratory chain complexes I11112IV0-4 into supramolecular stoichiometric entities, such as I11112IV0-4, considerably differs between young and aged tissue. **Conclusion :** The age-related changes observed might explain alterations in respiratory activity and ROS production during aging and age-associated diseases. Supported by the BMBF grant 0315585D GerontoMitoSys "Systems Biology in Health Ageing" and EU grant "MiMage" **Keywords :** brain ageing, hippocampus, mitochondria

OP26 419-B-7

FOXO6 IS A NEW COMER OF FOXO FAMILY THAT MEDIATES INSULIN-DEPENDENT REGULATION OF HEPATIC GLUCOSE PRODUCTION

Dae Hyun KIM¹, Henry DONG², Hae Young CHUNG¹ (1. Department of Pharmacy, Molecular Inflammation Research Center for Aging Intervention, Pusan National University, Korea; 2. Children's Hospital of Pittsburgh, University of Pittsburgh School of Medicine, USA)

Introduction : Excessive hepatic glucose production is causative for fasting hyperglycemia in diabetes. We investigate hepatic regulation of gluconeogenesis by FoxO6, a new member of FoxO nuclear factor family. FoxO6 activity is up-regulated, correlating with increased gluconeogenesis in liver under fasting conditions. **Method :** Using adenovirus-mediated gene transfer approach, we delivered FoxO6 cDNA and its siRNA to achieve gain- vs. loss-of-function in mice. **Results :** FoxO6 gain-of-function stimulates hepatic gluconeogenesis, raising fasting blood sugar levels. In contrast, FoxO6 loss-of-function suppresses gluconeogenic activity, contributing to lower fasting blood sugar levels. FoxO6 stimulates the expression of G6Pase, a hepatic enzyme that catalyzes the rate-limiting step of gluconeogenesis. FoxO6 binds and enhances G6Pase promoter activity, and this effect is counteracted by insulin. Insulin inhibits FoxO6 activity in a distinct mechanism by promoting its phosphorylation and disabling its binding to target promoters without altering its subcellular distribution. To address the potential synergistic effect of FoxO6 and FoxO1 on glucose metabolism, we achieved co-production vs. double-knockdown of FoxO6 and FoxO1 in liver. FoxO6 in concert with FoxO1 augments hepatic G6Pase expression at much higher levels, producing an additive effect on hepatic G6Pase activity and fasting blood glucose levels. Hepatic FoxO6 activity is markedly induced in insulin-resistant and insulin-deficient livers of dietary obese mice, diabetic db/db mice and streptozotocin-induced diabetic mice. **Conclusion :** These data characterize FoxO6 as a new regulator and therapeutic target of gluconeogenesis. Augmented FoxO6 activity, resulting from insulin resistance or deficiency, is attributable to excessive hepatic glucose production and fasting hyperglycemia in diabetes. **Keywords :** FoxO6, Glucose metabolism, Insulin

OP26 420-S

LONG TERM CARE XII

OP26 420-S-1

PREVALENCE OF POSSIBLE RISK FACTORS FOR INCREASING ELIGIBILITY LEVEL IN HOME HELP SERVICE USERS OF JAPANESE LONG-TERM CARE INSURANCE SYSTEM: THE CROSS-SECTIONAL STUDY

Kuniyasu KAMIYA¹, Sumio YAMADA², Kenji SASOU³, Makoto FUJITA⁴ (1. Rehabilitation Center, Kitano Hospital The Tazuke Kohukai, Japan; 2. Department of Rehabilitation Sciences, Nagoya University Graduate School of Medicine, Japan; 3. Welfare Department, CO-OP AICHI Consumer Co-operative Society, Japan; 4. Welfare Department, CO-OP KANAGAWA Consumer Co-operative

Society, Japan)

Introduction : Growing cost of nursing care is common concern in the aging countries. In Japan, the cost of long-term care insurance (LTCI) system doubled between 2000 and 2009. For maintaining the system, it is necessary to create the strategy for preventing the increase of the eligibility level. However, the risk factors for increasing eligibility level have not revealed. This study aimed to survey the prevalence of possible risk factors in persons who receive home help service in Japan. **Method :** This is a cross-sectional study of home help service users who were certified as LTCI support level 1-2 and care level 1-2 in Japan. Data were collected from October 2011 to November 2011. Variables included eligibility level, grip strength, calf circumference (CC), body mass index (BMI), memory impairment, depression, functional limitation, participation restriction, social support, and nutrition status. The presence of risk was evaluated with the cut-off values of previous studies. The data of care level 2 were compared with ones of care level 1 or less. **Results :** A total of 417 subjects (109 males and 308 females, mean age 83 years) were examined. There were 109 subjects (26.1%) with memory impairment. By dividing by cut-off values, care level 2 was found to have higher prevalence of low grip strength, low CC, and depression. **Conclusion :** High prevalence of memory impairment indicated the importance of assessment without recalling, such as grip strength, CC, BMI. Low grip strength and low CC may predict increasing eligibility level because the factors showed higher prevalence in higher eligibility level. **Keywords :** risk factor, prevalence

OP26 420-S-2

COST-EFFECTIVENESS ANALYSIS COMPARING A FAMILY MEETINGS INTERVENTION FOR FAMILY CAREGIVERS OF DEMENTIA PATIENTS TO USUAL CARE- A RANDOMIZED CONTROLLED TRIAL

Karlijn JOLING¹, Judith E. BOSMANS², Harm W. VAN MARWIJK¹, Henriette E. VAN DER HORST¹, Philip SCHELTENS³, Janet MACNEIL-VROOMEN⁴, Hein P. VAN HOUT¹ (1. *General Practice and Elderly Care Medicine, VU University Medical Center, Netherlands*; 2. *Health Sciences, VU University Medical Center, Netherlands*; 3. *Neurology, VU University Medical Center, Netherlands*; 4. *Internal Medicine, Amsterdam Medical Center, Netherlands*)

Introduction : Dementia patients impose a heavy economic burden on society. Family caregivers, providing most of the care are at risk to become overburdened. Interventions which effectively support caregivers may prevent patient institutionalization and hence be very cost-effective. However, evidence about their cost-effectiveness is scarce. The aim of this study was to assess the cost-effectiveness of a family meetings intervention for caregivers of dementia patients and to provide insight in the formal and informal costs of caring for a dementia patient. **Method :** The economic evaluation was conducted from a societal perspective alongside a randomized trial among 192 primary caregivers of community-dwelling dementia patients. Outcome measures included the incidence of depression and anxiety disorders in caregivers and Quality Adjusted Life-Years (QALY) of caregivers and patients. Missing cost and effect data were imputed using multiple imputation. Bootstrapping was used to analyze differences in costs and cost-effectiveness. **Results :** At 12 months, total costs per patient and primary caregiver dyad were €77,832 for the intervention group and €75,201 for the usual care group (mean difference €2631, 95% CI -13912;20697). Main cost driver was informal care (66% of total costs), followed by patients' day treatment and admission costs. No significant differences in costs and effects

between the groups were found. **Conclusion :** The annual costs of caring for a dementia person were substantial with informal care being by far the single largest cost item in size. Based on this study, the family meetings intervention was not considered a cost-effective intervention strategy in comparison with usual care. **Keywords :** family caregiver, dementia, cost-effectiveness

OP26 420-S-3

PREDICTORS OF INCREASING ELIGIBILITY LEVEL FOR JAPANESE LONG-TERM CARE INSURANCE SYSTEM: THE FIRST YEAR FOLLOW-UP RESULTS FROM THE PROSPECTIVE LONGITUDINAL STUDY

Sumio YAMADA¹, Kuniyasu KAMIYA², Kenji SASOU³, Makoto FUJITA⁴ (1. *Department of Rehabilitation Sciences, Nagoya University Graduate School of Medicine, Japan*; 2. *Rehabilitation Center, Kitano Hospital, The Tazuke Kofukai, Japan*; 3. *Welfare Department, CO-OP AICHI Consumer Co-operative Society, Japan*; 4. *Welfare Department, CO-OP KANAGAWA Consumer Co-operative Society, Japan*)

Introduction : Cost containment for long-term care is one of major concerns in the aging countries. In Japanese long-term care insurance (LTCI) system, preventing the increase of the eligibility level is vital to contain the cost. However, the modifiable risk factors for increasing eligibility level, such as body composition or physical functions, have not been revealed yet. Therefore, we started a prospective study in October 2011. This study describes candidate risk factors from the first year follow-up data. **Method :** The data were obtained from a longitudinal study of home help service users who were certified as LTCI support level 1-2 and care level 1-2. Baseline survey was carried out from October 2011 to November 2011. The adverse outcome was defined as certified as care level 3 or more, institutionalization, and death until October 2012. Predictor variables included age, gender, history of diseases, living alone, eligibility level, grip strength, calf circumference (CC), body mass index (BMI). **Results :** A total of 413 subjects (111 males and 302 females, mean age 84 years) were examined. Adverse outcomes occurred in 44 subjects (10.7%). Multiple logistic regression analysis indicated that age, eligibility level, grip strength, and CC were predictors of adverse outcomes. By ROC analysis, the area under the curve was 0.63 for grip strength and 0.61 for CC. **Conclusion :** The findings of this study suggest that, in the home help service users, adverse outcome may be predictable by some modifiable risk factors even in the short term period. **Keywords :** risk factor, follow-up study

OP26 420-S-4

MODEL ANALYSIS OF LONG-TERM CARE SERVICE USE AMONG THE ELDERLY LIVING AT HOME - JAPAN-SOUTH KOREA COMPARATIVE ANALYSIS

Katsuhisa KOJIMA (*Department of International Research and Cooperation, National Institute of Population and Social Security Research, Japan*)

Introduction : Even in the countries with public long-term care system, family caregivers are prevailing. What kinds of factors will decide the in-home long-term care service usage or not? I have analyzed it with the model based on the framework by Andersen behavior model. **Method :** I have used probit model. There is the dependent variable whether the elderly use in-home long-term care service. The independent variables are attributes of the elderly, family caregivers and region where the elderly live. The data are 2010 Japan and South Korea survey conducted by our research team, which covered the elderly need long-term care services and family caregiver. The

samples are 1500 in Japan and 930 in South Korea. Results : In Japan, there are significant independent variables at 5% level, like level of ADLs losses (+), income class of the elderly (-), caregiver employment status dummy (+). South Korea result has also such variables, like level of ADLs losses (+), level of dementia (-). In addition to these results, regional variable will affect in-home long-term care use. Conclusion : There are differences between the factors deciding the in-home long-term care use or not in Japan and South Korea. Long-term care policy makers in Japan and South Korea often refer to the system of other countries. But, they also should take into account the differences between the needs of in-home long-term care services in own country and other countries. Acknowledgements Funding supported by Japan Society for the Promotion of Science KAKENHI Grant Numbers 21330121. Keywords : Long-term care, Caregiver, Japan and Korea

OP26 420-S-5

THE DEVELOPMENT OF A GATE KEEPING INSTRUMENT FOR LONG TERM CARE IN MACAO

Edward M.F. LEUNG¹, Stella Yuk Har CHEUNG¹, Alice Dick Wah CHIU² (1. *Research and Division Department, Hong Kong Association of Gerontology, Hong Kong*; 2. *Quality Development Division, Hong Kong Association of Gerontology, Hong Kong*)

Introduction : The ageing population in Macao SAR increased rapidly to 11.95% in 2012. Some of the Long Term Care services were mismatched especially found in the subvented residential care homes for the elderly in a consultancy report by Hong Kong Association of Gerontology in 2005. In order to assure the resources are well matched with the needy, a research on the effectiveness of the gate keeping instrument was conducted in Macao in 2006. Method : To (1) understand the actual needs of the long term care service users and provide appropriate services to them; (2) attribute the residential care services and community care services to the elders according to their need based. The research study was divided into 2 phases. First phase was a feasibility testing on the gate keeping instrument. A pilot test was conducted with 36 elders and the results were compared with the MDS-HC (Version 2.0) used in Hong Kong. After the pilot test, 100 cases conducted the assessment with the revised instrument in the second phase. It is to measure the validity and reliability of the instrument. Validity testing and inter-rater reliability testing were done. Results : The findings showed that the gate keeping instrument is effective and has a high reliability in assessing the elders' ADL, cognitive, the support from family areas and the service matching according to the need based. Conclusion : Macao started to use the instrument from 2008 till now for the long term care service matching. Keywords : gate keeping instrument

OP26 420-S-6

INSTITUTIONAL CARE FOR OLDER PEOPLE WITH DEMENTIA IN AN EUROPEAN PERSPECTIVE

Staffan KARLSSON¹, Connie LETHIN¹, Ulla Melin EMILSSON², Ingalll Rahm HALLBERG¹ (1. *Health Sciences, Lund University, Sweden*; 2. *School of Social Work, Lund University, Sweden*)

Introduction : Cognitive impairment has been found to be a main predictor for institutionalization. Various types of institutional care are available for persons with dementia, but knowledge is sparse about how the institution should be designed and scaled, and if it should be specialised in dementia or mixed with other older people. To explore various types of institutional care for older people with dementia in eight European countries. Method : Estonia, Finland, France, Germany, Netherlands, Spain, Sweden and UK were included in the

study. A template was developed for collecting data among other areas also about various institutional care. Terminology was reviewed by experts and agreed between the countries. The template covers 50 types of care provided in relation to the dementia trajectory, from diagnosis to end of life stage. Questions about various types of institutional care were analysed. Each question covered estimation of availability, utilization and professionals involved. Results : In the description of the care system, preliminary results showed that residential home or nursing home not specifically organised for persons with dementia was the most common institution through all stages. Institutions more specialised in dementia care was less common and mostly available for those in moderate to end of life stage. The professionals were more educated in dementia in the specialised institutions compared to non specialised institutions. Conclusion : For people with dementia disease, institutions not specific for those with dementia were common in all eight countries, while institutions more specialised were available for few. On the behalf of RightTimePlaceCare consortium. <http://www.righttimeplacecare.eu>. Keywords : Institutional care, Older people, Dementia

OP26 421-S

SUCCESSFUL AGING

OP26 421-S-1

SUCCESSFUL AGING IN THE ELDERLY OF MEXICO

Elva Dolores ARIAS MERINO¹, Neyda Ma. MENDOZA-RUVALCABA², Xxii Scientific Research Summer Group MASTER OF GERONTOLOGY¹ (1. *Public Health, Cucs. University Of Guadalajara, Mexico*; 2. *Health Sciences, Cutonala. University Of Guadalajara, Mexico*)

Introduction : Aging is a public health challenge as well as a challenge for the elderly to remain active and healthy as long as possible. Rowe and Kahn postulate the successful aging in an individual level. In this study, the successful aging of the elderly in seven states of Mexico is identified. Method : Quantitative cross-sectional study. Sample of 583 elderly (≥ 60 years), conventional and proportional by gender. Participating states: Sinaloa (15.4%), Jalisco (25.6%), Michoacan (8.6%), Guerrero (7.7%), Edo. Mexico (25.6%), Veracruz (8.6%) and Tabasco (8.6%). A survey was applied evaluating the following: socio-demographic characteristics, cognitive function (Folstein), Rowe and Kahn indicators of successful aging and ideas about successful aging (Phelan). Inclusion criteria: age and preserved cognition. Results : Age 70.8 ± 8 years, education 5.7 ± 4.8 years. 13.9% had successful aging, range of 23.3% (Sinaloa) and 8.7% (State of Mexico). In similar proportions they consider aging as successful, healthy and active. The most prominent features of successful aging were: not having any chronic disease, make self- decisions, economic security, be active, be able to meet their own needs and desires, to have good health until the last moment of their life and stay involved with the world and the people around them. Conclusion : Successful aging figures are higher than other studies while controlling the cognitive function. Elderly define aging in a multidimensional way, most representative attributes were: the duality health- disease, cognitive physical and economic autonomy and social participation. Health is the most important indicator of aging well and to reach the stage of aging successfully. Keywords : Successful Aging, Mexico

OP26 421-S-2

OLDER NEW ZEALANDERS' VIEWS ON AGEING WELL

Valerie A. WRIGHT-ST CLAIR, Clare HOCKING, Adina NACHUM (*Occupational Science and Therapy, Auckland University of Technology, New Zealand*)

Introduction : The United Nations Research Agenda on Ageing prioritized understanding older people's subjective views on successful ageing. This project explored Maori and non-Maori New Zealanders' views about growing older and their hopes and values for ageing well. **Method :** Ethics approval was granted for this feasibility for cohort study. A non-representative sample of 33 Maori, aged 75-79, and 79 non-Maori, aged 85 were recruited from three urban and rural regions. The final section of the interview-based questionnaire focused on thoughts about growing older using two closed (5-point Likert scale) and 5 open written questions. Ordinal data were analyzed in SPSS by comparing frequencies and associations using Fisher's exact test where appropriate. Narrative responses were analyzed using interpretive methods. **Results :** Ninety-eight percent agreed or strongly agreed they can do a lot to keep healthy in old age, and 80% agreed or strongly agreed that, overall, growing older was a positive experience. Respectively there were no statistically significant differences for sex ($p=.835$) and ($p=.598$), or ethnicity ($p=.908$) and ($p=.773$). However many who felt growing older was mainly negative or very negative, agreed there was a lot they could do to keep healthy ($p=.001$). Qualitatively, Maori and non-Maori valued their health, cared about a peaceful future and the world's resources, its people and future generations of family. Maori hoped for community unity and togetherness while non-Maori wanted to be independent and age at home. **Conclusion :** Overall, participants hoped to be healthy, be connected with family, and for a better world for future generations. **Keywords :** ageing well, subjective values, cultural differences

OP26 421-S-3

THE NATURAL OCCURRENCE OF SUBJECTIVE AGEING EXPERIENCES IN COMMUNITY-DWELLING OLDER ADULTS AND ASSOCIATIONS WITH SUBJECTIVE WELL-BEING

Martina MICHE¹, Hans-werner WAHL¹, Manfred DIEHL², Frank OSWALD³, Roman KASPAR³ (1. Dept. of Psychological Aging Research, Heidelberg University, Germany; 2. Human Development & Family Studies, Colorado State University, USA; 3. Interdisciplinary Ageing Research, Goethe University Frankfurt, Germany)

Introduction : The subjective experience of ageing is a relevant correlate of developmental outcomes. However, traditional measures of subjective ageing experiences (SAEs), such as felt age, fail to acknowledge the multidimensionality inherent in subjective appraisals of ageing, as well as the day-to-day experience of being aware of one's own age. Based on the concept of Awareness of Age-Related Change (AARC, Diehl & Wahl, 2010), the aim of this paper was to capture the natural ecology of subjective ageing based on a daily diary approach. **Method :** We analyzed 1,757 semi-structured diary entries in which participants described daily events and experiences reminding them of their own ageing. These reports were collected from a sample of 225 community-residing adults aged 70 to 89 years and coded according to AARC domains and subdomains. **Results :** Seventy percent of all participants had SAEs about physical functioning. About half of the sample reported experiences in the domains of interpersonal relations, social-emotional and social-cognitive functioning, and lifestyle. Thirty percent experienced ageing in terms of changes in cognitive functioning. Contents of SAEs varied by gender, age group, and functional status. SAEs about social-emotional and social-cognitive functioning were most consistently related to affective components of subjective well-being. **Conclusion :** Our results demonstrate the benefits of an open-ended approach to a multidimensional understanding of SAEs. Content-related, social-cognitive and social-emotional changes more than functional age-related changes were most important for well-being. Future studies should extend this

research by investigating the dynamic, time-related interplay between different domains of SAEs or between SAEs and well-being related measures. **Keywords :** Subjective Experience of Ageing, Subjective Well-Being, Self-Perceptions of Ageing, Subjective Age, Age Identity, Life Satisfaction

OP26 421-S-4

THE ANTI-AGING-PANACEA OF THE ELDERLY: EXPLORING THE NEW OPPORTUNITY OF TECH PRODUCTS AT THE ELDERLY MARKET VIA THREE-VALUE CONCEPT

Hui-Yi LO (The Department of Marketing, National Chung Hsing University, Taiwan)

Introduction : Ideally, technologies should make the task easier, more efficient or perhaps more pleasurable. However, new technologies might sometimes lead elders to do their task more difficult, slower, or more frustrating. Given the fact of aging, the elderly adults today will become one of the largest social groups and they will be with a growth rate higher than the population as a whole. Thus, tech-products must be adapted to seniors' need. The aim of this study focuses on matching psychological needs with the design concept of a tech-product of elderly people. **Method :** Three aging reflections (physical, sensory, and affective) and three arousing value-perceptions (utilitarian, emotional, spiritual) are explored in this study. Four focus group interviews were conducted and included two age groups (above 55-65 year-old, above 65 year-old). All interviewees consisted of equal number of females and males. **Results :** For utilitarian value, results indicate that five elements, physical compatibility, less risk, without fear, durability and reliability, affect seniors' acceptance of tech-products. The happiness or pleasure is not derived from tech-products, but from their associations and meanings for the seniors, such as learning new things, fun, and interaction between communities. Tech-products with spiritual value can motivate their learning, enrich their life, and impact health-related outcomes. Once elderly adults adopt a particular technology, they use it as frequently as young adults, and they are highly willing to upgrade this tech-product. **Conclusion :** Three values, utilitarian, emotional, spiritual, should be embedded in a tech-product of seniors. Findings provide those high-tech marketers an insight into the elderly market. **Keywords :** Healthy Aging, Tech-products, Value-perceptions, Aging reflections

OP26 421-S-5

DYNAMICS OF LIFE BALANCE IN LATER LIFE IN THE UK: TIME USE AND SUCCESSFUL AGEING

Jiweon JUN (Department of Sociology, University of Oxford, United Kingdom)

Introduction : This study examines the issue of balance in daily time use of older people in the UK. From disengagement theory to successful ageing, there have been a number of theoretical attempts to identify what is good to spend time on in later life. In empirical studies, however, the results have been mixed. In this study, we argue that rather than focusing on the effect of certain kinds of activities on well-being, applying the perspective of balance can be more fruitful in understanding the relationship between daily activities and well-being in later life. **Method :** We propose a theoretical model of life balance, and empirically measure the life balance of older people in the UK using the UK time use data from MTUS (Multinational Time Use Studies). We develop two measurements for life balance: the life balance triangle and the multidimensional life balance index. We then examine the determinants of life balance in later life. **Results :** We found that in later life, the balance shifts to having more discretionary

time and less committed time, yet having too much discretionary time/too little committed time is negatively associated with well-being. We found that demographic and socio-economic variables such as gender, income, and retirement status affect the level of life balance in later life. Conclusion : Findings suggest that maintaining balance in daily life especially in terms of balance between discretionary time and committed time is important in well-being in later life, as it provides a time-structure in daily life. Keywords : work-life balance, time use of older people, retirement

Thursday June 27th

OP27 101-S FAMILY CARE-GIVING

OP27 101-S-1 FAMILY SUPPORT AND SOCIAL ADJUSTMENT OF ELDERLY IN LATER LIFE: A CASE OF RURAL INDIA Dhananjay BANSOD (*Population Research Centre, Institute for Social and Economic Change, India*)

Introduction : The present paper focuses on family support and social adjustment of elderly in rural Maharashtra. Issues like adjustment in various stages of life regarding self, health and social matters are explored and discussed under the sub domain of social adjustment. Further, the impact of various socio-economic factors on social adjustment is discussed in detail. Method : Data for this study was collected from rural areas of Amravati district, Maharashtra using semi-structured interview schedule. 600 males and females were interviewed using systematic sampling technique. Chi-square test is used for establishing associations. Multinomial logistic regression is used to analyse the determinants of social adjustment of elderly. Results : The higher proportion of elderly living in joint families shows better social adjustment than those living in nuclear families or living alone. Marital status has significant influence on their social adjustment. The elderly who were economically dependent on others showed poor adjustment compared to those who were economically independent. The elderly who get family support and care are more socially adjustable than the elders with no family support. Conclusion : The family support system and level of social adjustment of elderly in rural Maharashtra seems to be good. However, there are elders who are not getting any kind of support from either from family or from the government and for them we need to have some sort of policy or support system to secure their welfare. Keywords : social adjustment, family support, elderly

OP27 101-S-2 CARING FOR OLDER ADULTS AT END-OF-LIFE: FAMILY INVOLVEMENT AND INTERACTION Diane Martha PRICE (*School of Nursing and Health Professions, State University of New York Institute of Technology, USA*)

Introduction : As the population ages, elder individuals need more care and assistance from others. Some elders are at end-of-life and their needs often intensify. This care and assistance is often provided by family members however family members may disagree as to how to care for their loved one. The caregivers may have interpersonal disagreements regarding the division of labor. This may lead to one family member taking on the central role in the elder's care, again leading to friction among the rest of the family caregivers. Method : After the researcher had experienced this phenomenon in her practice, she conducted a literature review regarding the topic of family

dynamics and elder care at end-of-life. Results : While much of the research done on caring for a loved one at end-of-life reveals a situation where family members get along and work together in caring for a loved one, there is some research that differs from this scenario. This particular research shows that a rift can occur among family members who are caregivers. Conclusion : It is important for the provider to be aware that not all family caregivers of elders at end-of-life get along and have the same goals for the elder. The provider needs to establish this early in the elder's death trajectory in order to provide good care that is consistent with the elder's wishes. The provider may also want to act as an intermediary thus coordinating care among the family members. Keywords : family relationships

OP27 101-S-3 POSITIVE GAINS IN FAMILY CAREGIVING AND SUCCESSFUL AGING: AN EXPLORATORY STUDY Chiu Mei Lee TERESA (*Department of Rehabilitation Sciences, Hong Kong Polytechnic University, Hong Kong*)

Introduction : According to Rowe and Kahn, successful aging is comprised of three hierarchical components: prevention of disease and disability, high cognitive and physical function, and active participation in meaningful activities. This paper aims to explore positive gains in family caregiving through the concept of successful aging. Method : A mixed method design was used to interview 14 family caregivers who took care of a person with dementia. The caregivers took part in in-depth interviews and shared their positive experiences in caregiving. They also completed a questionnaire that measures the gains in Alzheimer care in four areas: personal, interpersonal, knowledge and spiritual gains. Main themes were identified using a grounded theory analysis procedure and a substantive theorizing process. Results : Three themes of positive gains were identified. All participants felt that giving care is more than a responsibility; it is a way of life. Being able to fulfill the meaningful role was extremely important to them. Next, most caregivers felt that they had improved the relationship with the care recipient and other family members. Finally, many indicated that their knowledge in dementia care had increased. The highest domain of successful aging was reflected in the first two themes: sustained engagement in meaning and social activities. The third theme reflected that the caregivers could have maintained high cognitive function through continuous learning. Conclusion : Although caregiving can be stressful, caregivers who experience gains can be a subgroup that age more successfully. The findings support intervention studies that can enhance positive gains and successful aging among family caregivers. Keywords : family caregiving, successful aging, dementia

OP27 101-S-5 THE EFFECTS OF DEPRESSION OF THE ELDERLY WITH CARDIO-CEREBROVASCULAR DISEASES ON SUICIDAL THOUGHTS : MODERATING EFFECT OF SOCIAL SUPPORT Dongbae KIM, Soomin SHIN, Jihee YUN (*Social Welfare for the Elderly, Graduate School of Social Welfare, Yonsei University, Korea*)

Introduction : In Korea, the suicide of the elderly is on the rise as the most serious social problem. Therefore, suicide of the elderly is 1st grade among OECD countries. According to many researches, the depression of the elderly has an effect on the suicidal thoughts and thoughts directly lead to suicide in the end. Especially, the elderly patients with cardio-cerebrovascular disease could be more easily exposed in the depression than the others. According to some of researches, the social support could control the relationship between

the depression of the elderly with cardio-cerebrovascular disease and the suicidal thoughts. Based upon this fact, it is the goal of this research to verify the moderate effect of the social support between the depression of the elderly with cardio-cerebrovascular disease and the suicidal thoughts. Method : The data were Seoul welfare panel data made by Seoul welfare foundation in 2010. The total sample size was 901 elderly aged over 60. The used statistical analysis methods were frequency analysis, correlation analysis, t-test, ANOVA, and the multiple regression analysis. Results : As a result, the depression of the elderly with cardio-cerebrovascular disease is direct influential factor to suicidal thoughts. Moreover, social support including family support and social network works as a moderator in the research model. Conclusion : This research makes an effort to approach the concept of the moderating effect of social support of the elderly with an integrated perspective. Also, verifying the relationship between the depression and suicidal thoughts of the elderly with cardio-cerebrovascular disease is meaningful. Keywords : the elderly with cardio-cerebrovascular disease , depression and suicidal thoughts, social support

OP27 102-S
EMERGING ISSUES

OP27 102-S-1
AGEING AND ITS HUMORS

Chris GILLEARD (*Mental Health Sciences, University College London, United Kingdom*)

Introduction : Early Greek medicine created a model of human nature based upon elements, qualities and humors. This tradition was maintained by Galen who elaborated the idea of aging as a process of cooling down and drying out. Later followers of the Galenic tradition pursued the idea of ageing through a lamp metaphor that saw aging as the diminishing and extinction of the lamp's flame due to a loss of radical moisture. Method : Examining the literature from Hippocrates to Floyer's Galenic medicine of old age, this paper reviews the continuities embedded in humoral theories of aging. Results : From this review, three themes emerge - that of a unitary process of endogenous aging; that of the potential for 'positively aging' through maintaining the humors; and that of the use of the six 'non-naturals' as the principle vehicles for living well in later life. Conclusion : Current literature on active, positive or successful aging shows many continuities with these traditions that saw old age as both inevitable and yet modifiable. In contrast to the magical traditions of astrology, alchemy and mysticism that offered an escape from old age, the use of the six non naturals can be observed still in contemporary self help books designed to help us all 'age well'. Keywords : Galenic humors non-naturals and aging

OP27 102-S-2
BABY BOOMERS' MOBILITY PATTERNS AND PREFERENCES: WHAT ARE THE IMPLICATIONS FOR FUTURE TRAVEL?

Anu SIREN, Sonja HAUSTEIN (*Department of Transport, Technical University of Denmark, Denmark*)

Introduction : The demographic grand challenge of population ageing will be reflected on most of the areas of society, and to a great extent also on the area of transportation. The large post-II world war cohorts, the so called baby boomers, will comprise a large share of tomorrows older population, and it is expected that they will differ from their parents' generation when growing old. Method : In order to understand how the aging boomers may impact the future travel, the travel

behaviour and future expectations of Danish baby boomers were analysed based on 1772 standardized telephone interviews. Results : The boomers reported in general being healthy, independent and highly (auto)mobile. They also showed optimism regarding the level of mobility, use of various transport modes, and leading an independent life in the future. However, there were significant gender differences somewhat similar to those observed in the older cohorts. In addition, using cluster analysis, three segments of baby boomers could be differentiated. The segments showed significant differences in current travel behaviour and living circumstances and some similarities to former segmentations of older road users. Conclusion : The boomers will be strong consumers of the transport system, with high demand for mobility. This will pose challenges to society, which must generate policies and plans to support these needs. However, the results indicate that the differences between boomers and their parents might in some aspects be smaller than expected. Keywords : baby boomers; travel; future expectations; forecasts

OP27 102-S-3
A BIBLIOMETRIC ANALYSIS OF STUDIES ON PSYCHOLOGY OF AGING IN CHINA

Fengzhan LI (*Institute of Development Psychology, Beijing Normal University, China*)

Introduction : This study aimed at discovering the trends of research on psychological aging in China during the past three decades, and proposing possible directions needed to be reinforced. Method : There are 761 articles, based on Chinese samples and authored by Chinese scholars, retrieved from the CNKI (the most well-known academic database in China) and ISI Web of Knowledge. Bibliometric analyses, mainly with percentage and frequency index, were conducted. Results: The results showed that: (1)the research themes mainly concentrate on mental health, social life, cognitive aging, and physiological changes more than other aspects; (2) the articles are published most (30.1%) on the Chinese Journal of Gerontology, which is a comprehensive rather than a psychological specialized journal; (3) cooperative study has become the main pattern of undertaking research; (4) the distribution of research investment is unbalanced with respects to regions and institutions, and the core alliance on research of psychological aging has not been formed so far in China; (5) However, as time goes by, the number of publications about psychology of aging has increased obviously, especially in past ten years. And some researchers started to look at the aged population from a cross-cultural perspective. Conclusion : In conclusion, more study more and more studies on psychological aging can be anticipated in the near future. However, it may take some time to widen the research investment cross the whole nation. And the core organizations are called to help promoting the research quality in China. Keywords : psychology of aging; bibliometric analysis; the elderly; literature review

OP27 102-S-4
THE TEMSED FRAMEWORK: A HOLISTIC AND ETHICAL APPROACH OF EVALUATION IN E-HEALTH TECHNOLOGY

Lionel BEN-AHMED¹, Bertrand BOUDIN¹, Juliette SABLIER¹, Iwan BARTH², Jeremy BAUCHET³, Yannick FOUQUET⁴, Nicolas VUILLERME², Vincent RIALLE² (*1. Laboratory AGIM, University Joseph Fourier, France; 2. Medecine, University Joseph FOURIER AGIM Laboratory, France; 3. Informatique, University Joseph FOURIER, AGIM Laboratory, France; 4. Technology, TASDA (Technopole Alpes Sante a Domicile et Autonomie), France*)

Introduction : We are living in the technology era. We use them in the

field of health and gerontology with the aim of help us to cope with demographic ageing. These device should increase our quality of life, our social networks, our efficiency, etc. However, we have to assess the real values of these new technologies. What is the social utility of this technology, the health service provided, the acceptability and the financial sustainability? Method : Presently a huge number of experiments are being conducted using their own evaluation methods. We need to define a guideline for the evaluation of innovative technology, but without creating another method similar to the other. This is the purpose of the framework TEMSED (Technology Medical Social Economy Deontology), which answer to the question: what does evaluation mean? This issue allows putting together the value needed for the evaluation, and the development of assessment tools: Technology, safety, reliability, acceptability; Ergonomics: usability; Medical: improvement of autonomy and adjustment of the disposal to an evolving disease; Social: improvement of social network; Economy: costs & returns, economic valuation; Deontology: Ethical basement and issues. Results : TEMSED is a holistic framework of evaluation. The originality of this method lies in its ethical basement. Conclusion : With the TEMSED framework , we have to think about the meaning of evaluation, the place and function of ethic in assistive technology. Keywords : evaluation, e-health, ethics

OP27 102-S-5

QUALITY OF FAMILY RELATIONSHIP AND LATE-LIFE DEPRESSION AMONG LATINO AND ASIAN AMERICAN POPULATIONS

Mijung PARK (Dept. Health and Community Systems, University of Pittsburgh School of Nursing, USA)

Introduction : The purpose of this study was to examine the associations between the quality of family relationship (family conflict and family cohesion) and late-life depression outcomes in Latino and Asian populations and test if these associations vary by race/ethnicity and gender. Method : We used subsample of older adults from the National Latino Asian American Study (N=395), a nationally representative epidemiological study of Asian and Latino mental health. The dependent variable of this study was the 12-month DSM-IV Major Depressive Episode, assessed with the World Health Organization Composite International Diagnostic Interview (WMH-CIDI). And the independent variables of interest were family conflict and family cohesion. All analysis were controlled for age, gender, race/ethnicity, marital status, education, living in poverty, duration of living in the U.S., relative support, and friend support. Results : We document a robust inverse association between late-life depression and family cohesion in Latino and Asian older adults populations (weighted adjusted OR: 0.66 95% CI: 0.46, 0.93). And these associations vary by gender, with men being more sensitive to family cohesion than women. In contrast to previous literature, ethnicity was not a significant effect modifier of the relationship between late-life depression and family cohesion. Furthermore, family conflict was associated with late-life depression, but this relationship was not statistically significant (weighted adjusted OR: 1.27 95% CI: 0.98, 1.62). Conclusion : The quality of family relationship is a major determinant of late-life depression outcomes. Further research is needed to better understand the complex interplay between social support, ethnicity, and gender in predicting late-life depression. Keywords : Family, culturally diverse family: Late-Life Depression

OP27 102-S-6

SELF-NEGLECTING ELDERLY IN AN AGING SOCIETY: HOW SERIOUS IS IT IN JAPAN?

Yoshiaki TAKAHASHI (JICA Research Institute, Japan International

Cooperation Agency, Japan)

Introduction : The share of the population aged 65 years and over in Japan is now the highest in the world. Self-neglect was appeared as one of serious issues same as other developed countries. However, due to the lack of its magnitude to the society, we could not deal with it appropriately. Impact of elder self-neglect on Japanese society was measured. Method : The questionnaires were sent to three major gatekeepers in local communities: directors for aging in the local government authorities, local comprehensive support centers, and district welfare commissioners. 41.6% of the centers (n=1,884) and 5.2% of the commissioners (n=11,806) reported us 7,061 cases in detail. Results : Taking account of duplication between three sources, we estimated total number of cases in each municipality. If the information is missing for the municipality, we estimated the number by using the probability of likelihood in the municipalities which have similar size of the population. As a result, we estimated total number of cases in Japan as a whole. It was 10,785 cases in average (9,381-12,190 cases with 95% confidence interval). Conclusion : Self-neglect was already widespread in Japan. Because serious cases are identified by other members in the communities, the magnitude of self-neglect to the society has already been significant. When ratio of elderly to population is increased, self-neglectors are expected to increase more. Therefore, we need to explore risk factors and solution for this serious issue in detail. Keywords : Self neglect, elderly, Japan

OP27 103-S

QUALITY OF LIFE AND LIFE SATISFACTION

OP27 103-S-1

QUALITY OF LIFE IN OLDER PEOPLE FROM CHILE: THE ROLE OF SUBJECTIVITY AND AGENCY

Paulina OSORIO¹, Maria-Jose TORREJON², Cynthia MEERSOHN³, Maria-Sol ANIGSTEIN⁴ (1. Department of Anthropology, Universidad de Chile, Chile; 2. Department of Sociology, University of British Columbia, Canada; 3. School of Applied Social Sciences, Durham University, United Kingdom; 4. Faculty of Social Sciences, Universidad de Chile, Chile)

Introduction : From a subjective perspective, the concept 'quality of life' is the evaluation that individuals make of their living conditions. Because individuals place themselves in relation to the opportunities and constraints in their societal and cultural environment, a subjective perspective of quality of life invites us to reflect on the ability of individuals to exercising agency over conditions imposed by a broader context. Method : This is a qualitative research that includes in-depth interviews to semi-dependent seniors 60 years and older living in the Metropolitan Region, Chile. The analysis was informed by a grounded theory approach assisted by Atlas ti 5.0. Results : Through the application of a constructivist stance, we have developed a diagram that gives dynamism to the dimensions of quality of life identified by the participants. We can observe how the dimensions interact to distinguish those that correspond to the social environment (e.g. intimacy and social inclusion) from those related to living conditions (e.g. health and economics). Conclusion : Living conditions do not univocally affect the quality of life of older people since those conditions can be managed with greater or lesser agency depending on the social environment where they are experienced. In fact, it is the idea of self-determination -to have some control over a situation- which is the axis to positively evaluate a given condition. Keywords : quality of life in older people, agency, self-determination

OP27 103-S-2

INVESTIGATING SHORT TERM TEMPORAL ASPECTS OF LONELINESS IN OLDER PEOPLE: RESULTS FROM A PILOT STUDY

Mary Pat SULLIVAN, Christina VICTOR, Mary GILHOOLY (*School of Health Sciences and Social Care, Brunel University, United Kingdom*)

Introduction : The dynamic nature of loneliness in later life has been largely overlooked in the existing literature which has sought to establish the prevalence of, and risk factors for, loneliness or quantify how loneliness varies longitudinally. Much less is understood about how the experience of loneliness may vary across seasons, different days of the week or various times in the day. **Method :** We used a mixed methods study with people aged 65+ to explore the links between the temporal variations in loneliness and an individual's intra and inter personal characteristics and social environment: (1) secondary analysis of 'loneliness' interviews (n=45); and (2) survey of a volunteer sample to explore levels of loneliness using a self report and the de Jong Gierveld scales, at 3 month intervals across a 12 month period (n=33). Participants had a mean age of 74, 18 were female and they were all living independently in the community. At baseline 40% were lonely. **Results :** Re-analysis of our interviews revealed that temporal variations are important for the experience of loneliness and these are intimately linked with the individual's socio-environmental context. Across the survey sample, variations in loneliness at different times of the year (winter), days of the week (weekends) and times of day (evenings) were evident. **Conclusion :** There is a complex relationship between temporal variations in loneliness and an individual's characteristics and psychosocial context which present challenges for the development of intervention strategies. Further longitudinal investigations are warranted to explore individual experiences of loneliness and effective interventions for a diverse older population. **Keywords :** loneliness

OP27 103-S-3 ASSOCIATIONS AMONG STRESSFUL LIFE EVENTS, ANXIETY AND WELLBEING AMONG OLDER ADULTS: FINDINGS FROM THE HEALTH AND RETIREMENT STUDY (HRS)

Robert STAWSKI, Tara QUEEN, Lindsay RYAN, Jacqui SMITH (*Survey Research Center, University of Michigan, USA*)

Introduction : Considerable research has documented the negative influence of stressful life events on psychological wellbeing, and anxiety as an important risk factor for vulnerability to stress. While the effects of stressful life events on wellbeing are robust during early adulthood, less is known about interactive effects of stressful life events and anxiety on psychological wellbeing during old age. **Method:** A nationally representative sample (N=4,516) of adults aged 50 and over (Mean = 70, Range = 50-100; 64% Female) from the 2008 wave of the Health and Retirement Study (HRS) completed measures of early life events, lifetime traumatic experiences, and recent life events, as well as measures of anxiety and psychological well-being (negative affect, positive affect, life satisfaction). **Results :** Preliminary analyses revealed three main findings. First, the distribution of early life events, lifetime traumatic experiences, and recent life events differed across age, sex, and education. Second, early life events, lifetime traumatic experiences, and recent life events were all significant and independent predictors of poorer psychological wellbeing. Finally, anxiety moderated the effect of stressful life events such that the negative influence of stressful life events on psychological wellbeing was strongest among older adults reporting the highest levels of anxiety. **Conclusion :** Early life events, lifetime

traumatic experiences, and recent life events are all important predictors of older adults' psychological wellbeing, and anxiety is an important risk factor for increased vulnerability to stress in old age. **Keywords :** Stress, Wellbeing, Anxiety

OP27 103-S-4 THE EFFECTS OF INTERNET USE ON THE LIFE SATISFACTION OF THE ELDERLY: THE MEDIATING EFFECT OF SELF-ESTEEM AND SOCIAL RELATIONSHIP

Soomin SHIN, Kyuhyoung JEONG (*Social Welfare for the Elderly, Graduate School of Social Welfare, Yonsei University, Korea*)

Introduction : Aging is often accompanied by various physical and mental problems including deteriorating health and cognitive functioning. The Internet has become an accepted, routine means of communication for many people, including the elderly. The Internet has created new opportunities for isolated older people to participate in online support groups and communities. These unique characteristics of the Internet can enhance the quality of life for older people. This study looks into the effects of internet use on the life satisfaction level of the elderly in depth. **Method :** In order to verify the correlation of the two variables, a mediating model structured by psycho-social resources (self-esteem and social relationship) was used. The data used, the Seoul welfare panel data, was created by the Seoul Welfare Foundation in 2010. The total sample size was a group of 340 elders aged over 60. When it came to our research methods, structured equation analysis was applied to verify the mediating effect and theoretical background. **Results :** The results revealed that Internet use by the elderly indirectly affected their life satisfaction level positively, thus self-esteem and social relationships showed a complete mediating effect between Internet use and life satisfaction levels. Internet use seems to contribute to older adults' life satisfaction by affecting their interpersonal interactions and promoting their experience of self-efficacy and independence. **Conclusion :** The outcome of this study emphasizes the importance of promoting internet utilization by the elderly. To ensure this, an improved and increased number of computer education programs should be put in place as a theoretical and practical intervention. **Keywords :** The aged Internet use, Life satisfaction, Psycho-social resource

OP27 103-S-5 THE STUDY OF CARE QUALITY IN NURSING HOMES FOR OLDER PERSONS WITH DEMENTIA IN SWEDEN, IN RELATION TO CHARACTERISTICS OF THE INHABITANTS AND THE FACILITY

Staffan KARLSSON¹, Sangyo NAM² (*1. Department of Health Sciences, Faculty of Medicine, Lund University, Sweden; 2. Department of Health Services Administration, Yuhan University, Korea*)

Introduction : Older people with dementia admitting to nursing homes are vulnerable persons and in need of extensive care and service. To develop strategies for improvements in nursing homes for people with dementia it is important to provide knowledge about factors that will have an impact on care quality. The aim of this study was to investigate comparisons and correlations between care quality and, the characteristics of the inhabitants and the nursing home facilities. **Method :** Data was collected from 51 nursing homes and 115 newly admitted persons 65 years or older with dementia. Statistical analysis included comparisons and correlations between characteristics of the nursing homes, inhabitants' condition and the rating of care quality called CLINT(Vaarama 2009). **Results :** The people were in mean 85 years old and those living in nursing homes specialised in dementia

were more depended in activities of daily living (ADL) and had more often defined dementia diagnosis than those living in an ordinary nursing homes. Less number of older people per ward and higher staff ratio were found in specialised nursing homes or group dwellings compared to ordinary nursing homes. Preliminary results indicated that low rate of care quality was associated with dependency in ADL and living in group dwelling. Conclusion : The dementia diagnosis is more often made in nursing homes specialized in dementia. When improving care quality in nursing homes it is important to consider the inhabitants dependency of ADL. Keywords : Care quality, Dementia, Nursing home

OP27 104-S

ELDER ABUSE AND SUICIDE

OP27 104-S-1

AN INNOVATIVE SUICIDE PREVENTION PROGRAM FOR DEPRESSED OLDER ADULTS

Sylvie LAPIERRE¹, Micheline DUBE¹, Lyson MARCOUX¹, Sophie DESJARDINS¹, Paule MIQUELON¹, Michel ALAIN¹, Richard BOYER² (1. *Department of Psychology, University of Quebec in Trois-Rivieres, Canada*; 2. *Centre de recherche Fernand-Seguin, University of Montreal, Canada*)

Introduction : The realization of personal goals is positively related to psychological well-being, life satisfaction, happiness, self-esteem, and gives meaning to one's life. Since reasons for living and meaning in life are incompatible with suicide, an intervention program centered on the realization of personal goals was developed as an innovative way to decrease depression and suicidal ideations in older adults living in the community. Method : The 14-week group intervention program was offered to help participants set, plan, pursue, and realize meaningful personal goals in order to promote their mental health, increase their psychological well-being and quality of life. The 24 participants (14 women, 10 men), aged 65 to 84 years (M = 68.6), were moderately depressed (Beck Depression Inventory-II, M = 21.1). They completed questionnaires on goal realization, depression, and suicidal ideations as well as various measures of well-being at three times (pre, post, and six months later). Results : Results indicated that improvement could be observed on goal realization abilities ($F(2,22) = 11.46, p < 0.001$) and that depressive symptoms had decreased significantly ($F(2,22) = 20.86, p < 0.001$) as well as suicidal ideations ($F(2,22) = 5.99, p < 0.01$). Progress was maintained six months later. Repeated anovas (time X gender) also indicated a gender effect for depression. Conclusion : The goal intervention program seems efficient to improve psychological well-being of depressed older adults and could be an innovative approach to suicide prevention, especially for men. Keywords : suicide well-being intervention

OP27 104-S-2

PREVALENCE OF ELDER ABUSE AND AFFECT OF SOME SOCIAL FACTOR ON IT IN MARKAZI PROVINCE 2010

Babak ESHRATI¹, Ezat VAHIDIAN¹, Mahin AZIMI¹, Pegah MEHRTALAB², Ezat TAHERI³ (1. *Public Health, Arak University of Medical Science, Iran*; 2. *Psychology, Applied and Science University, Iran*; 3. *Public Health, Arak University, Iran*)

Introduction : Elder abuse has devastating consequences for older persons such as poor quality of life, psychological distress, and loss of property and security. The purpose of this study is to determine the prevalence of elder abuse and effects of social factor on it in Markazi province. Method : the society of the study was all of the elders in Markazi province that were available by geographical address in the

table of rural and urban household societies .the study was cross sectional and multi phases in sampling .the first one was classification according rural and urban area and the second one was cluster sampling with equal cluster. estimation of samples were 472 persons and increased by design effect to 1110 persons .collection data was done by questionnaire and analyzed by SPSS and chi 2 exam. Results: This study showed 6.3 % of elderly were abused. 42/8% male and 57.2% female, mean of ages was 74.7 years, 64% were married and 31% were widows. There weren't any significant meaningful association between elder abuse and area of living ($p.v=0.299$), occupation ($p.v=0.104$), education ($p.v=0.358$) and age ($P.value=0.104$). There were significant meaningful association between physical impairment ($p.v=0.08$) and movement impairment ($P.value=0.008$). Conclusion : results verify that maltreatment occurred in the aged persons. Analysis of data indicated that elder abuse exist in every socio economic group with any context of education in urban area and rural area and in men and women .prevalence of elder abuse was 6.3 %(70persons) that verify the data of developed countries with limited sample. Keywords : elderly, abuse, elder abuse, physical impairment, movement impairment, education, occupation

OP27 104-S-3

ELDER MISTREATMENT IN RURAL TAMIL NADU, INDIA

Srinivasan CHOKKANATHAN (*Social Work, National University of Singapore, Singapore*)

Introduction : Elder mistreatment is a serious human rights and public health problem. However, there is limited research on the nature and magnitude of elder mistreatment in developing countries such as India. The current study attempts to determine the prevalence rate and risk factors of mistreatment in rural Tamil Nadu, India. Method : A two stage 30 (villages) by 31(respondents) sampling design was employed in this study. In the first stage, villages were selected through Probability Proportionate to Size (PPS) method. In the second stage 902 elderly persons aged 61 years and above were randomly selected. The mistreatment questionnaire encompassed items on psychological, physical and financial abuse as well as neglect. Measures on demographic profile, family environment, family stressors, and dependency were also administered. Logistic regression analysis was performed using complex survey method in stata.12. Results : The overall prevalence rate of mistreatment in the past one year to the interview was 20%. Almost all of them who were mistreated reported multiple abuses. Psychological abuse was most common followed by physical abuse, financial abuse and neglect. Risk factors for mistreatment included high levels of family stressors, low levels of family cohesion and alcoholism in the family. Conclusion : Interplay of socio-cultural and familial factors pose severe challenges in the identification of mistreatment. Elder abuse is multifactorial and effective intervention preferably should occur in the context of a multidisciplinary team. Keywords : elder abuse rural risk factors

OP27 104-S-4

CONNECTED BUT LONELY: MOBILE TECHNOLOGY AND SURVIVAL BATTLES OF OLDER ADULTS IN RURAL COMMUNITIES

Eucharia Chinwe IGBAFE (*Of Adult and Community Education and Training, University of Pretoria, South Africa, South Africa*)

Introduction : Connecting with people through mobile technology has been linked to well-being. Science has established that faulty connection is stressful and may become anti well-being. This study presents an exploration of the effect of mobile technology on older

adults in rural communities. Method : The participants were 300 older adults selected purposefully from rural communities in South-South Geographical zone in Nigeria. Quantitatively, questionnaire was used for data collection and qualitatively, semi-structured interview was conducted. Results : The results suggested that in mobile technology, voice to voice contact have more negative impact on older adults. The older adult perceived voice to voice contact as unhelpful to their need for face to face contact; spend time together to fulfill sincere yearning for family reunion and improve source of revenue situation. These factors results in emotional imploding which significantly affect the well-being of older adults. Conclusion : The study concluded that older adults in rural communities' battle to survive as mobile technology has limited the number of their children and relatives, who visit, see their living conditions and empathically give financial supports. Keywords : Connected, Lonely, Mobile Technology

OP27 104-S-5

HELPING RELATIONSHIPS, LIFE SATISFACTION AND SELF ESTEEM: INTERGENERATIONAL POLICY IMPLICATIONS FOR KOREAN OLDER ADULTS AND CHILDREN

Sondra Seungja DOE (*College of Health and Welfare, Woosong University, Korea*)

Introduction : This study examined whether perceived relationships between older adults and children were associated with older adults' life satisfaction and children's self esteem. Method : Data were collected from a total of 31 Korean Community Welfare Centers (CWCs), yielding usable data on 242 children and 244 older adults. A 20-item Old Age Life Satisfaction Index was used for older adults aged 60 or above and a 32-item Self Esteem Index for Children were used to measure 4 dimensions of children's self-esteem. Results : Results from children's data showed a positive linkage between children's self-esteem scores and their positive beliefs about their relationship with older adults. Children who received help from older adults and those who helped them showed significantly higher Global Self-Esteem (SE), Social-Peer SE, and Home-Parents SE scores than their counterparts who did not have helpful relationships with older adults with whom they interacted at CWCs. Among older adults, the younger they were, the higher expectation they had for receiving help from children and older adults who were relatively younger than others in the participant group were more likely to attend intergenerational programs. Among older adults, the older they were, the less they were satisfied in family relationships and friendships, and they were less likely to participate in social groups and organizations. Conclusion : The author concludes that isolated older adults and children with low self-esteem may benefit from participating in intergenerational social programs developed in the community setting. Policy implications are provided for fostering mutually-helpful interactions between children and older adults. Keywords : intergenerational networks; helping relationships

OP27 104-S-6

THE EFFECTS OF HOBBY AND LEISURE ACTIVITY PREPARATIONS ON THE SUICIDE IMPULSE FOR SOUTH KOREA'S OLDER GENERATION, AND THE MEDIATING EFFECT OF EGO INTEGRITY

Dongbae KIM, Hyunjeong KIM, Kyeongwon LEE, Eunjin LEE (*Graduate School of Social Welfare, Yonsei University, Korea*)

Introduction : Suicide is currently one of the most critical social problems in Korea, because Korea has the highest suicide rate among the Organization for Economic Cooperation and Development

(OECD) countries. The incidence of suicide among the elderly has dramatically increased. This study investigated the relationship between hobby and leisure activity preparations and the suicide impulse. Method : A mediating model structured by ego integrity was used to verify the relation between the two variables. The data was obtained through the Seoul Welfare Panel Data Study compiled by the Seoul Welfare Foundation in 2010. This study analyzed 1,862 people over sixty years old. Descriptive analysis, t-tests, ANOVA and the multiple regression analysis are used as research methods. Additionally, a Sobel test was used to verify the significant mediating effect. Results : The findings are as follows: First, hobby and leisure activity preparations indicated significant effects on the suicide impulse. Second, ego integrity functioned as a partial mediator on the relationship between hobby and leisure activity preparations and the suicide impulse. Conclusion : These findings suggest that practical interventions focused on hobbies and leisure activities reduce the suicide impulse for older adults. Furthermore, promoting ego integrity should be considered by practitioners who both plan and implement suicide impulse programs. Finally, this article provides theoretical and practical implications for promoting hobby and leisure activity preparations to prevent the problem of elderly suicides in South Korea. Keywords : Hobby and leisure activity preparations for older generation, the Suicide impulse, Ego integrity

OP27 105-S

GRANDPARENTING

OP27 105-S-1

THE GRANDMOTHER ROLE IN THEIR GRAND-CHILDREN'S EDUCATION: CASE LOMAS OF TABACHINES

Margarita MALDONADO (*Psychology, Instituto Tecnológico y de Estudios Superiores de Occidente (ITESO), Mexico*)

Introduction : In Mexico the structure of households had diversified in period from 1990 to 2000 there was a considerable decrease in nuclear units (from 74.9% to 68.8%) and an increase in large units (from 19.6% to 24.5%) (Sieglin, 2005). The dedication of the grandmothers to grandchildren has changed from voluntary to an obligation to them involves physical exertion, emotional and economic impact (Mestre, 2012). Hoyuelos (2004) mentions in general the roles of grandparents are: Caregiver, playmates, storyteller, transmitter of moral values and help in times of crisis. Objective: Describe the roles they have in the maternal grandmothers raising their grandchildren during their early childhood. Method : Descriptive study was conducted in the Lomas de Tabachines. This colony is characterized for high level of marginalization. Six grandmothers were interviewed. The age was $x = 67.0$, poor education 50.0% cannot read and write. The 100% were Catholics. Results : In all cases the presence of grandchildren was permanent. The grandmothers had an authority role because; they were responsible for correcting and provide guidelines for their grandchildren education. The responsibilities of this group of grandmothers who have to their grandchildren can be grouped into three categories: a) Care giver b) Support in their schooling c) Discipline. Conclusion : All of the families visited have extended family structures, where in addition to the couple, living children, nephews and grandchildren. This shows what Sieglin mentions (2005) on the extended family increased steadily and progressively. The best person to care for grandchildren was the maternal grandmother. Keywords : Grndmother poverty education

OP27 105-S-2

GRANDPARENTING IN SINGAPORE AND VIETNAM

Kalyani Kirtikar MEHTA¹, Bui The CUONG² (*1. Human Development*

and Social Services, SIM University, Singapore; 2. Southern Institute for Sustainable Development, VietNam Academy of Social Sciences, Viet Nam)

Introduction : The paper is based on a study on Grandparenting in Singapore and Vietnam. Within the context of an ageing Asia, the growing numbers of grandparents and the important roles they play within the family propel the need for more research devoted to their experiences. The sweeping social changes that are increasingly felt within individual families and society are giving rise to a shift in expectations of the role and functions of grandparents. **Method :** Using a mixed method of surveys and face to face interviews a comparison was made of the grandparents in Singapore with their counterparts in Vietnam. The survey questionnaire and interview guideline of questions were the same in both nations. The data was analyzed using SPSS to compare various variables across Singaporean and Vietnamese grandparents. **Results :** In terms of relationship with grandchildren, grandparents from both the countries indicated that they had a very good/good relationship with their grandchildren; however the grandparents from Vietnam indicated a slightly higher response (82.2%) in comparison to Singapore grandparents (77.1%). The roles and functions played by grandparents were similar across both countries. However, there were some urban and rural differences in Vietnam with regard to the views and experiences of grandparents. In both countries, grandchildren expressed greater intimacy with grandmothers than with grandfathers. **Conclusion :** Recommendations for further research and policies conclude the paper. **Keywords :** intergenerational, grandparenting, family

OP27 105-S-3
AGE GROUP DIFFERENCES IN HUMAN SERVICE NEEDS AND SERVICE ACCESSIBILITY IN CENTRAL TEXAS, U.S.A.
Kyong Hee CHEE (*Sociology, Texas State University, USA*)

Introduction : Most older people in the United States want to continue living in the community where they currently reside. Yet, it is difficult to “age in place” without easy access to various human services. The purpose of this study is to assess human service needs as well as accessibility to such services among older residents in Central Texas, Texas. **Method :** This study uses the survey data from a community needs assessment for a small city government in Central Texas. The assessment was conducted during the summer of 2012, and the author worked on it as a project manager/research collaborator. A total of 207 study participants who completed the surveys were recruited with the assistance of 18 local human service agencies. Surveys were made available in both English and Spanish. The typical respondent is Hispanic, middle-aged, a woman, and from a lower-income household. **Results :** Statistical data analyses reveal a number of areas in which older residents differ from their younger counterparts. Not surprisingly, older respondents are more likely to have need for senior services and housing for special needs populations. They are, however, less likely to have received substance and alcohol abuse services, and legal services. Older respondents also reported significantly greater difficulty accessing services for domestic violence victims. **Conclusion:** These results suggest the need for greater attention to population aging at the community level. To respond to shifting resident needs, human service agencies and communities should recognize the age-differentiated patterns of human service needs and accessibility. Implications for local government policy are discussed. **Keywords :** Age Group Differences, Human Service Needs, Service Accessibility

OP27 106-S

SERVICE PROGRAMMES

OP27 106-S-1
KOREAN OLDER PEOPLE'S CARE IN THE POLITICS OF FAMILY SUPPORT
Keong-Suk PARK (*Sociology, Seoul National University, Korea*)

Introduction : This study aims to examine the deep relationship between the characteristics of family change and the delayed social perception of older people's care. The main argument to evince in the paper is that the politics of family support between the extended family and the interest of nuclear family has been unrecognized under the influence of familism, and it deterred from building a broader semantic basis of social care and had deleterious effects on the care of elderly people as well as their self perception. **Method :** Main method is semantic analysis to trace the social meanings of the diverse, conflicting, and scattered images in family laws and mass media (mainly newspapers) between the 1980s and the present time. Using these materials, it was analyzed how conflictual legal underpinnings about family relationship have been and how the conflicts have changed, and how views and contents of family relationship between gender and generation in mass media have changed. **Results :** Legal contradictions and real conflicts between extended and nuclear family interest, and the social pressure to cover this family conflict are interpreted in the context of intense but covert politics of family support. Inertial reliance on family support irrespective of its tension and social ignorance to cover the patriarchal coercion underlying the tension of family support, have deterring effect on building social ethics about care. **Conclusion :** Ignorance of progressive aspect of family conflict, inertial reliance on filial piety for the elderly, and social absence of care ethics have displaced the elderly from the care. **Keywords :** care, family support, familism

OP27 106-S-2
DETERMINANTS OF LIFE SATISFACTION AMONG THE ELDERLY USING SOCIAL SERVICES IN KOREA
Hongjik LEE¹, Sooyoun K. HAN² (*1. Social Welfare, Kangnam University, Korea; 2. Executive Director, CARE the Right, USA*)

Introduction : The purpose of this study was to explore the determinants of life satisfaction among the elderly using social services in Korea. Especially, it aimed to explore how the socioeconomic characteristics of the elderly, service organizational characteristics and service performances affected their level of life satisfaction. **Method :** The subject of this study was 152 elderly who received social services of nine service agencies in the Seoul-Gyeonggi metropolitan area. The level of life satisfaction was measured by the 5-subset questionnaires of feeling of daily life, expectation of future, meaningful work, pride and overall feeling of life. Also, socioeconomic characteristics of the elderly, organizational characteristics, and service performances were introduced as predictors of life satisfaction. This study conducted descriptive statistics analyses and multiple regression analyses to explore the determinants of life satisfaction among the elderly in social service agencies. **Results :** Although life satisfaction of the elderly was varied significantly according to various socioeconomic characteristics, service organizational characteristics and service performances, only subjective health status, type of facility, reliability, tangibility, responsiveness of services were still remained as statistically significant predictors to their level of life satisfaction in the total model. **Conclusion :** The result of this study showed us that elderly who were healthy, were not living in the facilities, who received reliable, tangible and responsive services enjoyed higher level of life

satisfaction than their counterparts. It suggested us that more policy and program considerations should be took for the elderly to improve their levels of life satisfaction. Keywords : elderly, life satisfaction, service performances, socioeconomic status, organizational traits

OP27 106-S-3

EXPLORING INTERGENERATIONAL RELATIONSHIPS THROUGH UTILIZING INTERACTIONAL PATTERN ANALYSIS (IPA)

Erica DE LANGE (African Unit for Transdisciplinary Health Research, North West University, South Africa)

Introduction : This presentation addresses the topic of intergenerational relationships evident within the family. The context of this research is the field of gerontology as the research findings are appropriate to persons of age 60+. Method : Interactional pattern analysis was utilized with various gerontology case studies. These cases were taken from clinical private practice, where therapy was conducted with persons of age 60+. Data was collected during the first consultation with the client and during the therapeutic process. Then the collected data was analysed thematically. Interactional pattern analysis was used to identify the intergenerational relationships of these clients. Results : The findings of the research reflected the interactional patterns and the interactional styles of the participants and the outcomes of the therapeutic interventions are presented. Conclusion : The implications of the research are presented with some suggestions regarding the facilitation and improvement of interpersonal relationships for people that are ageing and recommendations for future research are given. Keywords : Intergenerational, relationships, family

OP27 106-S-4

THE EFFECT OF PSYCHO-EDUCATIONAL INTERVENTION PROGRAM ON COMPLETION OF END OF LIFE DECISION FOR KOREAN AMERICAN, DEMENTED OLDERS

Sooyoun K. HAN¹, Jason J. HAN², Hongjik LEE³, John KIM⁴ (1. Executive Director, CARE the Right, USA. 2. VAD & Cardiac Transplant Program, Exercise Physiology Laboratory, Center for Advanced Cardiac Care, Columbia University Medical Center, USA. 3. Social Welfare, Kangnam University, Korea. 4. Internal Medicain & Geriatrics, Bergen Regional Medical Center, USA)

Introduction : The study examined the benefits of a psycho-educational intervention program (PEIP) on completion of end-of-life decision (EOLD) for demented, Korean-American, nursing home olders. Method : This study used a classic pre and post-test control group design to identify that PEIP would enhance family caregiver(FC) to complete EOLD in comparison to control group receiving only the standard information routinely provided in Korean. A two-hour long PEIP was designed to educate FCs about dementia prognosis and symptoms, life sustaining treatment choices, and the EOLD procedure, all by using supportive counseling skills. The telephone interview included semi close-ended questions with regard to how many FCs had actually completed EOLD or consulted physicians, and why the FCs decided to complete EOLD. Data analyzed by SPSS 19, the One-Way Analysis of Covariance(ANCOVA). Results : Results found FC who received the PEIP statistically significantly scored higher completion rate of EOLD than the control group. They significantly increased their knowledge to compare with the control group after three months of PEIP. They involved in EOLD to help elderly residents' pain relief, elder's dignity, medical condition. Conclusion : This study suggests if PEIP works in such a positive way to improve the quality of EOLD for minority

elders, encouraging policy maker and healthcare providers to be more cognizant of the system's current shortcomings in caring for and educating minority elders and FCs is needed in order to effectively address them. Keywords : End-of-Life Decision, Korean American Olders, Nursing Home

OP27 106-S-5

EFFECT OF NURSING EDUCATION ON STUDENTS' KNOWLEDGE, ATTITUDES AND PREFERENCES TO WORK WITH OLDER ADULTS: ISRAELI PERSPECTIVES

Anna ZISBERG¹, Max TOPAZ², Tova BAND-WINTERSHTEIN¹ (1. The Cheryl Spencer Department of Nursing, Haifa University, Israel; 2. School of Nursing,, University of Pennsylvania, USA)

Introduction : More nurses are needed to provide care for increasing numbers of older adults; however, many are reluctant to work in geriatric settings. Nursing education has a controversial effect on the development of positive attitudes towards old age and career choices in geriatrics. There is lack of knowledge on how older adults are viewed by nursing students, especially in the Middle East. We examined the effect of nursing education on students' knowledge, attitudes and work preferences with older adults in ethnically-diverse Israeli society. Method : We conducted a cross-sectional survey applying Kogan's Old People Scale to measure attitudes toward elderly and Palmore's Facts on Aging Quiz-1 to assess knowledge level. Socio-demographics and intention to work with older adults were also examined. We used multivariate-regression models to examine the effect of nursing education on students' attitudes and work preferences. Results : 224 nursing students from the largest academic institution in Northern Israel across four cohorts responded to the survey. 55% were Jewish and the rest Arabs. Ethnicity (being Jewish, $\beta=.40$, $p<.000$) and knowledge ($\beta=.27$, $t=4.54$, $p<.000$) were the strongest predictors of attitudes; attitudes ($\beta=.28$, $p<.000$) and ethnicity (being Arab, $\beta=-.28$, $p<.000$) predicted work preferences. Conclusion : While the knowledge of old age increased, preferences for future career in geriatrics declined. Student's attitudes did not change with education. Ethnicity was a strong predictor of attitudes and work preferences; Arabs indicated more willingness to work in geriatrics while their attitudes were more negative. The results highlight the need in culturally tailored educational programs focused on changing the attitudes toward aging. Keywords : nursing education, attitudes toward elderly, knowledge of old age

OP27 107-S

AGEING AND PSYCHOSOCIAL THEORY I

OP27 107-S-1

FEASIBILITY AND VALIDITY OF DEMENTIA ASSESSMENT BY TRAINED COMMUNITY HEALTH WORKERS

Hae-Ra HAN¹, So-Youn PARK², Heejung SONG³, Miyong KIM⁴, Kim B. KIM⁵, Hochang Ben LEE⁶ (1. Department of Community and Public Health, The Johns Hopkins University School of Nursing, USA; 2. College of Social Sciences, Kyonggi University, Korea; 3. College of Agriculture and Natural Sciences, University of Maryland, USA; 4. Department of Community and Public health, The Johns Hopkins University School of Nursing, USA; 5. Korean Resource Center, USA; 6. School of Medicine, Yale University, USA)

Introduction : Ethnic minority elders in the United States, particularly recent Asian immigrants, have a heightened prevalence of dementia but lack timely diagnosis and treatment. One of the critical steps in addressing the unmet needs of dementia care in this rapidly growing ethnic population is to build the capacity to adequately screen people

with dementia for necessary follow-up assessment and care. The purpose of this study was to determine whether dementia rating by trained community health workers (CHWs) based on the Clinical Dementia Rating (CDR) could achieve an acceptable level of agreement with the gold standard, physician diagnosis of dementia. Method : A total of six CHWs were trained and certified as CDR raters. Ninety community-dwelling Korean American elderly (aged 60 years or older) were included in the analysis. After completing a Korean version of the Mini-Mental State Examination (MMSE-KC), each study participant was interviewed and rated by a trained CHW based on the CDR. A bilingual geriatric psychiatrist evaluated the participants independently for dementia status. Results : 61.1% of the participants were rated as having either mild cognitive impairment (CDR=0.5) or dementia (CDR=1 or higher) by CHWs, as compared to 56.7% diagnosed by the clinician. A receiver operating characteristic (ROC) curve analysis demonstrated a good predictive capability for CDR rating by trained CHWs (ROC area under the curve=0.86 [95% confidence interval=0.78-0.93], with sensitivity=85.5% and specificity=88.6%) in detecting mild cognitive impairment and dementia. Conclusion : These findings provide preliminary evidence that trained CHWs can effectively identify community-dwelling Korean elderly with mild cognitive impairment and dementia. Keywords : Clinical Dementia Rating, community health workers, dementia, elderly, Korean

OP27 107-S-2
FUNCTIONAL SELF-EFFICACY IN FACE OF A HYPOTHETICAL DECLINE IN HEALTH AND FUNCTION: DEVELOPMENT AND VALIDATION OF A SCALE

Hava TOVEL¹, Sara CARMEL¹, Victoria H. RAVEIS² (1. Center for Multidisciplinary Research in Aging, Ben-Gurion University of the Negev, Israel; 2. Psychosocial Research Unit on Health Aging and the Community, New York University College of Dentistry, USA)

Introduction : Decline in health and/or function is one of the major factors negatively affecting wellbeing in old age. This paper describes the development and validation of a scale for assessing the degree of confidence in self-functioning while facing a decline in health/function - Functional Self-Efficacy (FSE). Method : The FSE scale was evaluated in three different studies of older Israelis aged 75+ (N1=191, N2=350, N3=1364). Data were collected by structured home interviews. Results : Results of the three exploratory factor analyses clearly revealed two underlying factors: emotional, and behavioral self-efficacy. Confirmatory factor analyses resulted in acceptable model fit criteria (e.g.: NFI=.952-.987, CFI=.983-.991, RMSEA=.040-.052). The final 13-item FSE scale was found to have good internal consistency in all three studies (Cronbach's alpha ranged .90-.95) and good criterion validity based on Pearson correlation coefficients with relevant scales such as general self-efficacy (r=.479-.553) and life satisfaction (r=.379-.520). Multiple regression analyses conducted to predict wellbeing showed a positive and significant contribution of FSE to wellbeing, controlling for age, gender, health evaluation, economic status, education, social support, and general self-efficacy. Conclusion : The FSE scale appears to be a reliable tool for evaluating older adults' confidence in self-functioning in the presence of health decline, and an important predictor of wellbeing. Functional abilities and the confidence in them can be strengthened by appropriate interventions and in turn enhance wellbeing in older adults. Keywords: Functional Self-Efficacy, well-being, elderly

OP27 107-S-3
STATISTICAL GERONTOLOGY

Yury GUSCHO (Gerontology, Longevyty AS, Norway)

Introduction : According to the statistics the average human has at least 1 disease if he is between 18 and 25 years old (the health resource is about 90%). He has 3 diseases if he is between 37 and 50 (the health resource is about 75%), and 5 diseases if he is between 60 and 80 (the health resource is about 50%). The average life expectancy of the Earth's inhabitants is 50 years. Method : In the 17-th century the first attempts to create "the formula of life" and to forecast the lifetime on its foundation were made by K.Huygens, V.Leibnitz and E.Halley, and in the 18-th and the 19-th centuries - by Eylerer and P.Laplace. In the 20-th centuries the theory was pushed by Mr. Gomperts, Mr.Meykem, Mr.Johnson, Mr.Pavelets, Mr.Brillinger, Gavrilovs's married couple and by many other well-known scholars. In the Report the algorithm of the calculation of the index of the vital and business activity is presented. Results : On the basis of statistical data, collected and processed by the author in 120 countries for 25 years, it was possible to complete the efforts of the Pleiad of scientists, executed during the previous four centuries. Conclusion : On basis of our program product, it is possible to forecast the dynamics of the index of vital and business activity, the resource of health and longevity. Now it is realizable to optimize the style of life in consideration of the possible changes in living conditions and to prolong the lifetime for twenty-three years and completely free of charge. Keywords : Active longlife

OP27 107-S-4
PERCEIVED CONTROL IN HEALTH CARE AMONG FRAIL OLDER ADULTS: FROM CONCEPTUALISATION TO ASSESSMENT

Lily CLAASSENS¹, Martijn HUISMAN¹, Suzanne VAN RHIJN¹, Caroline TERWEE¹, Marjolein BROESE VAN GROENOU², Guy WIDDERSHOVEN³, Fenna VAN NES¹, Dorly DEEG¹ (1. Dept. of Epidemiology & Biostatistics (LASA), VU University Medical Center, EMGO Institute for Health and Care Research, Netherlands; 2. Dept. of Sociology, VU University, Netherlands; 3. Dept. of Medical Humanities, VU University Medical Center, EMGO Institute for Health and Care Research, Netherlands)

Introduction : Experiencing control in the health care process can be challenging for frail older adults with multi-morbidity. We conduct a mixed method study to address: 1.) the conceptualisation of health care-related 'perceived control' from the perspective of frail older adults; and 2.) the construction of a measurement instrument. Method : In a qualitative interview study, among 32 frail older Dutch adults aged 65 and over, elements of perceived control were identified and integrated into a conceptual framework. Based on this framework, a self-administered questionnaire was developed and revised upon pilot-testing and a (first-round) field-test with 197 individuals from the target group. Subsequently, 300 frail older people are invited to participate in a survey starting December 2012, to complete the questionnaire validation process, and to assess the empirical association of perceived control with socioeconomic status; the perceived quality of care; and quality of life. Results : Perceived control in health care is believed to be a subjective state, driven by internal and external factors. Our 29-item questionnaire reflects a formative model and captures 5 independent sub scales: self-confidence in (I) organising formal health care, (II) communicating with health care providers, and (III) self-management in the home setting, (IV) expectations regarding future health care needs, and (V) perceived support from and interaction with significant others. Conclusion : Assessing perceived control in the health care domain may be a new step towards understanding at what level supportive interventions should operate, and at whom these should be directed. Keywords : perceived control, health care, frail older adults

OP27 107-S-5

CAREGIVER DUTY FULFILLMENT AND CAREGIVER SATISFACTION : INSTRUMENT DEVELOPMENT

Lyda Consuelo AREVALO-FLECHAS¹, Michael SIERRA-AREVALO² (1. St. David's School of Nursing, Texas State University - Round Rock Campus, USA; 2. Sociology, Yale University, USA)

Introduction : Caregiver satisfaction and caregiver duty fulfillment are concepts central to the Latino caregiving experience. Yet, measures of caregiver burden remain in use as outcome indicators of the effectiveness of caregiver interventions. Aims To describe the use of mixed methodology in the initial phase of development of a culturally and linguistically congruent instrument that captures central concepts in the Latino Alzheimer's caregiving experience: Duty fulfillment and satisfaction. Method : Three phase mixed methodology. Phase I (QUAL) : Ethnographic interviews of bilingual and monolingual Latino/Hispanic Alzheimer's caregivers. Phase II (QUAL-QUANT) : Interviews in Spanish and English and completion of the English and Spanish versions of the Screen for Caregiver Burden (SCB) by bilingual caregivers. Phase III (QUANT) : Completion of the English and Spanish versions of the SCB and three measures of quality of life: The Perceived Stress Scale (PSS), the Short Form 36 (SF-36) Health Survey, and the Center for Epidemiologic Studies Depression Index (CES-D). Results : Data from the ethnographic and subsequent interviews were used to identify substantive content areas. An initial 120-item pool was constructed and balanced across referent groups and direction of wording. Items with minimal variance were eliminated during pilot testing. The reduced set was initially administered to a sample of 100 Latino caregivers of a relative living with Alzheimer's disease. Conclusion : The instrument must continue to be refined as it shows promise in the measurement of previously ignored central concepts in Latino caregiving. Latinos have been described as under reporting or not acknowledging the existence of burden. Keywords : instrumentation, cross-cultural, caregiver

OP27 107-S-6

AN EXPLORATORY STUDY ON THE AFFECTING FACTORS OF GEROTRASCENDENCE IN METROPOLITAN AREA IN KOREA

Min-Suk YOON (Department of Future and Social Policy Research, The Seoul Institute, Korea)

Introduction : This study aims to confirm the existence and influencing factors of Gerotranscendence in the case of elders living within the Metropolitan area in Korea. The definition of gerotranscendence is as people grow older after mid-age, they experience a major shift in the way they view the world. This theory was first mentioned by Tornstam(1994), and the ninth stage of Erikson(1997)'s psycho-social development theory. Method : This study investigated 494 elders over the age of 65 who living within the Metropolitan area in order to confirm the existence of Gerotranscendence. We used The scale of gerotranscendence, which was executed by SPSS 12.0. to confirmed the existence of the phenomenon of gerotranscendence in the elderly. Results : The result shows that, First, as a result of comparison between the middle aged group and the elder group through the average points of Gerotranscendence, that the score of the middle aged group was significantly lower than that of the elder group. Second, it has been proven that the factors influencing Gerotranscendence are everyday life stress, social support, satisfaction of one's health status, marital status and educational level being over Middle school graduated. Conclusion : The age factor wasn't significant in quantitative research by gerotranscendence, but when we interviewed subjects over 70's years in age, some of them realized the concept of

gerotranscendence and were affected by other factors. These results show that the difference of the phenomenon of gerotranscendence dose in fact depend on the age group. Keywords : Gerotranscendence, Erikson & Erikson's Ninth Stage, Social Support, Life - Satisfaction, Daily Stres

OP27 108-S

SOCIAL PARTICIPATION I

OP27 108-S-1

INCREASING VCT SERVICES UPTAKE BY OLDER PEOPLE THROUGH PEER COMMUNICATION

Michael Kanyingi KIMUHU (Mgh Project, Mkccs Helpage Kenya Project, Kenya)

Introduction : HIV is a major problem for Older People in Africa. HIV impacts Older People in two main ways. Older People become infected within their older years or are entering their older age infected with HIV. Older people in most cases do not consider themselves at risk of HIV infection. Project objective - To increase older people's awareness and understanding of HIV/AIDS transmission and available support services and enhance their ability to more effectively protect themselves and their dependents from HIV/AIDS transmission. Method : The programme staffs communicate with the community through the area provincial administration where a public forum is called for the community to select the older persons for training as peer educators. This is followed by the training of the older persons as peer educators. The training units included; Facts about HIV and AIDS, Issues of older persons, communication, and basics of community home based care. The project is designed to use volunteer community resources among older persons 50+ to provide accurate, honest information about sexuality HIV and AIDS, through household visits, one-on-one conversations and community meetings. Peer educators visit homes and give information about HIV and encourage testing. Each peer educator refers about 20 older people for HIV test. Results : 284 older people tested for HIV during two HTC days. 1350 tested in three years. Conclusion : There is notable increase in the comfort by older people talking about sexuality. There is an increase in the number of older people who access and request for HTC services. Keywords : Older people, HTC, Peer

OP27 108-S-2

ST-AGE-ING MATTERS: TRAINING ELDER ACTORS TO PROMOTE EMPOWERMENT AND SOCIAL INCLUSION

Mary Ann MURPHY (Social Work/Sociology, University of British Columbia, Canada)

Introduction : The complex concept of social inclusion includes elements of belonging, participation, community/civic engagement, the elimination of discrimination, the promotion of independence and quality of life. These elements include access to services. The oral presentation of this paper will summarize the process and outcomes of a Canadian community-based "geriatric actors project" titled "ST-AGE-ING Matters: Acting Out Our Issues". The main goal of this project was to mentor and train members of a lifelong learning organization as community 'elder actors' to promote empowerment, public understanding and awareness of issues such as seniors care, dementia and Alzheimer's disease, intergenerational communication, ageism, elder abuse, and social exclusion. Two well qualified theatre directors were hired. Method : The methods include: participant observation; focus groups with participants, and a thematic analysis of developed vignettes. Results : The presentation - with performance footage - includes results of a formal evaluation of this 'elder actors'

project. The major intended outcomes of this project were met: 1) to increase the social capital of older adults by training novice actors and 2) to generate public awareness and conversation about issues that critically and negatively affect older adults. The dramatic process itself had a major impact on participants. Conclusion : An inclusive society is one where it is common to find attitudes of mutual respect, friendships, and communication across the generations regardless of race, religion, gender etc. (Government of Ireland, National Action Plan for Social Inclusion, 2008; European Social Watch, 2010). This creative project makes a contribution in the area of arts, health, and active ageing. Keywords : actors, social inclusion, empowerment, active ageing

OP27 108-S-3

EVALUATING THE IMPACT OF MEMBERSHIP OF AN ACTIVE RETIREMENT IRELAND ON THE QUALITY OF LIFE OF MEMBERS

Aine NI LEIME, Aoife CALLAN, Caroline FINN, Ronan HEALY
(*Irish Centre for Social Gerontology, National University of Ireland Galway, Ireland*)

Introduction : It is increasingly recognised at international policy level that non-governmental organisations that promote older people's participation in society play an important role in enhancing their quality of life and well-being. The World Health Organisation suggests that keeping active mentally, physically and socially promotes healthy ageing. Research indicates that volunteering and participating in older people's organisations enhances the quality of life and well-being of older people. There remains a scarcity of research exploring the impact of participating in such organisations. This paper discusses the findings of an evaluation conducted with a non-governmental organisation in Ireland, Active Retirement Ireland (ARI) in 2012. It investigates the impact of volunteering and participation in ARI on the well-being of older volunteers and participants. ARI is a national organisation with 23,000 members that encourages the involvement of older people in a wide variety of activities. Method : The mixed methods study involves a questionnaire sent to 882 ARI members to establish the impacts on them of involvement in ARI; CASP-19 scale was used to measure quality of life. Five focus groups and 30 interviews were conducted with 64 ARI members to explore the processes by which participants are impacted. Results : Response rate is 54%. Findings indicate impacts across a number of domains including enhanced quality of life, mental and physical well-being and reduced loneliness. The time spent by members participating in the organisation is assigned an economic value. Conclusion : Findings allowing for the identification of key elements that may lead to a healthier lifestyle in older age. Keywords : volunteering, quality of life, impact

OP27 108-S-4

TRANSITION TO RETIREMENT AND SOCIAL ACTIVITIES: A FOCUS ON GENDER DIFFERENCE

Jinkuk HONG¹, Gyounghae HAN², Jeong-yeon SON³ (1. *Waisman Center, University of Wisconsin-Madison, USA*; 2. *Dept. of Child and Family Studies, Seoul National University, Korea*; 3. *Institute on Aging, Seoul National University, Korea*)

Introduction : Employment status playing a critical role in individual's social identity, the retirement process usually reflects individual's own social sphere, and simultaneously influences one's social connectivity significantly. The goal of this study is to examine how transition to retirement is associated with one's social activities among Koreans baby boomers, many of whom are going through the retirement

process. Method : Using data from the Study of Korean Baby Boomers that surveyed men and women born between 1955 and 1963, this study examined the differences in social activities across different stages in transition to retirement: continually working on a main job, working on a bridge job - the second job after retiring from the main job, and not working at all after retiring from the main job. Results : Results of regression analysis show that, for women (n = 2306), compared to those who were continually working, women in other phases of the retirement process reported higher levels of social participations and more frequent contacts with her social networks. For men (n = 1995), those not working at all after retiring from the main job reported lower levels of social participation than those continually working. Men working on a bridge job, however, reported higher level of social participation if they were high in the "positive relation" domain of psychological well-being. There was no difference in the amount social contact across three phases of transition to retirement for men. Conclusion : These findings suggest that transition to retirement has very different social consequences for men and women. Keywords : Social participation, retirement, gender differences

OP27 108-S-5

A STUDY ON THE DIGITAL DIVIDE AND LIFE SATISFACTION OF THE BABY-BOOM GENERATION IN KOREA

Chung Sun PARK (*Department of Family Welfare, Daegu University, Korea*)

Introduction : The baby-boomers have recently experienced the expansion of the digital devices in every sphere of their lives. However, there is a significant difference between baby-boomers who were well adapting and those who were not to new digital environments. This difference resulted in a digital divide within a baby-boom generation. Some reasons for the digital divide were individual, but most reasons seemed to be social-structural. In our study, the factors to cause the digital divide were analyzed, and the relationship between the causes of the digital divide and the life satisfaction was examined. Method : 400 men and women of baby-boom generation were surveyed with a structured questionnaire. Results : The findings are as follows; the possession and the buying intention of digital devices were related to sex, education, income, and job, but not to the age of the baby-boomers. The capability to digital device utilization showed a negative relationship with age, and a positive relationship with education and income. The accessibility to digital devices and the capacity to manage digital information showed a strong relationship with socio-economic backgrounds. The participation rate in digital activity also showed significant differences among socio-economic backgrounds of the baby-boomers. Finally, satisfaction with digital life and overall life satisfaction of the baby-boomers were influenced by digital-related activities. Conclusion : Therefore, in order to narrow down the gap of the digital divide, and to enhance digital life and overall life satisfactions, there should be strong support programs and services for the baby-boomers who had relatively disadvantages in their socio-economic backgrounds. Keywords : baby-boom generation, digital divide, quality of life

OP27 108-S-6

THE STUDY FOR RETIREES' STRESS AND LIFE SATISFACTION OF THE ELDERLY: MODERATING EFFECT OF PRODUCTIVE AGING ACTIVITY

Soomin SHIN (*Social Welfare for the Elderly, Graduate School of Social Welfare, Yonsei University, Korea*)

Introduction : The emphasis on a continuous productivity for the

elderly is the main characteristic among the developed countries getting ready for the aging society. Traditional perspective has viewed the elderly as diseased, lacking of ability, and dependent person. However this paradigm shifts to a positive viewpoint considering them as healthy, productive, and independent people. Moreover, retirement from work can present a significant adjustment challenge for the elderly financially, socially and emotionally. In this aspect, retirement has been identified as a significantly stressful event. Method : The purpose of this research is to verify how the multi-dimensional activities of the elderly could moderate the relations between retirees' stress and life-satisfaction. The data used, the Seoul welfare panel data, was created by the Seoul Welfare Foundation and this study was targeted at retirees aged over 50. Results : According to the result, retirees' economic, relational, dairy stresses are direct influential factor to life-satisfaction. Moreover, periodical physical exercise, active social participation, leisure activity, volunteering activity, donation, participation for job training and continuing education program work as a moderator in the research model. Conclusion : This research makes an effort to approach the concept of productive aging activity of the elderly with an integrated perspective. Also, verifying the relationship between retiree's stress and life-satisfaction in terms of multi-dimension is meaningful. Through this outcome, national policies have to provide not only quantitative opportunities for activity of the elderly, but also qualitative services in order that the productive activity could recover retirees' stress in the old age and enhance their life-satisfaction finally. Keywords : Retiree's Stress, Life-Satisfaction of the Elderly, Productive Aging Activity

OP27 109-S **HOUSING & URBAN**

OP27 109-S-1 **THE VIRTUAL ENVIRONMENT IN COMMUNICATION OF AGE-FRIENDLY DESIGN**

Eunju HWANG¹, Andrew PARK², Andrew SIXSMITH³, Gloria GUTMAN³ (1. Apparel, Housing and Resource Management, Virginia Tech, USA; 2. Computer Sciences, Thomson Rivers University, Canada; 3 Gerontology Research Center, Simon Fraser University, Canada)

Introduction : The purpose of this study was to construct a virtual environment (VE) and to conduct oral narratives from older adults to listen to their virtual walking experiences in making the Vancouver Chinatown, Canada more age-friendly. Method : To construct the VE, first an environmental audit was conducted and pictures of buildings and streets were taken at the street level (segment). Then using a computer software program (Maya), 3D models of the Chinatown were built, and they were imported to a game engine (Unity 3D) so that participants could interact with the VE. A total of 21 seniors participated in oral narratives experiencing the virtual walk. 11 participants were male and 10 were female. The participants freely talked about what they were exploring, motivations to make their choice of route, and likes and dislikes. Results : Safety and shortest routes to local amenities were mentioned frequently in making decisions on walking routes. About using the VE, the majority (16) of participants said that they navigated the VE as if they navigated in the real environment and over half of participants (13) felt that the experience was very similar with playing a video game. However, only about the half of participants (12) agreed that it was definitely easy to learn how to navigate the VE. Conclusion : The VE can be developed as a potential research tool when we work in a high crime areasuch as the Vancouver Chinatown. It can greatly reduce ethical issues since there would be no real physical risk of danger. Keywords : virtual

environment; age friendly; physical environment

OP27 109-S-2 **DEVELOPING AGE-FRIENDLY CITIES: CASE STUDIES FROM BRUSSELS AND MANCHESTER AND IMPLICATIONS FOR POLICY AND PRACTICE**

Tine BUFFEL¹, Chris PHILLIPSON², Paul MCGARRY³, An-sofie SMETCOREN⁴, Nico DE WITTE⁴ (1. Social Sciences, Humanities, The University of Manchester, Adult Educational Sciences, Vrije Universiteit Brussel, United Kingdom; 2. School of Social Sciences, The University of Manchester, United Kingdom; 3. Senior Strategy Manager Valuing Older People (VOP), Public Health Manchester, United Kingdom; 4. Adult Educational Sciences, Vrije Universiteit Brussel, Belgium)

Introduction : Developing environments responsive to the aspirations and needs of older people has become a major concern for social and public policy. Policies and programmes directed at achieving 'age-friendly' communities are considered to require a wide range of interventions, including actions at the level of the social and physical environment. Method : This article aims to provide a comparison of the age-friendly approaches in two European cities, Manchester and Brussels, with a particular focus on policies and initiatives that promote active ageing in an urban context. Both cities have been recognised as 'age-friendly' cities by the World Health Organization because of their active policy for older people. Results : This comparative paper is developed by examining: first, the main findings from empirical studies which sought to examine experiences of place among older people living in inner-city neighbourhoods in Brussels and Manchester; second, the key factors driving the age-friendly debate in both cities; third, the implementation of age-friendly policies; fourth, the nature of the cooperation between older people and different stakeholders, including both formal and third sector agencies; and fifth, examples of practice initiatives aimed at involving older people in the development of age-friendly environments. Conclusion : The article concludes by discussing the key elements and resources needed to develop age-friendly cities. Keywords : Age-friendly cities, living environment, inner-city neighborhoods, aging

OP27 109-S-3 **EXAMINING DIFFERENCES IN RURAL AND URBAN COMMUNITIES IN CHINA FROM AN AGING FRIENDLY COMMUNITY PERSPECTIVE**

Yi WANG, Ernest GONZALES, Nancy MORROW-HOWELL (George Warren Brown School of Social Work, Washington University in St. Louis, USA)

Introduction : The Aging Friendly Communities (AFC) Initiative by the World Health Organization has gained worldwide momentum given its potential to facilitate health, economic security and engagement. Unfortunately, measures have yet to be explicated. Moreover, much emphasis is on urban communities; yet significant increases of rural older adults are projected. Our objectives are to (a) analyze community-level measures in the 2011-2012 national baseline survey of China Health and Retirement Longitudinal Survey (CHARLS) within the paradigm of AFC-Initiative, and (b) compare the 'age-friendliness' of urban/rural communities. Method : Community variables in CHARLS baseline survey were reviewed and analyzed. Chi-square and t-tests were utilized to explore differences between 301 rural and 152 urban communities. Results : Information pertaining to the built environment but not the social environment was collected. The existence of certain facilities was assessed from some basic infrastructure to highly age-friendly facilities. Quality,

accessibility, and affordability dimensions were not collected. Secondly, rural communities are significantly underdeveloped regarding basic infrastructure (public transportation, type of roads, drinking water system, heating system, sewer system, usage of electricity) and the quality of the medical care in rural communities was lower than urban areas. Significant urban-rural distinctions are also found in community facilities that can encourage older adults' engagement in physical exercise, leisure, personal enrichment activities, employment, and volunteering. Conclusion : This is the first study to examine CHARLS data through an AFC perspective. Social inclusion measures and research that examines the impact of urban/rural settings on health, economic security and engagement are warranted. Keywords : aging-friendly community, CHARLS baseline, urban-rural comparison

OP27 109-S-4

“MOVING OUT? OR NOT!”: URBAN NEIGHBORHOOD CONTEXT AND INTENTIONS TO MOVE IN LATER LIFE

Min Hee KIM¹, Philippa CLARKE², Jeffery MORENOFF³ (1. *School of Social Work & Department of Sociology, University of Michigan, USA*; 2. *Survey Research Center, Institute for Social Research, University of Michigan, USA*; 3. *Survey Research Center, Institute for Social Research & Department of Sociology, University of Michigan, USA*)

Introduction : Based on competing theories surrounding the role of neighborhood push factors and attachment factors on moving intentions in later life, this paper examines the association between neighborhood-level physical and social environments and the intention to move among community-dwelling adults in Chicago by age. Method : Data comes from Chicago Community Adult Health Study (2001-2003)(N=2,972), which collects neighborhood-level data using Systematic Social Observation and US Census. Multilevel multinomial logistic regression was applied. Results : Results indicate that neighborhoods with greater signs of risky behavior are associated with a greater desire to move for all age groups. Poor physical conditions in the neighborhood played a significant role in increasing the intention to move. However, older adults(65 and over) were less likely to report an intention to move than the younger age group(18-40) when living in a physically decaying neighborhood. The push effect of a high proportion of racial minorities at the neighborhood-level was also attenuated among older adults. At individual level, being female, married, owning a home, and having more friend/kin networks decreased the odds of move intention, whereas higher education levels and physical health limitations increased the odds for all age groups. Conclusion : Older adults' decisions to stay or leave neighborhood are related to residential safety and personal health status, but not the neighborhood physical condition or racial segregation itself. Results show the importance of an individual's support network on moving intention. This study suggests incorporating theories from social gerontology, neighborhood health effects, and residential mobility studies to understand older adults' intention to age in place. Keywords: Social and Built Environment, Residential mobility, Neighborhood safety

OP27 109-S-5

BABY BOOMERS' PREFERENCES FOR RESIDENTIAL TECHNOLOGIES FOR AGING-IN-PLACE

Hyun Joo KWON¹, Eunju HWANG², Julia O. BEAMISH³ (1. *Art and Design, Purdue University, USA*; 2. *Apparel, Housing, and Resource Management, Virginia Tech, USA*)

Introduction : Almost 90% of people in the United States age 50 and

over have indicated they want to age in place. Residential technologies could support older adults' independence and healthy living. The purpose of this study is to investigate U.S. Boomers' needs for residential technology, their intention to use the technologies at their retirement, and considerations they have when purchasing technology products. Method : A national on-line survey was conducted during April, 2011 using a self-administered questionnaire. The questionnaire included demographic characteristics, need for residential technology systems, overall intention to use the technologies, and considerations when purchasing the technologies. Descriptive statistics, t-test, chi-square analysis, and analysis of variance (ANOVA) were employed (N=403). Results : Among the need for various residential technology systems, the entertainment system was significantly higher, and the on-site health care system and environment control system were significantly lower than overall needs. The mean value of intention to use residential technology was higher than the neutral point of 3.0. When considering purchasing residential technology products, price, usability and compatibility were the most important considerations. Chi-square analysis and ANOVA detected significant differences among needs of the residential technology and purchasing considerations in terms of gender, education level, marital status, income, health status, housing type, location, number of bedrooms and years of residence. Conclusion : Participants identified need for certain residential technologies for their later life. They were more interested in entertainment systems and have concerns for on-site health care systems, suggesting more familiarity with certain technologies and a lack of immediate concerns about their health. Keywords : Aging-in-place, Residential Technologies, Baby Boomers

OP27 109-S-6

A STUDY OF REASONS FOR MOVING INTO ELDERLY CONCENTRATED SMALL CITIES IN THE UNITED STATES, CANADA, AND KOREA

Choon-Seek RIM (*Dept.of Social Welfare, Hannam Univeristy, Korea*)

Introduction : It is essential that past experience of initiating senior zone small cities needs to be reviewed along rural communities of other counties as they are done in all other zones, and their research model of settling senior concentrated township should be taken into considerations for the future of rural areas in Korea, as a primary means of offering urbanized environment for the elderly along aged rural community. Method : In this study, a series of qualitative analysis was taken from 12 open-ended interviews conducted in 2007 and 2010 with older men, women, and couples aged 55 or more who moved to a smaller residence such as a single house or condominium in small cities of higher elderly population, located in rural counties of the United States, Canada, and Korea within the past year. Results : Because they spent middle lives working heavily without adequate income and culture social activities, nearby small cities with social supports and policy considerations are affordable and satisfiable places. In addition to positive and hopeful mobility, many mobility is an inevitable final choice. Several episodes help illustrate interactions across ecological layers of the aging context: individual health and functional limitations, individual beliefs and attitudes, the physical environment of the home, and social pressures. Conclusion : For the future of Korean rural elderly policies, productive and active early old stage lifestyles need to be maintained by limiting expansion of dependent level facilities around the moved in new class of independent active elderly. Keywords : Senior Living, Cottage, RV-Park, Senior Zone, Functional Limits

OP27 110-R

SOCIAL POLICY

OP27 110-R-1
LOCAL AUTHORITY MANAGED PERSONAL BUDGETS - WHAT OPPORTUNITIES FOR CHOICE AND CONTROL BY OLDER SERVICE USERS?

Caroline GLENDINNING, Kate BAXTER, Parvaneh RABIEE
(*Social Policy Research Unit (SPRU), University of York, United Kingdom*)

Introduction : Increasing choice and control is at the heart of English social care policy. All older people eligible for local authority-funded social care are now offered personal budgets; it is expected that care markets will respond as older people have greater command over the resources for their care. However, instead of taking the personal budget as a cash payment and arranging their own support (eg hiring a carer), most older people opt to have their budget managed by the local authority which purchases and arranges services on their behalf. Older people with local authority-managed personal budgets should also receive personalised and flexible home care support. A new study examined: What local authorities are doing to develop local markets so that older people with managed personal budgets receive personalised and flexible services; How care managers and home care agencies are planning and delivering personalised and flexible services; What factors help or impede the delivery of personalised home care; Older people's satisfaction with the home care services they receive. Method: Interviews with senior local authority managers and front-line staff; staff from home care agencies; and older people using home care services in three innovative local authorities. Results : The findings will illustrate the potential for home care markets to adapt to delivering personalised services, and the barriers remaining. Conclusion : The findings will illustrate the potential for home care markets to adapt to delivering personalised services, and the barriers remaining. Keywords : care markets, home care, personalisation

OP27 110-R-2
NATIONAL PENSION SCHEME IN TAIWAN: A WINDING ROUTE OF CONSENSUS-BUILDING IN DEMOCRATISATION

Hubert C.Y. LIU (*Department of Gerontological Care and Management, Chang Gung University of Science and Technology, Taiwan*)

Introduction : In Taiwan, social welfare systems developed in correspondence with the consolidation process of democratisation, after martial law was initially lifted in 1987. From that time onward, Taiwan's social security system as a whole developed drastically. Nevertheless, economic security for the elderly had been insufficient until the National Pension Scheme (NPS) could be enacted as late as 2007. Democratisation and political liberalisation seemed unable to promote the progress of enacting the NPS. Method : Regarding methodology, I adopted an unobtrusive method and field research method to collect primary data in Taiwan. I also adopted the snow ball sampling method to collect main participants' opinions from different realms. Results : This study explores the preventing factors and promoting factors in the process of the belated enactment of the NPS, particularly within the background of democratisation. The controversies surrounded its institutional design, coverage, and the benefit for the elderly. The involvement in the process of enactment of the NPS from different angles of viewpoint, by actors in three main circles, namely the bureaucrats, the political elites, and the Social Movement Groups (SMGs), aggravated the complexity of the proceedings. Conclusion : This process was embedded in struggled political competitions in which democratisation affected every sphere of planning the National Pension Scheme. Hence, this study explores

the nature of democratisation in depth in Taiwan and then its impacts toward the National Pension Scheme were manifested subsequently. Keywords : National Pension Scheme, Democratisation, Taiwan

OP24 412-S-4
MEETING THE HEALTH AND WELLNESS NEEDS OF THE AGING POPULATION IN CANADA: THE 2013-2018 STRATEGIC PLAN OF THE CANADIAN INSTITUTES OF HEALTH RESEARCH - INSTITUTE OF AGING

Yves JOANETTE (*Scientific Director, CIHR-Institute of Aging, Canada*)

Introduction : In the context of the aging population in Canada, new knowledge is required in order to face the health and wellness needs of the population. Method : The Canadian Institutes of Health Research - Institute of Aging (IA) has undergone extensive consultations in order to identify its 2013-2018 strategic orientations. After being successful in consolidating the community of research on aging in Canada, IA is now facing new challenges such as the need to identify the determinants of healthy aging and the complexity and the chronicity of health challenges in older adults, as well as their need to be supported at the community level. Results : IA's vision is to become the key player in ensuring that knowledge is generated to enable evidence-based decisions and promote prevention, care, management and better health systems for all aging Canadian within the diversity of the Canadian society. In doing so, IA's goal is to optimize health and wellness over the course of the aging trajectory. Five strategic orientations are identified in this plan: Priority 1) The Health and Wellness Trajectory. Priority 2) Adding Life to the Late Years. Priority 3) Interventions that Meet the Complex Needs of Older Adults. Priority 4) Innovative and Efficient Health Service Care Transitions for Older Adults. Priority 5) Ensuring the Conditions for a Positive Impact on Health and Wellness of the Aging Population. Conclusion : This is a unique and privileged opportunity to engage in discussions in view of developing future international collaborations around these shared priorities. Keywords : Canadian Strategic Plan, Health and Wellness, Research Needs

OP27 111-S
POVERTY AND ECONOMIC OF AGING

OP27 111-S-1
ECONOMIC WELL-BEING AMONG OLD-AGE IMMIGRANTS IN THE UNITED STATES

Yunju NAM (*Social Work, University at Buffalo, USA*)

Introduction : Older immigrants are a growing but vulnerable population in the United States. Among older immigrants, those who immigrated at old age (older than 55) are especially vulnerable since many are ineligible for Social Security benefits and pension. We know little about old-age immigrants' economic conditions, especially asset ownership. Method : This study conducts secondary data analyses using data from the Current Population Survey, collected by the U.S. Census Bureau from 2003 to 2008. The sample consists of 71,161 older adults consisting of native-born citizens, young-age immigrants (those who immigrated at or before age 55), and old-age immigrants. This study employs various indicators of economic well-being: poverty, homeownership, and asset income (income from assets such as interests and rental properties). This study employs a decomposition method to estimate how much economic gaps are explained by compositional differences in demographic and human capital characteristics among the three groups. Results : Old-age immigrants' economic conditions are worse than native-born adults and young-age

immigrants in all indicators. Poverty rate is 9.5% among native older adults, 12.8% among young-age immigrants, and 20.9% among old-age immigrants. Homeownership rate is 84.4%, 76.5%, and 52.8%, respectively. While the majority of native older adults (61%) have asset income, only 52% of young-age immigrants and 34.2% of old-age immigrants do. Mean asset income is \$ 4,529 among native older adults, \$3,677 among young-age immigrants, and \$1,637 among old-age immigrants. Conclusion : The results indicate that older immigrants, especially old-age immigrants, are at high risk of experiencing economic hardship in the United States, calling for policy intervention. Keywords : economic security , assets

OP27 111-S-2

THE BLIND SPOT: ETHICAL CHALLENGES IN THE HEALTH CARE FOR OLDER PRISONERS

Violet HANDTKE, Wiebke BRETSCHNEIDER, Tenzin WANGMO, Bernice ELGER (*Institute for Biomedical Ethics, University of Basel, Switzerland*)

Introduction : Prisons worldwide are facing challenges associated with growing numbers of aging prisoners. This trend will continue due to a greater call for public safety, longer sentences and the incarceration of a higher number of adults. So far, studies have concluded that the health, both physical and mental, of prisoners in general and older prisoners in particular is worse than that of the general population. Detainees are reported to age faster as compared to adults in the community. However, to date, very little is known about the actual healthcare conditions of older prisoners and the ethical challenges associated with it. Method : The principle of equivalence is the guiding principle for the health care of older prisoners. The principle stipulates that health care received by prisoners and non-prisoners should be equivalent. However, it has to be analysed what the principle of equivalence means in practice, how it is interpreted, and utilized in prison medicine. Results : It remains to be explored how far the principle can be stretched to issues indirectly related to health care of older prisoners such as preventive efforts, housing and end-of-life care. Alternative solutions such as compassionate release must also be considered under this umbrella of the principle of equivalence. These issues will be analysed focusing on the declining abilities of older prisoners. Conclusion : Finally, ethically acceptable solutions to prison medicine for aging and dying prisoners will be discussed with an emphasis on clarifying the range and limits of the principle of equivalence for aging prisoners. Keywords : aging prisoners, principle of equivalence, ethics

OP27 111-S-3

MATERIAL DEPRIVATION OF OLDER GENERATIONS IN CENTRAL AND EASTERN EUROPEAN COUNTRIES

Jolanta PEREK-BIALAS (*Institute of Statistics and Demography, Warsaw School of Economics/Jagiellonian University Cracow, Poland*)

Introduction : Although there are a lot of publications which focus on showing the material situation of older generations in Europe, they are primarily about the industrialized Western countries of Europe. The paper offers an unique comparison the material deprivation of older generations in selected countries of Central and Eastern European countries. Aim is to identify factors which lead to material deprivation (other measure of poverty) with relation to other economic aspects of life in old age in countries of CEE. Method : Multivariate data analysis are based on the European Union Surveys of Income and Living Conditions (2007, 2008, 2009) with taking into account that samples are complex designed. Results : Single 65+ households from Czech

Republic are in the best economic situation compared to other countries while Bulgarian single 65+ households are in the worst situation. Older persons who live as couple are in much better situation in all countries than single 65+ persons. As an example in Bulgaria 54.1% of couple households with at least one 65+ person were not able to face unexpected expenses compared to 82.3% of single 65+ households from this country. The clusters of countries in which we observe the similar situation are identified. Conclusion : The results and recommendations given can help in planning and implementation of the policy aiming at fight with social exclusion (deprivation, poverty) of older persons (not only) in Europe. Older persons in various households types can benefit or could be deprived and understanding these differences and its magnitude are crucial for effective policy against poverty. Keywords : material deprivation, Central and Eastern Europe, older persons

OP27 112-R

GERIATRICS & DIGNIFIED CARE

OP27 112-R-1

THE EFFECT OF COGNITIVE TRAINING ON GAIT STABILITY: A CONTROLLED TRIAL STUDY IN THE OLDEST OLD

Jean-Paul STEINMETZ, Carine FEDERSPIEL (*Department of Research & Development, ZithaSenior, Luxembourg*)

Introduction : Recent empirical findings suggest that positive outcomes of cognitive trainings are not limited to improvements in specific cognitive functions such as attention and working memory, but may in addition contribute to the reduction of related gait disturbances. Spatial and temporal gait cycle instabilities under dual task conditions represent one major gait disturbance increasing the risk of falling in old adults. The present study investigates the influence of a structured cognitive training program on spatial and temporal gait cycle stabilities. Method : Participants are selected according to predefined inclusion criteria from a population of long-term care residents and allocated to two different groups, one training group (n=30) or one control group (n=30). Gait parameters are analysed in both groups by using an electronic walkway following a clinical protocol at three predefined intervals: before the onset of the training in the training group, after the 6-week training period, and 3 months after the training phase. Results : In the training group, we expect to find a significant reduction of spatial and temporal gait instabilities under dual task conditions after the completion of the 6-week cognitive training period. No improvements are expected to be observed in the control group. We furthermore hypothesize that the effects of the cognitive training program on attention and related gait parameters remain stable over three months after completion of the training. Conclusion : The discussion of the findings focuses on the necessity of introducing structured cognitive training programs to reduce falls in older adults. Keywords : gait stability, falls, cognitive training

OP27 112-R-2

A COMPARISON OF THE RESPONSIVENESS OF THREE PREFERENCE-BASED QUALITY OF LIFE INSTRUMENTS (EQ-5D, ICECAP-O, ASCOT) IN COMMUNITY-DWELLING FRAIL OLDER ADULTS

Karen VAN LEEUWEN¹, A.P.D. JANSEN¹, J.E. BOSMANS², R.W. OSTELO³, M.W. VAN TULDER², H.E. VAN DER HORST¹ (*1. General Practice and Elderly Care Medicine, VU University Medical Centre / EMGO Institute for Health and Care Research, Netherlands; 2. Department of Health Sciences, VU University /*

EMGO Institute for Health and Care Research, Netherlands;
3. Department of Epidemiology and Biostatistics, VU University
Medical Centre / EMGO Institute for Health and Care Research,
Netherlands)

Introduction : In economic evaluations the EQ-5D is widely used to assess health-related quality of life (hr-QoL). However, the focus on health does not correspond with current developments towards integrated health- and social care systems and with older people's experiences, who consider other aspects of life just as essential. In complex care situations involving older adults, the aim is to improve or sustain general quality of life (also referred to as 'well-being'), which includes non-health components. Two recently developed preference-based generic quality of life instruments have taken these considerations into account: the ASCOT and the ICECAP-O. We compared the responsiveness of these instruments with the EQ-5D in community-dwelling frail older adults. Method : Quality of life in 147 Dutch community-dwelling frail older adults (participants in the ACT study) was assessed using Dutch translations of the instruments and repeated after 6 months. A criterion based approach was used to analyse responsiveness; changes in quality of life as measured with the three instruments were compared with a global rating scale of change in quality of life. Results : Results about the responsiveness of the three instruments are available in March 2013. Conclusion : The results of this study show which of the three instruments is most responsive to changes in quality of life of community-dwelling older adults. Combined with the results of our further clinimetric and feasibility studies the results contribute to the selection of more relevant outcome measures for future economic evaluations in complex care settings aimed at generic quality of life, rather than hr-QoL alone. Keywords : Responsiveness, Preference-based quality of life, Economic evaluation

OP27 112-R-3

THE MEANING AND IMPORTANCE OF DIGNIFIED CARE: FINDINGS FROM A SURVEY OF HEALTH & SOCIAL CARE PROFESSIONALS

Christina VICTOR¹, Deborah CAIRNS¹, Veronika WILLIAMS², Wendy MARTIN³, Sally RICHARDS⁴, Andree LE MAY⁵ (1. School of Health Sciences and Social Care, Brunel University, United Kingdom; 2. Department of Primary Care, University of Oxford, United Kingdom; 3. School of Health and Social Care, Brunel University, United Kingdom; 4. School of Health and Social Care, Oxford Brookes University, United Kingdom; 5. School of Health Sciences, University of Southampton, United Kingdom)

Introduction : There are well established national and local policies championing the need to provide dignity in care for older people. We have evidence as to what older people and their relatives understand by the term 'dignified care' but less insight into the perspectives of staff regarding their understanding of this key policy objective. Method : A survey of health and social care professionals across four NHS Trusts in England to investigate how dignified care for older people is understood and delivered. We received 192 questionnaires of the 650 delivered; a 30% response rate. Results : Health and social care professionals described the meaning of dignified care in terms of their relationships with patients: 'respect' (47%), 'being treated as an individual' (40%), 'being involved in decision making' (26%) and 'privacy' (24%). 'Being treated as an individual' and 'maintaining privacy' were ranked as the most important components of dignified care. Physical tasks caring tasks such as 'helping with washing, dressing and feeding' were rarely described as being part of dignified care and attributed much less importance than the relational

components. Conclusion : Dignity in care is a concept with multiple meanings. Older people and their relatives focus upon the importance of providing physical care when describing what this means to them. Our participants focussed upon the relational aspects of care delivery rather than care itself. Proactive measures are therefore required to ensure that the physical aspects of care are met for all older people receiving care. Keywords : Dignity

OP27 112-R-4

POLICY REVIEW ON GERIATRIC CARE IN NEPAL

Hom Lal SHRESTHA (*Geriatric Care Policy, Advocacy and Research, Non-Smokers' Rights Association of Nepal, Nepal*)

Introduction : Nepal faces lack of geriatric care at hospital for senior citizens despite some initiative of public and private health sector since 2009. However, 2011 Nepal Census recorded 2.5 million population of old aged over 60s. There is no public health policy and provision to address geriatric care problem for senior citizens. Non-Smokers' Rights Association of Nepal was initiated pioneering effort to start Geriatric Ward at Janamaitri Hospital in August 2009 but not sustained due to misconception on geriatric medicine and lack of institutional strength. Method : The numerous data on geriatric care in medical department of very few hospitals, National Health Policy 1991, Second Long Term Health Plan (1997-2017) and National Plan of Action on Ageing 2005 and research references have rigorously been reviewed. Results : The geriatric care concern among senior most citizens are virtually ignored by the health care delivery system. The initiative of geriatric services in Geriatric Center Nepal (2010) and Patan Hospital (2011) were no more sustained due to lack of geriatric care national policy and guidelines. JP Foundation initiated establishing Senior Citizen Natural Home and Geriatric Hospital as model of public health policy advocacy device. Conclusion : The concept of Comprehensive Geriatric Assessment should be incorporated as practice of general medicine to develop geriatric care policy and system integrated into national health care delivery system. Government of Nepal (GON) must regulate to teach geriatric medicine in entire medical and nursing colleges. GON must facilitate private and public health sector to operate geriatric care center and hospital in the senior citizen communities. Keywords : geriatric, policy, nepal

OP27 112-R-5

ASIAN NEIGHBORHOODS AND THE MENTAL HEALTH OF OLDER ASIAN AMERICANS

So-young PARK¹, Duy NGUYEN¹, So-youn PARK² (1. Silver School of Social Work, New York University, USA; 2. Department of Social Welfare, College of Social Science, Kyonggi University, Korea)

Introduction : Applications of social capital theories with Asian Americans show social connections can improve health and mental health outcomes. Little research has extended the theories to older Asian Americans, who have many health, mental health, and social vulnerabilities. This study examines the relationship between social context and the depressive symptoms of community-dwelling older Asian Americans. Method : This study utilized a cross-sectional, mixed method design to collect data in partnership with community-based agencies. A semi-structured interview was used to elicit responses to questions about housing, health and mental health, and service use. Phone and in-person interviews yielded 120 completed surveys. Open ended items were analyzed qualitatively by two independent coders. In order to account for missing values, missing imputation with bootstrapping methods were used to test a multiple regression model that examined the effect of neighborhoods, social capital, and discrimination on Patient Health Questionnaire 9 scores.

Results : The results reveal the separate and unique contributions of two dimensions of neighborhood relationships. Elders living in non-Asian neighborhoods endorsed more depression symptoms, while higher levels of social capital were associated with lower depression scores. Four major themes emerged from the qualitative analysis: characteristics of neighbors, physical environment, convenience, and safety. Elders living in Asian neighborhoods expressed less satisfaction with their neighbors, and more uncertainty about their surroundings, while elders in non-Asian neighborhoods reported positive experiences with their neighbors. **Conclusion :** The social environment and role of aging in place are vitally important for elders with implications for elder housing policies, social capital theorization and mental health promotion. **Keywords :** Asians, social capital, mixed methods

OP27 112-R-6

OBESSE AND OVERWEIGHT MEN SURVIVE LONGER THAN THE NORMAL - WEIGHT AND STABLY UNDERWEIGHT MEN - A SIX-YEAR PROSPECTIVE STUDY IN 3322 OLDER PERSONS

Tung Wai AUYEUNG¹, Jenny Shun Wah LEE¹, Timothy KWOK², Jason LEUNG³, Jean WOO¹ (1. *The S. H. Ho Centre for Gerontology and Geriatrics, The Chinese University of Hong Kong, China*; 2. *Department of Medicine and Therapeutics, The Chinese University of Hong Kong, China*; 3. *School of Public Health, The Chinese University of Hong Kong, China*)

Introduction : Whether being underweight or having rapid weight loss was associated with excess mortality in old age remains controversial. Furthermore, the advantageous effect of being overweight can alternatively be explained by the biased comparison to the sicker persons who are rapidly losing weight. We therefore examined whether the advantageous effect of being overweight persisted after exclusion of rapid weight-losers. **Method :** Four thousand community-dwelling men and women older than 64 years were recruited. Their baseline BMIs were categorized into four groups: <18.5 (underweight), 18.5-22.99(normal-weight), 23-24.99(overweight), ≥25(obese), according to the Asia-Pacific definition. Those having weight loss of >10% or early death in the first two years were excluded. They were followed up for six years and their mortality status was ascertained by the Hong Kong Death Registry. The mortality rate was compared across the four groups with adjustment for age, smoking status, history cancer, COPD, stroke heart disease, hypertension and diabetes mellitus. **Results :** 1692 men and 1630 women were analyzed after exclusion of the rapid weight-losers or early deaths. The mortality across the four groups in ascending BMI was: in men, 13.1%, 10.5%, 7.0%, 6.5%, p-for-trend <0.01; in women, 5.8%, 2.2%, 3.5%, 3.3%, p-for-trend >0.05. **Conclusion :** In older men, being stably underweight was associated with excess mortality. The advantageous effect of overweight and obesity in older men cannot be accounted for by the inclusion of sicker rapid weight-losers. **Keywords:** body mass index, old age, mortality

OP27 113-S

HEALTH AND LATER LIFE

OP27 113-S-1

THE RELATIONSHIP BETWEEN ORAL HEALTH CONDITION AND NUTRITIONAL STATUS OF THE INSTITUTIONALIZED OLDER ADULTS IN EGYPT

Rasha Ahmed FOUAD, Bothaina Hussein HASSAN (*Gerontological Nursing, Faculty of Nursing, Alexandria University, Egypt*)

Introduction : With aging of the population, the oral health and nutritional status of the elderly people have become important public health issues. Oral health and nutritional status are critical areas in the care of the elderly as they may be associated with negative effects on general health and their quality of life. **Method :** Mini-Nutritional Assessment (MNA), The Kayser-Jones Brief Oral Health Status Examination (BOHSE), and A modified version of Geriatric Oral Health assessment Index. **Results :** According to the Mini nutritional assessment score. It was noticed that, more than two fifth (43%) of the study subjects are at risk of malnutrition, nearly two fifth (39%) are malnourished, and the rest 18% had good nutritional status. According to the geriatric oral health index score it was found that, two thirds (66%) of the study subjects had poor oral health status, followed by 22% had fair oral health status, while the rest (12%) had good oral health status at the time of data collection. The majority (87.2%, 72.1%) of the study subjects who had poor oral health status are malnourished or at risk of malnutrition respectively, a highly significant difference was found (p= 0.000). On the other hand, one half (50%) of the study subjects and more than two fifth (44.4%) who had good and fair oral health condition respectively had good nutritional status. **Conclusion :** There is a significant relationship between oral health and nutritional status, as the majority of elders who had poor oral health status are malnourished or at risk of malnutrition. Moreover, a significant relationship was found between poor oral health condition and increased age. **Keywords :** oral health-nutrition - elders

OP27 113-S-2

DEVELOPMENT OF REHABILITATION MODEL FOR CHRONICALLY ILL OLDER ADULTS THROUGH FAMILY AND COMMUNITY PARTICIPATION BASED ON SUFFICIENCY ECONOMY CONCEPT AND THAI WISDOM

Pornchai JULLAMATE, Rarcharneeporn SUBGRANON, Narirat SUNGVORAWONGPHANA, Wanida NOIMONTEE, Sasithon KARUNA (*Gerontological Nursing Department, Faculty of Nursing, Burapha University, Thailand*)

Introduction : This study aimed to develop rehabilitation model for chronically ill older adults through family and community participation based on sufficiency economy concept and Thai wisdom. **Method :** One community located in Chon Buri province was selected for conducting this research. Sixty samples who were chronically ill older adults, their caregivers, community leaders, health volunteers, and community dwellers of this community were recruited. Data were gathered using four valid and reliable instruments and focus group discussion. Descriptive statistics and content analysis were performed for data analysis. **Results :** The results revealed that: 1. This suburb community consisted of 6.71 % of older adults. 2. Knowledge, attitude, and practice regarding rehabilitation in chronically ill older adults of samples obviously increased after finishing the project. 3. The proposed rehabilitation model for chronically ill older adults was a consecutively dynamic four-step process comprising of policy and rehabilitation planning, implementing, evaluating, and following up the progress and giving feedback to all steps with the participation of various sectors. Several rehabilitation strategies emerged during the study such as setting up “the instrument bank for chronically ill older adult rehabilitation and disable persons”. and training programs. **Conclusion :** The findings suggest that knowledge, attitude, family and community participation, and cooperation of all relevant persons and institutions play important components in rehabilitation for chronically ill older adults in the community. This proposed rehabilitation model should be introduced and implemented in various communities in order to strengthen the usefulness of this model. Additionally,

continuity of the rehabilitation model is also recommended for further study. Keywords : rehabilitation, family and community participation, older adults

OP27 113-S-3

HEALTHY ROUTES AND NORDIC WALKING

Elisaveta KACHAN¹, Olga MILOVIDOVA² (1. Department of demography of aging, Saint Petersburg Institute of Bioregulation and Gerontology, Russia; 2. Saint Petersburg Society of Nordic Walking, Saint Petersburg Society of Nordic Walking, Russia)

Introduction : Taking into consideration global trends of urbanization and population ageing and recognizing that active living is essential for daily living and a cornerstone of health and quality of life, we strongly believe that modern city must provide structures and services to support wellbeing and productivity of its elderly residents. Method : Walkways and cycle paths are always seen as part of a health promoting urban systems; nevertheless we should admit that there are not many adapted for elderly people. Jointly with our partners we recommend developing a system of walkways - 'healthy routes' - adapted for walking, Nordic walking, jogging and winter skiing. Nordic walking demonstrates and meets the main principles of the active living: it possesses definite advantages such as functionality, safety and availability for almost everyone; moreover it helps to involve people into the process of health maintenance as well as into the social relationships maintenance. Results : Healthy routes are designed from the point of view of the walking distances, also comprise outdoor gyms sites for aerobic warm-up exercises, being a convenient alternative to rather expensive and often-inconvenient indoor gyms, they are integrated into existing safe green spaces of the city. Conclusion : These routes are accessible and safe for elderly pedestrians and should be utilized not only for physical activity and active life style promotion, but also as a cultural platform for projects giving general information about local and city history, botany, natural sciences, arts and all other forms of activities which can be interesting for city dwellers of all ages. Keywords : healthy routes, active life style promotion, Nordic walking

OP27 113-S-5

PATIENT COGNITIVE IMPAIRMENT AND OTHER CHARACTERISTICS DO NOT INFLUENCE SHARED DECISION MAKING IN FAMILY MEETINGS FOR OLDER PEOPLE AND THEIR CARERS

Catherine MILTE¹, Julie RATCLIFFE², Owen DAVIES¹, Craig WHITEHEAD¹, Stacey MASTERS³, Maria CROTTY¹ (1. Rehabilitation, Aged and Extended Care, Flinders University Repatriation General Hospital, Australia; 2. Clinical Effectiveness Cluster, Flinders University, Australia; 3. Discipline of General Practice, Flinders University, Australia)

Introduction : Clinicians, older people and carers frequently meet to make decisions around treatment and lifestyle following an acute hospital admission. Patient age, psychological status and health locus of control influence patient preference for consultation involvement and information. However, it is not known if these characteristics and the presence of cognitive impairment influence shared decision making (SDM) competency during family meetings. Method : Family meetings (n=59) involving geriatricians, patients and carers undergoing transition care were coded using the OPTION system for measuring clinician SDM behaviour. Patients completed the geriatric depression scale and multidimensional health locus of control scale. The mini mental state exam (MMSE) assessed level of cognitive impairment. Patient and meeting characteristics associated with a

SDM communication style were explored using multiple hierarchical regression. Results : Meetings lasted 38 minutes (S.D. 13) and scored 41 (S.D. 17) out of 100 on the OPTION scale. Patient MMSE ranged from 10 to 30. The final regression model explained 48% of variance in OPTION scores (p<.001). After controlling for the geriatrician involved in the meeting, patient and meeting characteristics explained 12% of variance in OPTION scores (p=.015). Meeting length was the only significant determinant of OPTION score (beta=.413, p=.017), with higher SDM competency displayed in longer meetings. Patient characteristics, including MMSE, health locus of control and depression did not make a significant contribution to the model to explain OPTION score. Conclusion : Whilst SDM can be achieved during consultations with frail older patients and their carers, an increased consultation time is a consequence of this approach. Keywords : shared decision making, physician-patient relations, frailty

OP27 114-S

AGEING AND DISABILITY III

OP27 114-S-1

TRENDS IN LENGTH OF STAY, FUNCTIONAL OUTCOMES AND DISCHARGE DESTINATIONS BY DISEASE FOLLOWING INPATIENT REHABILITATION IN SINGAPORE COMMUNITY HOSPITALS, 1996-2005

Cynthia Huijun CHEN¹, Gerald Choon Huat KOH¹, Nasheen NAIDOO¹, Angela CHEONG¹, Ngan Phoon FONG¹, Vincent Yaoyuan TAN¹, Kin Ming CHAN², Boon Yeow TAN³, Edward MENON⁴, Chye Hua EE⁵, Kok Keng LEE⁵, Yee Sien NG⁶, David KOH⁷, Kee Seng CHIA¹, Yik Ying TEO⁸ (1. Saw Swee Hock School of Public Health, National University of Singapore, Singapore; 2. Geriatric, Ang Mo Kio Thye Hua Kwan Hospital, Singapore; 3. Medical Services, St Luke's Hospital, Singapore; 4. Rehabilitation Medicine, St Andrew's Community Hospital, Singapore; 5. Geriatrics, Bright Vision Hospital, Singapore; 6. Rehabilitation Medicine, Singapore General Hospital, Singapore; 7. Saw Swee Hock School of Public Health, National University of Singapore PAPRSB Institute of Health Sciences, Universiti Brunei Darussala, Singapore; 8. Saw Swee Hock School of Public Health, National University of Singapore Genome Institute of Singapore, A*Star, Singapore)

Introduction : Changes in length of stay (LOS) and its effect on rehabilitation outcomes for different disease groups on patients admitted for inpatient rehabilitation is not known in Asia. Method : National data were retrospectively extracted from medical records of community based inpatient rehabilitation admission. There were 12,506 first admissions for rehabilitation in four community hospitals. 40.6% were for stroke, 30.4% for fracture, 2.9% for lower limb (LL) joint-replacement, 2.3% for LL amputation, 1.9% for cancer, 1.8% for falls, 1.6% for pneumonia and 18.5% for other illnesses. The overall mean age was 73.2(SD=11.5). Results : The overall median LOS decreased by 16.2% from 37 days in 1996 to 31 days in 2005 with sharpest decline observed in LL amputation group. The overall mean admission and discharge activities of daily living scores were 45.6 (SD=25.7) and 60.3 (SD=28.9) respectively; median Rehabilitation Effectiveness(REs) was 28.8%, median Rehabilitation Efficiency(REy) was 12.9/30 days. REs increased by 184% from 14% in 1996 to 40% in 2005, REy increased by 104% from 9 units/30 days in 1996 to 19 units/30 days in 2005. Overall, 78.2% of patients were discharged home, 9.7% to nursing or sheltered homes and 10.9% to acute hospital. Conclusion : The socio-demographic profile and rehabilitation outcomes of patients varied between different disease conditions. Rehabilitation outcomes of patients admitted into Singapore's community hospitals have improved between 1996 and

2005 despite a decreasing LOS. Discharge destinations have largely remained unchanged. Keywords : Trends, Rehabilitation, Aging

**OP27 114-S-2
COPING WITH HEALTH LOSSES AND SUBJECTIVE WELLBEING**

Sara CARMEL¹, Victoria H. RAVEIS², Hava TOVEL¹ (1. Center for Multidisciplinary Research in Aging, Ben-Gurion University of the Negev, Israel; 2. Psychosocial Research Unit on Health, Aging, and the Community, New York University College of Dentistry, USA)

One of the main challenges of aging societies is maintaining quality of life despite inevitable changes in health and/or functioning. The purpose of this longitudinal study was to evaluate the relative influences of various personal resources and different patterns of coping behaviors (reactive and proactive) on elderly persons' subjective wellbeing following a decline in health/functioning. Altogether, 1,216 individuals were interviewed at baseline (T1) and 1,022 one year later (T2), a response rate of 84%. T2 wellbeing was comprised of 6 z standardized scores measuring Life satisfaction (2 scales), Morale, Self-evaluation of ageing, Depression, and Loneliness. The influence of changes in health/function, personal resources and coping patterns on T2 wellbeing was evaluated by a structural equation model, resulting in satisfying fit criteria: $\chi^2 = .741$ (df=288, $p < .01$); CFI=.954; NFI=.927; RMSEA=.043. The model explained 70% of the variability in wellbeing. In addition to indirect effects, all the studied personal resources had significant direct positive effects on wellbeing: self-efficacy ($\beta = 0.26$), functional self-efficacy ($\beta = 0.21$), social support (Carmel, $\beta = 0.15$; Berlin, $\beta = 0.10$) economic status ($\beta = 0.11$) and satisfaction with health services ($\beta = 0.11$). Among the reactive coping patterns only optimization had a positive effect on wellbeing ($\beta = 0.06$), while the proactive coping pattern of awareness of future care needs had a negative effect on wellbeing ($\beta = -0.09$). It appears that elderly people can control their wellbeing even in presence of decline in health/function by using appropriate personal resources and coping behaviors. Controlled interventions can help older people acquire and/or strengthen some of the effective resources and coping patterns, thus promoting their well-being. Keywords : subjective wellbeing, aging, personal resources

**OP27 114-S-3
A LIFE REVIEW GROUP PROGRAM FOR NURSING HOME RESIDENTS WITH SEVERE PHYSICAL IMPAIRMENT : PROGRAMME DEVELOPMENT AND FEASIBILITY TEST**

Enid Wai-yung KWONG, Mandy MA, Po Yi LUK, Pui Nam YIP, Ka Yee WONG, Ka Po WONG (School of Nursing, The Hong Kong Polytechnic University, China)

Introduction : Empirical data has supported the effect of life review on various kinds of participants except the physically impaired elderly. This study aimed to develop a life review group program specifically for Chinese nursing home residents with physical impairment and test its feasibility. Method : We identified the specific life themes for Chinese older people which enabled us to develop guiding questions and group activities for 5-section life review group programme which is culturally sensitive. In the feasibility test, we adopted mixed method which are primarily qualitative design and one-group pretest and posttest design. A group of six nursing home residents who were chair bounded voluntarily participated in the programme. Before and after completion of the programme, they were assessed life satisfaction, depressive symptoms and quality of life. Moreover, they were individually interviewed to explore their perceptions of the programme after the programme implementation. Results : The participants

welcomed the programme which was new and unique to them. They expressed that it allowed them to recall their past life events, enhanced self-exposure through peer sharing and promoted their psychological wellbeing. They were satisfied with the current lives through evaluation and integration of past experiences and willing to talk life and death issues. In their life review booklets, they expressed their wishes, appreciation and blessings to their close family members. No significant changes of the study outcomes except life satisfaction ($p = 0.034$). Conclusion : The programme is feasible to be implemented and acceptable to the participants. It is recommended to test its effect in future studies. Keywords : nursing home residents, life review, physical impairment

**OP27 114-S-4
LONGITUDINAL DYNAMICS IN INDICATORS OF FRAILTY AND LONG TERM EFFECTS ON MORTALITY AND HOSPITALIZATION RATE**

Oleg ZASLAVSKY¹, Barbara COCHRANE², Hilaire THOMPSON³, Nancy Fugate WOODS³, Jerald HERTING⁴, Andrea LACROIX⁵ (1. Department of Nursing, University of Haifa, Israel; 2. Family and Child Nursing, University of Washington, USA; 3. Biobehavioral Nursing and Health Systems, University of Washington, USA; 4. School of Sociology, University of Washington, USA; 5. Public Health Science Division, Fred Hutchinson Cancer Research Center, USA)

Introduction : Although most frail older adults develop age-related deficits affecting multiple biological systems, their clinical outcomes are not universally adverse, and they fluctuate in severity even among individuals sharing the same level of frailty initially. The aim of this study was to determine the extent to which membership in previously estimated longitudinal trajectories of individual frailty criteria predicts mortality and first incident hospitalization over 5 years of follow up. Method : We used longitudinal data from a subset of Women's Health Initiative Clinical Trial participants, ages 65+ at baseline (N=19,891). Cox proportional hazard models were used to estimate the effect of membership in longitudinal trajectories on mortality and first incident overnight hospitalization. Results : For each of the defining elements of frailty, the magnitude of risk carried by membership in particular longitudinal trajectories was closely linked to the distance from the trajectory that represented the most optimal functioning over time. Although most criterion-specific trajectories of frailty predicted mortality and first incident hospitalization independently of other baseline factors, energy/fatigue and physical activity indices has the strongest effects (range of HRs=1.09-2.26). Conclusion : In contrast to other prospective studies that measured the association between frailty-related indicators and distant outcomes, we were able to capture the effect of variability in longitudinal patterns of individual frailty criteria over a relatively long follow up period. These findings provide new and vital insights into mechanisms of frailty development. Keywords : frailty, mortality, hospitalization

**OP27 114-S-5
YEARLY TRANSITIONS OF ISO-SMAF DISABILITY PROFILES AND MEAN LENGTH OF STAY IN A PROFILE FOR OLDER PEOPLE IN LONG-TERM CARE FACILITY**

Michel RAICHE¹, Nicole DUBUC¹, Rejean HEBERT¹, N'deye Rokhaya GUEYE², Michel TOUSIGNANT¹ (1. Research Centre on Aging, Sherbrooke University Geriatrics Institute, Canada; 2. Faculty of Arts & Faculty of Sciences, Université de Saint-Boniface, Canada)

Introduction : To plan services for older people in a long-term care facility (LTCF), extensive knowledge of disability progression is

required. The objective was to analyse yearly transitions between disability profiles and mean length of stay in a profile in a LTCF. Method : Disabilities were evaluated with the 29-item SMAF covering five sectors of activity: activities of daily living (ADL), mobility, communication, mental functions, and instrumental ADL (IADL). Patients were then classified into their predominant disability profile based on the Iso-SMAF Profile case-mix classification. The 14 Iso-SMAF profiles can be grouped into four predominant disability categories: IADL profiles 1-2-3; mobility P-4-6-9; mental P-5-7-8-10; mixed and severe disability profiles 11-12-13-14. The data were analysed using a continuous-time, multi-state Markov model to estimate the matrix of probabilities for transitions into and out of each of clinical states or to death. Results : Disability profile (or death) was measured 19126 times over 8 years, in 2450 patients (mean age 81.5 years). Initial profiles were mainly in moderate to severe profiles (8 to 14). Detailed transitions matrix will be presented; from severe profiles 13-14, transitions to death were very high (0.35 and 0.42 respectively). We observed mean length of stay in a profile of 1 year for profiles 8-10-11-12, and near 1.5 year for profiles 9-13-14. Conclusion : Levels of required nursing care are already known for each of the Iso-SMAF profiles. Together with estimates of the transition probabilities -- and thus of the proportion of patients following any given trajectory, we are now able to predict nursing care requirements. Keywords : Disability profiles transitions

OP27 115-S
END-OF-LIFE CARE I

OP27 115-S-2
A SYSTEMATIC REVIEW OF FACTORS ASSOCIATED WITH INITIATING OF ADVANCE CARE PLANNING IN DEMENTIA

Jenny T. VAN DER STEEN¹, Nicole VAN UDEN², Mirjam C. VAN SOEST-POORTVLIET¹, Meertje HALLIE-HEIJERMAN³, Bregje D. ONWUTEAKA-PHILIPSEN⁴, Luc DELIENS⁴, Marike DE BOER¹, Lieve VAN DEN BLOCK², Cees M. HERTOOGH¹, Henrica C. DE VET⁵ (1. Dept. of general practice & elderly care medicine, EMGO Institute for Health and Care Research, VU University Medical Center, Netherlands; 2. End-of-Life Care Research Group, Ghent University & Vrije Universiteit Brussel, Belgium; 3. Dept. of general practice & elderly care medicine (formerly), VU University Medical Center, Netherlands; 4. Dept. of Public and Occupational Health, EMGO Institute for Health and Care Research, VU University Medical Center, Netherlands; 5. Dept. of Epidemiology and Biostatistics, EMGO Institute for Health and Care Research, VU University Medical Center, Netherlands)

Introduction : Planning ahead regarding end-of-life issues may be particularly relevant in dementia considering patients' cognitive decline and difficulty to predict the course of the dementia. We aimed at identifying factors associated with initiation of advance care planning in dementia. Method : We performed a systematic review of the PubMed, Psycinfo, Cinahl, Embase and Cochrane databases until April 2011 (we present an updated review scheduled February 2013). Two researchers assessed eligibility independently and included articles reporting on empirical research, identifying factors related to: (1) starting of a discussion; (2) starting of decision making; (3) having a written advance directive. Results : Of 3803 unique articles, we assessed 143 as full-texts, and we included 25 articles. Most articles were from the US (60%), employed an exclusively qualitative design (56%), and referred to severe dementia only (52%). Perspectives varied: family (36%), clinician (20%, physicians only), patient (12%), or mixed (32%). A complexity of factors may be involved in starting

of discussions or decision making. Family factors dominated, such as families' attitudes towards planning, taking initiative, care involvement, and these could either facilitate or hinder initiating advance care planning. Other factors included patients' wishes and decline, professional caregivers' taking time and their relationship with patient or family, continuity and philosophy of care. Quantitative studies identified demographics (e.g., younger age) related to having an advance directive, but findings were inconsistent. Conclusion : Professional caregivers should initiate advance care planning and invest time in building up relationships so that strategies carefully consider timing and receptiveness, and are family- and patient-centred. Keywords : dementia, advance care planning

OP27 115-S-3
A GOOD DEATH IN RESIDENTIAL CARE HOMES FOR THE ELDERLY: A CASE STUDY

Edward Mf LEUNG, Yuk Har CHEUNG, Ka Ming CHUN (Research and Development Division, Hong Kong Association of Gerontology, Hong Kong)

Introduction : A three-and-a-half year pilot project of "Palliative Care in Residential Care Homes for the Elderly" was started in 6 residential care homes in Hong Kong in 2010. It aims to initiate holistic end of life care and a change in the practice of care of the terminally ill in residential care homes for the elderly (RHCEs), i.e. dying in the RCHEs instead of hospitals. Method : Suitable terminally ill residents were recruited to join the project to receive holistic end of life care provided by multidisciplinary professionals including Palliative Care Doctor, Palliative Care Nurse, Counseling Psychologist and Social Worker. A care protocol was implemented in order to facilitate the end of life care. A comfortable, peaceful Palliative Care Room was provided to encourage family members to stay with their loved ones. Bereavement support was also provided. Results : 10 suitable residents had joined the pilot project till June 2012. One of the cases completed the whole care pathway and a good death was happened in a RCHE, i.e. died in the Palliative Care Room fully supported by a multidisciplinary team with the co-operation with the RCHE itself. Conclusion : It was reviewed that the case's last wish was fulfilled and the family members appreciated the pilot project and the efforts from all parties. The result demonstrated the effectiveness of the care pathway and the directions in future practice. Keywords : end of life

OP27 115-S-4
FACTORS AFFECTING TERMINALLY ILL BLACK ELDERLY USE OF HOSPICE CARE

Hyunjin NOH (School of Social Work, The University of Alabama, USA)

Introduction : The underuse of hospice care by African-Americans has been witnessed for decades in the United States. Though knowledge from previous studies on barriers to African-Americans' access to, and use of, hospice care provides insight into why African-American elders might not choose to use hospice care even when they have access to it, currently there appears to be no research that has explored why some African-American elders do choose to receive such care. Method : This study addresses this gap by interviewing older African-American hospice patients to seek answers to three research questions: why do terminally ill African-American elders choose to use hospice care?; what structural barriers do they face accessing hospice care, and how have they overcome them?; and what cultural preferences do they have in receiving hospice care and what is their experience in having their preferences respected? To gain such information, face-to-face interviews were conducted using a semi-structured survey with 28

older African-American hospice patients residing in Georgia, United States. Participants' responses were analyzed using the content analysis. Results : Themes that emerged include the importance of open communication between healthcare providers and patients, the sources of correct/incorrect information, family support/non-support in choosing to use hospice care, the role of spirituality/religiosity in making the choice, and important values in receiving hospice care. Conclusion : The findings of this study have implications for hospice service providers in developing their outreach programs directed toward the African American community focusing on building a trusted relationship with the community and providing correct and detailed information about hospice care. Keywords : African American, Hospice Care

OP27 115-S-5

LONG-TERM EFFECT OF END-OF-LIFE CARE AMONG SPOUSES WHO DEALT WITH DEATH AT HOME

Yongjoo RHEE (*Health Sciences, Dongduk Women's University, Korea*)

Introduction : Background: Spouse caregivers for dying elderly face intense psychological burdens and the effect on psychological and physical well-being remains even after caregiving ends. Objective: This study examines spouses' depressive symptoms before and after end-of-life-care as well as its long-term effects. Method : Methods: Data were extracted from the Health and Retirement Study, a nationally representative US survey of community-dwelling adults age 50. The spouses of decedents who lived at homes before death were identified in EXIT surveys from 1996 to 2004. The HRS measures depressive symptoms with a short version of the standard Center for Epidemiologic Studies Depression scale (CES-D). We identified active depression (CES-D \geq 3) based on previous literature. Results : Results: Among 1335 spouses providing end-of-life care for the past ten years, 69.2 % were female and 79.4% were white. The average age was 79.1 years. Health problems included arthritis (79.1%), high blood pressure (67.4%), heart disease (34.2%), pain (33.6%), diabetes (23.0%), psychiatric problem (20.1%), cancer (17.3%), lung disease (13.1%), and stroke (10.4%). The average CES-D scores significantly increased from two years before their spouses' death (2.03) and at the time period of their spouses' death (2.87) ($p<.001$). Over half (55.3%) had active depressive symptoms at the time of their spouses' death. The rate decreased 2 years later (40.2%). However, 33.5% still reported depression after ten years. Conclusion : Conclusion: This study provides evidence of the intensity of end-of-life care and long-term effect on spouse caregivers' depressive symptoms. Keywords : end-of-life care, depression

OP27 116-S

DEMENTIA & MENTAL HEALTH

OP27 116-S-1

THE EVALUATION STUDY FOR A PILOT HOME-BASED PLUS CENTRE-BASED COGNITIVE TRAINING MODEL FOR EARLY DEMENTIA PEOPLE IN HONG KONG

Choi Ying TONG¹, Adeline TSANG¹, Danny, Yw CHAN² (*1. Integrated Elderly Care Service, Christian Family Service Centre, Hong Kong; 2. Mind-Lock Memory and Cognitive Training Centre, Christian Family Service Centre, Hong Kong*)

Introduction : Christian Family Service Centre, with the HK\$1.5 million sponsorship by the Bank of China, has started a pilot cognitive training service for early dementia people in Hong Kong since 2010, named as the Mind-Lock Cognitive and Memory Training Centre

(MCT). The MCT adopted a new service model in the Hong Kong context, which including both centre-based group training and home-based individual training in the treatment and training programmed designed by occupational therapist. In the first pilot year, more than 180 people have participated in training programmed. With the evidents of the effectiveness of this pilot project, it was also gained a grant of HK\$6.6 million from the Keswick Foundation to continue and upscale the service in October, 2012 - September, 2015. Method : A pilot pre-and-post study was conducted and 34 subjects were measured by Dementia Rating Scales (DRS), Mini-Mental State Examination (MMSE) before and after their training programme in 2010-2011. Results : The result shows significant changes in the total rating of DRS ($p < 0.02$), DRS-memory ($p < 0.001$) and MMSE ($p < 0.002$) after the subjects finished the training programme when compared to the pre test ratings. Conclusion : Participants also gave positive feedback on home-based training for the convenience and high frequency of training of the programme. Participation of Family carers were also attributed to the positive change of the subjects. The positive result in the Pilot Project shows the effectiveness of the combined model. Hence, further grants was given to continue and upscale the project. Keywords : early dementia, training, home-based

OP27 116-S-2

DO HEARING AIDS PROTECT AGAINST COGNITIVE DECLINE OR DOES HIGHER COGNITIVE FUNCTION PREDICT HEARING AID USE?

Kim M. KIELY¹, Mary A LUSZCZ², Kaarin J. ANSTEY¹ (*1. Centre for Research on Ageing Health and Wellbeing, The Australian National University, Australia; 2. Centre for Ageing Studies, Flinders University, Australia*)

Introduction : Age-related hearing loss is a risk factor for cognitive dysfunction. Hearing aids may protect against cognitive decline by enabling older adults with hearing loss to remain socially engaged and participate in cognitive reserve building activities. The present study aimed to investigate links between hearing loss, aid use and cognitive decline. Method : Two-piece linear mixed models with fixed and random effects analyzed change in perceptual speed using data from the Australian Longitudinal Study of Ageing. The sample comprised 1547 participants aged between 65 and 103 assessed on up to 5 occasions over a 16-year period. Audiometric hearing thresholds were defined by a pure-tone average (PTA) of 0.5, 1, 2 and 4 kHz. Perceptual speed was measured by the Digit Symbol Substitution (DSS) test and hearing aid use was self-reported. Results : After adjusting for socio-demographics and health, there were within-person ($\gamma = -0.12; p < .01$) and between-person ($\gamma = -0.07; p < .01$) effects of PTA on DSS test scores. There was no significant association between occasional hearing aid use and DSS ($\gamma = -0.02, p = .97$), however regular hearing aid use predicted higher levels of DSS ($\gamma = 1.70, p = .02$). Although rates of change in DSS scores trended to more gradual decline trajectories after the commencement of regular hearing aid use, this association was not significant and could not be interpreted as reliably indicating discontinuities in slope. Conclusion : Rather than protecting against cognitive decline, on the basis of this evidence it appears more likely that good cognitive function is required for older adults to properly adjust to hearing aids and gain the full benefits of hearing aid use. Keywords : Hearing Aids, Cognitive Decline, Longitudinal Research

OP27 116-S-3

A CASE STUDY - POSITIVELY ENGAGING WITH A PERSON WITH FRONTOTEMPORAL DEMENTIA (FTD)

Karen Ellen BOROCHOWITZ (*Management, Dementia SA a national*)

South African NGO Providing Support, Counselling, Education, Awareness, Collaborative Research and Training. We also advocate for the rights of people with dementia, South Africa)

Introduction : Frontotemporal Dementia (FTD) is often a mis-understood and often mis-diagnosed dementia. A person with fronto temporal dementia often exhibits a host of complex and challenging behaviours which need to be understood. **Method :** This is a case study which will illustrate how a more integrated approach with family, care staff and the person with FTD, provides enhanced purpose and meaning into interactions with their environment. The use of inclusion, participation, positive communication and a person-centered approach all help add value to the well-being of a person with FTD and a decrease in behaviour that challenges. **Results :** Results in practical applications and tasks which included observation, active participation, communication, preferences and inclusion. **Conclusion :** A very rewarding case study that contributed significantly to the family and to the well-being of a person with FTD which included the development of skills for carers at a residential care facility. **Keywords:** dementia, fronto-temporal, case-study

OP27 116-S-4

THE IMPACT OF DEPRESSIVE SYMPTOMS ON THE RELATIONSHIP BETWEEN PERCEIVED CONTROL AND HEALTH-RELATED QUALITY OF LIFE DIFFERS BETWEEN OLDER AND YOUNGER PATIENTS WITH HEART FAILURE

Kyoung Suk LEE¹, Terry A. LENNIE², Seongkum HEO³, Sandra DUNBAR⁴, Susan J. PRESSLER⁵, Debra K. MOSER² (1. School of Nursing, University of Wisconsin-Madison, USA; 2. College of Nursing, University of Kentucky, USA; 3. College of Nursing, University of Arkansas Medical Science, USA; 4. School of Nursing, Emory University, USA; 5. School of Nursing, University of Michigan, USA)

Introduction : High perceived control is positively associated with health-related quality of life (HRQOL) in patients with heart failure (HF). Given that depressive symptoms are associated with perceived control and HRQOL, depressive symptoms may be an underlying factor in the relationship between perceived control and HRQOL. As younger HF patients are more depressed and have worse HRQOL than older patients, the association among depressive symptoms, perceived control, and HRQOL may differ between younger and older HF patients. **Purpose:** To determine whether the relationship between perceived control and HRQOL was mediated by depressive symptoms and whether the relationships differ between younger and older HF patients. **Method :** A total of 402 community dwelling patients with HF (62±12 years, 45% > 65 years, 32% female) completed the Control Attitudes Scale-Revised, Minnesota Living with HF Questionnaire, and Beck Depression Inventory-II to measure perceived control, HRQOL, and depressive symptoms, respectively. We conducted path analyses stratified by two age groups (age > vs. ≤ 65 years). **Results :** Perceived control was indirectly associated with HRQOL via depressive symptoms among older patients. However, perceived control in younger patients had neither direct nor indirect effects via depressive symptoms on HRQOL. **Conclusion :** Depressive symptoms mediated the relationship between perceived control and HRQOL in older HF patients but not younger patients. As older adults tend to focus on emotional aspects of situations and prioritize emotion-focused over problem-focused coping, being depressed may be more detrimental to HRQOL in older patients than younger patients. Therefore, different approaches by age are needed to improve HRQOL. **Keywords :** health-related quality of life , depressive symptoms , perceived control

OP27 116-S-6

AGEISM AND MENTAL HEALTH AMONG KOREAN ELDERS

Heeran CHUN¹, Il-Ho KIM² (1. Faculty of Health Science, Jungwon University, Korea. 2. Social and Epidemiological Research Center for Addiction and Mental health, University of Toronto, Canada)

Introduction : Although respecting older people was traditionally considered as commonplace in family and society, getting older in modern Korea is often associated with unpleasant experiences of personal and institutional age related discrimination, commonly known as Ageism. This study aims to examine how Korean elders experienced age discrimination and how this relates to mental health. **Method :** Data was gathered from a convenient sample of 256 people aged 60-89 via face-to-face interviews. Age discrimination was measured using a 20 item questionnaire from 'The Ageism Survey' by Palmore. Mental health included symptoms of depression. **Results :** Half of the respondents reported having experienced ageism 'more than once' in all 20 listed situations. The prevalence of Ageism and sub-group characteristics appeared to show a different picture compared to the results in the USA by Palmore's: with men (vs. women), people with higher education (vs. lower), and people with lower income (vs. higher) reporting higher level of ageism. Furthermore, the ageism experience increased the risk of having symptoms of depression, with the association still significantly consistent even after adjusting for socio-demographic characteristics by OR 1.17 (95%CI 1.07-1.29). **Conclusion :** This study supports the positive associations between Ageism and poorer mental health among older Koreans, suggesting extended cross-cultural research would be beneficial. **Keywords :** Ageism, Mental health, South Korea

OP27 118-B

CELLULAR LONGEVITY AND OXIDATIVE STRESS

OP27 118-B-1

AMINO ACIDS EXTENDS CHRONOLOGICAL LIFESPAN IN YEAST SACCHAROMYCES CEREVISIAE

Ziyun WU, Shao Quan LIU, Dejian HUANG (Chemistry, National University of Singapore, Singapore)

Introduction : Dietary restriction (DR) was found to extend lifespan from yeast to primates and delay the onset of aging-associated diseases. However, recent studies suggested that dietary composition but not dietary restriction plays a key role for longevity in higher organisms. In yeast aging studies, DR reflects in glucose restriction exclusively to extend chronological and replicative lifespan significantly. **Method :** Taking the advantage of yeast chronological aging model, we use a high throughput assay to quantitatively measure chronological lifespan in a number of media with different amino acids and glucose composition. **Results :** Our data shows that the ratios of essential amino acids and nonessential amino acids change yeast lifespan obviously. For individual amino acids, restriction of methionine or increase of glutamic acid prolongs lifespan significantly in normal condition and can further increase lifespan in DR condition. Interestingly, medium with low methionine and high glutamic acid extends longevity greatly, and also further increases lifespan in DR condition. Furthermore, buffered medium (pH 6.0) with restriction of methionine and glucose plus increase of glutamic acid extends yeast lifespan tremendously. **Conclusion :** Altogether, our findings demonstrate that amino acids composition change lifespan significantly. Methionine, glutamic acid, glucose, pH neutralization have strongly synergetic effect on yeast longevity through distinct mechanisms. Thus, this study would help to fill a gap in yeast model

for the fast developing view that nutrient balance could be a possibility to extend lifespan, and the remarkable longevity effect of methionine and glutamic acid merits the future investigation of their anti-aging activity in higher organisms. Keywords : Chronological lifespan, methionine, glutamic acid

OP27 118-B-2

MECHANISM OF CHRONOLOGICAL LIFESPAN EXTENSION BY CRYPTOTANSHINONE IN BUDDING YEAST SACCHAROMYCES CEREVISIAE

Ziyun WU¹, Shao Quan LIU¹, Dejian HUANG² (1. Food Science and Technology Programme, National University of Singapore, Singapore; 2. Food Science and Technology Programme, National University of Singapore Suzhou Institute, China)

Introduction : Cryptotanshinone, a major active constituent isolated from the roots of *Salvia miltiorrhiza* Bunge (Danshen), possesses multiple biological activities relevant to late-life diseases, such as stroke, Alzheimer disease, atherosclerosis, cancer, inflammatory, obesity and type 2 diabetes, by targeting regulation of several signaling pathways that are highly conserved in multiple species, such as the mammalian target of rapamycin (mTOR), AMP activated protein kinase (AMPK), and phosphatidylinositol 3-kinase (PI3K) pathways. Method : We report a highly conserved mechanism of lifespan extension by cryptotanshinone in budding yeast chronological aging model. Using a high throughput assays developed in our lab, we measured the lifespan extension activity of cryptotanshinone. Results : The three Danshen compounds, cryptotanshinone, tanshinone IIA and tanshinone I, have no synergetic effect on yeast longevity through similar mechanisms. Our findings demonstrate that essential amino acid sufficiency, and three conserved protein kinases Tor1, Sch9 and Gcn2 are required for cryptotanshinone induced longevity. In addition, cryptotanshinone increases lifespan of SOD2 deletion mutant significantly, suggesting that it mediates ROS stress protection. Conclusion : Altogether, genetic epistasis analyses indicate one mechanism that cryptotanshinone involves regulation of Tor1-Sch9-Gcn2-Sod2, a highly conserved longevity pathway modulated by nutrients from yeast to human, to extend CLS greatly at relatively low concentrations. Thus, the evolutionarily conserved mechanism merits the future investigation of anti-aging activity of cryptotanshinone in higher organisms. Keywords : yeast, chronological lifespan, cryptotanshinone

OP27 118-B-3

VITAMIN D INSUFFICIENCY AND MILD COGNITIVE IMPAIRMENT IN OLDER ADULTS

Cedric ANNWEILER¹, Cyrille LAUNAY¹, Bruno FANTINO¹, Anne-Marie SCHOTT², Gilles ALLALI³, Olivier BEAUCHET¹ (1. Geriatrics, Angers University Hospital, France; 2. Department of Medical Information, Lyon University, France; 3. Neurology, Geneva University, Switzerland)

Introduction : Low serum 25-hydroxyvitamin D (25OHD) concentrations have been associated with dementia. The association with mild cognitive impairment (MCI) has not yet been explored. The objective of this cross-sectional study was to examine the association between vitamin D insufficiency and MCI status among older community-dwellers with subjective memory complaint. Method : Ninety-five nondemented Caucasian community-dwellers with subjective memory complaint (mean age 71.1±6.4years; 54.7%female) included in the GAIT study, were divided into 2 groups according to Winblad et al. consensus criteria (i.e., subjects with MCI, or cognitively healthy individuals [CHI]). Vitamin D insufficiency was

defined as serum 25OHD concentration < 75nmol/L. Age, gender, body mass index, number of comorbidities, education level, Mini-Mental State Examination (MMSE) score, Frontal Assessment Battery (FAB) score, Geriatric Depression Scale (GDS) score, creatinine clearance and season tested were considered as potential confounders.

Results : Compared to CHI (n=52; mean age 72.7±7.0years; 71.2% female), MCI patients (n=43; mean age 71.4±5.6years; 34.9% female) had lower mean serum 25OHD concentrations (P=0.006) and presented more often with vitamin D insufficiency (P=0.010). In addition, increased serum 25OHD concentrations were associated with a lower risk of MCI (adjusted odds ratio=0.96, P=0.002), and vitamin D insufficiency was associated with MCI status (adjusted odds ratio=4.50, P=0.039). Conclusion : Low 25OHD concentrations were associated with MCI status in the studied sample of older nondemented community-dwellers with subjective memory complaint. Keywords : vitamin D; mild cognitive impairment; older adults; neuroendocrinology

OP27 118-B-4

SUPEROXIDE OVERPRODUCTION BY NADPH OXIDASE AND MORTALITY IN COMMUNITY-DWELLING OLDER ADULTS

Gregory BAPTISTA¹, Nils KUSTER², Julie LANO², Anne Marie DUPUY², Ernestine FERREIRA¹, Jean Paul CRISTOL², Claude JEANDEL¹ (1. Geriatrics, University Hospital of Montpellier, France; 2. Biochemistry, University Hospital of Montpellier, France)

Introduction : Indirect markers of oxidative stress have been associated to mortality in older women, but there is no data about free radicals. Method : Between 2003 and 2009, 500 community-dwelling older adults in Southern France were included in this study. Inclusion criteria were age above 60 years. Non-inclusion criteria were systemic inflammatory disease. Comorbidity index (CIRS-G) were evaluated for all subjects. Superoxide anion production by NADPH oxidase (NOX) was evaluated using a lucigenin-based chemiluminescence method. Results : Median age was 80.9 ± 9.1 years old. Median follow-up was 3.8 years. Among the 500 patients included in the study from 2003 to 2009, 155 had died by the end of 2009. At baseline those who died compared to survivors, were older (p <0.001), more often male (p <0.001), had a higher CIRS-G (p <0.001), a lower albumin (p <0.001), a lower total and LDL cholesterol (p = 0.004 and p = 0.001 respectively), had higher biological parameters of inflammation (p = 0.015 for orosomucoid, p = 0.035 for fibrinogen), a higher creatinine and homocysteine (p = 0.003 and p = 0.004 respectively), as well as a greater blood superoxide anion production (p = 0.006). In multivariate analysis, factors independently related to all-cause mortality in our population were age (p <0.001), male gender (p <0.001), CIRS-G (p = 0.027), albumin (p = 0.001), fibrinogen (p = 0.017), hemoglobin (p = 0.06) and blood production of superoxide anion by NADPH oxidase (p = 0.03). Conclusion : Superoxide overproduction by NOX was found to be independently associated with mortality in older adults. Keywords : oxidative stress, mortality, NADPH oxidase

OP27 118-B-5

MITOCHONDRIAL PEPTIDES IN AGING AND LONGEVITY

Pinchas COHEN (School of Gerontology, USC Davis, USA)

Introduction : Mitochondria contain >1000 nuclear proteins, but the mitochondrial-chromosome only encodes 13 proteins. Humanin; a novel 24AA peptide encoded from the 16S rRNA region of the mtDNA is a potent neurosurvival factor shown to be cytoprotective and metaboloprotective in vitro and in vivo, in models of aging-related diseases. Method : We developed a humanin ELISA assay and

demonstrated that humanin declines with aging and its levels are altered in states of insulin resistance, endothelial-dysfunction and neurodegeneration. Results : In vivo administration of humanin reverses pathological processes involved with diabetes, atherosclerosis and Alzheimer's disease. We recently identified an additional six peptides encoded from ORFs within the 16S rRNA, which we named SHLPs (small humanin-like peptides). Analysis of their expression reveals that they are transcribed in the mitochondria from mtDNA, are detectable in plasma, and exhibit tissue-specific distribution and age dependency. SHLPs 1-5 act as potent bioactive molecules acting to induce cell protection and ROS inhibition (like humanin, via activation of Erk and Stat3 phosphorylation) but with different temporal profiles, suggesting that these peptides may act in concert. SHLP6 has opposing actions, potentially inducing apoptosis. Conclusion : These observations reveal that the mitochondria possess previously unappreciated roles in the regulation of metabolism and apoptosis that occur via the synthesis of mitochondrial-derived peptides (MDPs). We propose that the mitochondrial peptidome could explain important new aspects of mitochondrial biology and dysfunction with relevance to human biology and disease and that the novel MDPs we describe here may represent retrograde communication signals from the mitochondria that are critical to the aging process. Keywords : mitochondria, longevity, humanin

OP27 119-S **HOUSING & ENVIRONMENT & TECHNOLOGY I**

OP27 119-S-1 **CREATING ENABLING ENVIRONMENTS IN RURAL RESIDENTIAL AGE CARE SETTINGS: AN AUSTRALIAN EXAMPLE**

Sandra DAVIS (*Palliative and Supportive Services, Flinders University, Australia*)

Introduction : Much work has been done to move to more domestic, familiar physical environments in residential aged care settings in Australia. This paper examines to what extent rural aged care providers understand the principles of enabling environments for people with dementia and how knowledge and appropriate resources are used when developing environmental improvements. Method : Thirteen rurally based aged care homes, varying in size, participated in improving environments with funding from the Victorian Department of Health. Evidence-based guidelines and tools were provided to support homes to develop projects creating more enabling environments. Proposals were reviewed in relation to findings from the Environmental Audit Tool (EAT), created to assess the quality of residential environments for people with dementia. A self-complete survey provided information about staff perspectives of enabling environments. Onsite expert support was provided over six months. Results : The majority of proposals for change received from facilities did not target issues within the environments identified in audit as priorities. Very few homes used the guidelines or audit tools provided to develop their proposal. Those homes who accessed expert advice and used evidence based resources to develop proposals were more effective in targeting and completing their improvements. Most utilised post proposal design assistance but few used support to implement staff education and practice change improvements. Conclusion : Tools and resources for creating enabling environments are poorly used by rural aged care homes and have limited effectiveness alone in facilitating appropriate improvements. Choices made are frequently on the basis of organisational effectiveness or staff preferences, not therapeutic value. Keywords : long term care, enabling environments

OP27 119-S-2 **PASSIVE OR ACTIVE CONSUMERS?: ACCESSING PRIMARY HEALTH CARE SERVICES AS A CARE HOME RESIDENT**

Christina VICTOR¹, Claire GOODMAN², Angela DICKINSON³, Susan DAVIES³, Kathryn FROGGATT⁴, Hazel MORBEY⁴, Masey HELEN¹, Steve ILIFFE⁵, Wendy MARTIN¹, Heather GAGE⁶ (*1. School of Health Sciences & Social Care, Brunel University, United Kingdom; 2. Centre for Primary Care, University of Hertfordshire, United Kingdom; 3. Centre for Primary and Community Care Research, University of Hertfordshire, United Kingdom; 4. Faculty of Health, University of Lancaster, United Kingdom; 5. Department of Primary Care & Population Science, University College, London, United Kingdom; 6. Department of Economics, University of Surrey, United Kingdom*)

Introduction : Much research in care homes in the United Kingdom focuses upon enumerating the nature of the health and social care needs of residents; evaluating specific interventions such as fall prevention; or describing the nature and composition of the care home work force. There is much less focussing upon the experiences of older people living in care homes, how they view their health, and how they access primary care and other health services when needed. Method : Using data from the case study phase of a three year study of integrated working between care homes and health services we focus upon the experiences of 39 residents across 6 care homes who were followed up for a year. This involved reviewing residents' notes (127 reviews) and interviewing them up to 3 times (87 interviews in total) about their health care needs, how they access primary care services if required, and their daily experiences of the care home. Results : Participants were aged from 65 to 101 years and had lived in the care home for 1 month to 11 years. Conclusion : Relying upon staff to call for a GP or arrange other primary health care visits could represent both a 'passive' loss of control but also an 'active' expectation that care staff are paid to both monitor residents' health needs and make appropriate arrangements. Our data showed evidence of both narratives and these findings indicate the importance of including the voice of residents in care home research. Keywords : Care home

OP27 119-S-3 **POLISH OLDER ADULTS' PERCEPTIONS ABOUT PHYSICAL ACTIVITY AND OPPORTUNITIES IN THEIR LOCAL ENVIRONMENT. QUALITATIVE STUDY**

Alina ZUREK¹, Grzegorz ZUREK² (*1. Dept. of Psychology, University of Wroclaw, Poland; 2. Dept. of Biostructure, University School of Physical Education, Poland*)

Introduction : Some reports from various researches present psychophysiological benefits resulting from undertaking physical activity (PA) by the elderly. It appears, however, that a lifestyle full of physical exercise doesn't enjoy much popularity among Polish elders. Thus, the reasons for which many elderly persons choose sedentary lifestyle are immensely interesting, as well as the possible ways of helping them change their habits and become physically active. The researchers have been realizing two aims: 1) to ascertain the types of PA and the way it's viewed by residents of retirement homes; 2) to observe the opportunities of the local environment to motivate them to undertake PA. Method : The participants of the research were 20 residents of retirement homes in Poland. The method used was the structuralized interview by Chodzko-Zajko (2009) examining the perception of PA and the local environment, and its influence on undertaking PA by the elderly. Results : Physical activity is equated by Polish elders from retirement homes with physical work. An active

person is the one who e.g. cultivates a garden, cleans, cooks, knits. A physically active person is also the one who spends free time out in the fresh air being active, e.g. going for a walk. The local environment is perceived by elders as not very effective in motivating them to be physically active. The only trigger for undertaking various activities is one's inner motivation. Conclusion : Physical activity understood as doing physical exercise is not a form of spending their free time looked for and undertaken by Polish elders from retirement homes. Keywords : physical activity, local environment, older adults

OP27 119-S-4

COOL TOWNS FOR THE ELDERLY - PROTECTING THE HEALTH OF ELDERLY RESIDENTS AGAINST URBAN HEAT

Franz KOLLAND, Anna WANKA (*Department of Sociology, University of Vienna, Austria*)

Introduction : The 2003 heat wave in Europe resulted in 70,000 deaths. Particularly at risk were socially isolated persons over the age of 65 years. Predicted climate changes will increase the health risk for the elderly in the future. The STOPHOT project explores how to reduce their vulnerability against heat stress. Method : Using a standardised questionnaire, a telephone survey was conducted (summer 2011). 400 subjects (>65y) living in four different residential area types in Vienna were interviewed. Face-to-face interviews with residents of retirement homes (n=200) and 15 in-depth interviews with stakeholders were carried out. Results : Older people adjust their behavior during a heat wave mainly by wearing lighter clothes, increasing liquid intake and staying indoors during daytime. Heat primarily affects the elderly's energy balance. Most frequently mentioned conditions are fatigue (58%) and sleeping problems (48%). High-risk groups are persons with a lower socio-economic status and activity level and poor health condition. This group is also more likely to withdraw from the public for the duration of the hot periods. Factors increasing the likeliness to stay at home are a disadvantaged neighborhood, dissatisfaction with and lack of neighborhood networks and age discrimination in the residential area. Conclusion : The elderly are particularly vulnerable towards heat stress. With urban populations ageing, and urban temperatures rising, design of urban areas must consider the interaction of social and climatic factors to become an age-friendly city. Heat is an environmental factor which is not natural and unchangeable. Resilience and individual coping strategies have to be supported by community-planning initiatives. Keywords : Heat stress, Urban areas, Resilience

OP27 119-S-5

ACCESS AND USE OF THE OUTDOOR ENVIRONMENT BY OLDER PEOPLE WITH OA: RESULTS FROM THE EUROPEAN PROJECT ON OSTEOARTHRITIS

Suzan VAN DER PAS¹, Laura SCHAAP¹, Sanne WIEGERSMA², Maria Victoria CASTELL³, Michael DENKINGER⁴, Elaine DENNISON⁵, Nancy PEDERSEN⁶, Stefania MAGGI⁷, Dorly DEEG¹ (*1. Epidemiology & Biostatistics, VU University Medical Center EMGO Institute for Health & Care Research - LASA, Netherlands; 2. Partoer, Social Economic Research Bureau, Netherlands; 3. Department of Preventive Medicine and Public Health, Unit of Primary Care and Family Medicine Faculty of Medicine Universidad Autonoma de Madrid, Spain; 4. AGAPLESION Bethesda Clinic, University of Ulm, Germany; 5. MRC Lifecourse Epidemiology Unit, University of Southampton Southampton General Hospital, United Kingdom; 6. Department of Medical Epidemiology & Biostatistics, Karolinska Institute, Sweden; 7. Department of Medical and Surgical Sciences, University of Padova, and National Research*

Council (CNR), Aging Branch Institute of Neuroscience, Italy)

Introduction : The aims of the present study were to examine cross-country differences in the access and use of the outdoor environment in relation to clinical OA at different sites, and to examine the mediating effects of physical functioning. Method : The European Project on OsteoArthritis (EPOSA) is a six-cohort study (Germany, Italy, the Netherlands, Spain, Sweden and the United Kingdom (UK)) on community-dwelling persons aged 65 to 85 years. Clinical hand, hip and knee OA was assessed using ACR criteria, and functional limitations were measured with the physical function subscale of the WOMAC and AUSCAN. Four items from the Home and Community Environment (HACE) instrument were used to assess access and use of the outdoor environment. Results : Of the 2816 participants, 19% had knee OA, 6% had hip OA and 17% had hand OA. There was more access to parks and walking areas, places to sit and rest, and public transport in the Netherlands and Sweden, and less access to these outdoor resources in Italy. Persons with knee or hip OA in the Netherlands, Sweden and the UK make less use of parks and walking areas, and more use of places to sit and rest. Functional limitations seem to mediate the association between OA and use of the environment. Conclusion : OA is associated with use of the outdoor environment. Countries that have more environmental resources enable more use of the environment. Having access to resources such as places to sit and rest are important to be able to deal with functional limitations caused by OA. Keywords : Outdoor environment, Osteoarthritis, Physical functioning

OP27 119-S-6

ENSURING ENABLING AND SUPPORTIVE REGIONAL TOWN CENTRES

Catherine Elizabeth BRIDGE (*City Futures Research Centre, The University of New South Wales, Australia*)

Introduction : The NSW Department of Family and Community Services funded the Regional Town Centres iPad application to explore new ways of understanding and engaging older people in developing age-friendly environments in NSW. This research conducted in 2012 set out to understand from the perspective of older persons what physical features in a regional town centers best supports its older residents adaptive capacity and wellbeing outcomes by provision, appropriate design, construction and maintenance of its town centre infrastructure. Method : Two regional councils were partnered with to pilot the iPad application with four small groups of older people aged over 60 years (the average age was 68 years). Within each town centre two walk and talk groups were conducted using the specially developed GPS iPad application to evaluate its age-friendliness. Results : The iPad application captured all the good, bad and ugly features of the built environment from the perspective of the older persons. The data gathered was displayed as histograms and on a google map, which allowed users to zoom in and out. The five point score allocated to every entry was then translated to a specific colour marker for visualisation and ease of integration. The data gathered can then be filtered according to which session the data was collected on, the object type and the score of each comment. Conclusion : Positive feedback from older people and councils across NSW now means that wider adoption of the system is being explored. Comments about potential fall and trip hazards were in the majority (54%), with issues such as inappropriate slopes (18%) and the need for improved road crossings (20%) being common. Further analysis revealed changes in materials, poor maintenance or obstructions were often causal issues. Keywords : age-friendly, streetscape, mapping technology

OP27 120-S
SUCCESSFUL AGING & SOCIAL SUPPORT

OP27 120-S-1
RURAL HEALTHCARE THROUGH PATIENT-DOCTOR E-COMMUNICATION AND E-SUPPORT GROUP PARTICIPATION

Younsook YEO¹, Eunjeong KO², Sue LEVKOFF¹ (1. College of Social Work, University of South Carolina, USA; 2. School of Social Work, San Diego State University, USA)

Introduction : Despite documented disparities stemming from limited quality healthcare, limited financial resources, and transportation barriers, little is known about rural older adults' online activities regarding healthcare needs. This study aims to examine the prevalence of the digital divide in (1) accessing the Internet, (2) patients' e-communication with doctors, and (3) e-support group participation between rural and urban adults aged 50 or older, and examine factors associated with these activities among rural older adults. **Method :** Multivariate logistic regression was estimated using nationally representative data collected in 2005 and 2008 by the National Cancer Institute for the Health Information National Trends Survey. **Results :** Rural older adults were significantly less likely than urban counterparts to access the Internet ($\exp(b)=1.44$, $p<.001$), even after controlling for socio-demographics. However, once they became wired, no significant difference in patient-doctor e-communication was observed between rural and urban internet users. Rural older adults were somewhat more likely than their urban counterparts to attend e-support groups ($\exp(b)=1.66$, $p=0.06$), after controlling for other covariates. Rural internet users tend to be non-Hispanic whites, educated, and higher income earners, who are frequent healthcare users and overweight. Both e-support group participants and patient-doctor e-communicators among rural internet users tend to be U.S.-born non-Hispanic whites who discuss online health information with doctors. **Conclusion :** Rural older adults lagged far behind in access to the Internet. However, once they became Internet users, they actively attended e-support groups and patient-doctor e-communication. However, the digital divide still exists even among rural older adults. Policy level changes are needed to reduce this digital divide. **Keywords :** successful aging, online healthcare resource, digital divide

OP27 120-S-2
FACTORS ASSOCIATED WITH SUCCESSFUL AGING: A STRUCTURAL EQUATION MODELING APPROACH

Hao LUO¹, Xiaomei PEI¹, Dale YEATTS² (1. Sociology, Tsinghua University, China; 2. Sociology, University of North Texas, USA)

Introduction : Successful aging is multidimensional, encompassing physical, mental and social well-being in older age. Its core is to distinct between primary and secondary aging in later life. By identifying factors associated with successful aging, interventions can be made to identify, prevent and reverse functional losses associated with usual aging. **Method :** Based on the data collected from the pilot survey of the China Health and Retirement Longitudinal Study (CHARLS), we assess the prevalence of successful aging in China's aged people and identify the factors associated with it using a structural equation modeling (SEM) approach. The differences between men and women as well as urban and rural elderly are estimated using the multiple group comparison technique. **Results :** We show that, although multiple logistic regression was routinely used to assess the predictors of successful versus usual aging, SEM provides an elegant alternative in this area. **Conclusion :** In the end, we discuss procedures for redressing common problems and

misunderstandings in the application of SEM procedures, focusing on the distributional characteristics of the measures, the choice of appropriate estimation method and the chi-square goodness-of-fit test. **Keywords :** successful aging, structural equation modeling, CHARLS

OP27 120-S-3
LAY VS. RESEARCHER CONCEPTUALISATIONS OF SUCCESSFUL AGEING: A SYSTEMATIC REVIEW

Theodore David COSCO¹, Jaime PERALES², Blossom STEPHAN³, Carol BRAYNE¹ (1. Public Health & Primary Care, University of Cambridge, United Kingdom; 2. Parc Sanitari Sant Joan de Deu, Universitat de Barcelona, Spain; 3. Institute of Health and Society, Newcastle University, United Kingdom)

Introduction : Despite having been used in a gerontological context for more than half a century, "successful ageing (SA)" has not been operationalised in a universally accepted definition. Definitions and conceptualisations of SA vary dramatically from study to study. However, there are generally two groups from which conceptualisations of SA stem: researchers and laypersons. **Method :** The current study compares two systematic reviews: quantitative operational definitions of SA and themes developed through exploratory studies of layperson perspectives of SA. **Results :** Results from the reviews reveal marked differences in the conceptualisations of SA between researchers and the "real world." Qualitative studies generally have greater multidimensionality and more emphasis on psychosocial aspects of SA, such as resilience and coping. Conversely, quantitative studies contain fewer components that are generally biomedically focused, such as physical functioning/disability and the presence of illness. The vast majority of included studies were conducted in North America and the UK using non-clinical populations, resulting in limitations on the generalisability of SA conceptualisations beyond these Anglophone contexts. **Conclusion :** Future SA research needs to be explicit about the geographic and cultural scope, focussing on the pragmatic application and societal value of definitions of SA. **Keywords :** successful ageing, operational definitions, layperson

OP27 120-S-4
DEVELOPMENT AND VALIDATION OF THE MALAYSIAN ELDERLY WELLNESS INDEX

Tengku Aizan HAMID¹, Rahimah IBRAHIM², Yadollah ABOLFATHI MOMTAZ¹, Mohmad SALLEH³, Siti Sa'adiyah HASSAN NUDIN⁴, Zaitun YASSIN⁵, Siti Aisyah NOR AKAHBAR⁶ (1. Social Gerontology, Institute of Gerontology, Universiti Putra Malaysia, Malaysia; 2. Social Gerontology, Institute of Gerontology, Malaysia; 3. Family Health Development Division, Ministry of Health Malaysia, Putrajaya, Malaysia; 4. Institute for Health Behavioural Research, Ministry of Health Malaysia, Malaysia; 5. Department of Nutrition and Dietetics, Faculty of Medicine & Health Sciences, Universiti Putra Malaysia, Malaysia; 6. Medical Gerontology, Institute of Gerontology, Universiti Putra Malaysia, Malaysia)

Introduction : As the population is aging, more attention is being paid to assess older adults' wellness. However, there is a lack of suitable and validated assessment tools. The major aims of the present study were to develop and evaluate an assessment tool that would meaningfully assess the various components of wellness in older persons. **Method :** The data for this study, consisting of 2541 community dwelling elderly people, were obtained from the national wellness survey entitled "Determinants of Wellness among Older Malaysian: A Health Promotion Perspective" conducted in 2010. SPSS 20 was used to assess the internal consistency of wellness

index and its domains. Confirmatory factor analysis was conducted using AMOS 20 to assess the construct validity. Results : The confirmatory factor analysis showed the six factor model with 26 items had a good fit with the latent constructs (CMIN=5.0, RMR = 0.006, GFI = 0.955, AGFI = 0.944, NFI = 0.944, RFI = 0.935, IFI = 0.954, TLI = 0.947, CFI = 0.954, RMSEA = 0.042). The Cronbach's alpha value of the wellness index was 0.82. The internal consistency for the six domains also showed acceptable to high reliability. All indicators significantly and substantively loaded on their corresponding latent constructs ($p \leq .01$). Conclusion : This study conceptualized and supported the wellness index as a multi-dimensional model consisting of cognitive, receiving support, providing support, physical functioning, environmental, and financial components. The findings showed that the proposed model of wellness might serve as a useful theoretical and empirical tool for future research. Keywords : Aged; Malaysia; Measurement Model; Wellness

OP27 120-S-5

YOUR LIFE YOUR WELLBEING: EVALUATING THE IMPACT OF COMMUNITY AGED CARE SERVICES

Sarah FOGG¹, Saul FLAXMAN¹, Tomasz SITEK¹, Anne CHAMBERLAIN² (1. *Social Policy and Research, The Benevolent Society, Australia*; 2. *Community Services, The Benevolent Society, Australia*)

Introduction : In addition to providing support that enables older people to remain living their homes, community aged care services are increasingly providing more holistic care which takes into account older people's social and emotional wellbeing. Despite anecdotal observations that service use positively impacts on clients wellbeing, there is currently a substantial evidence gap around the impact of community aged care. Method : The Benevolent Society, an Australia not-for-profit organisation, has embarked on an evaluation to assess the impact of their community aged care services on clients' wellbeing. A mixed methods longitudinal evaluation involving 21 community care programs across Sydney examined aspects of client wellbeing such as psychological distress, social isolation, autonomy and control as well as positive and negative aspects of being engaged in a caring role. The presentation client wellbeing as they begin to receive services, and how this changes over 12 months. Results : The results focus on the prevalence of social isolation among clients, and the relationship between this and other aspects of wellbeing such as physical and mental health. Results from qualitative interviews with clients (which investigated the mechanisms through which community care services and external factors impacted on wellbeing) are also reported. Conclusion : Finally, the presentation focuses on the methodological challenges in implementing a large scale evaluation through a partnership of the internal evaluator and community care practitioners, and the opportunities such a partnership provides in applying the knowledge gained through the evaluation towards positive practice change and advocacy in the policy sphere. Keywords: Wellbeing, Not for profit, Social

OP27 120-S-6

IMPACT OF ICT-BASED INTERVENTIONS ON FAMILY CAREGIVERS: A CROSS-ANALYSIS OF 54 GOOD PRACTICES IN EUROPE

Francesco BARBABELLA¹, Andrea SCHMIDT², Carlos CHIATTI³, Giovanni LAMURA¹ (1. *Centre for Socio-Economic Research on Ageing, National Institute of Health and Science on Aging (INRCA), Italy*; 2. *Health and Care Programme, European Centre for Social Welfare Policy and Research, Austria*; 3. *Scientific Direction, National Institute of Health and Science on Aging (INRCA), Italy*)

Introduction : Information and communication technologies (ICTs) have gained an increasing relevance for delivering innovative care and support services for dependent older people and their family caregivers. Although ICT-based interventions can vary remarkably in terms of functions, target users, operational aspects and technologies used, little knowledge is available concerning their implementation and impact in Europe, a gap that the CARICT project (<http://is.jrc.es/pages/EAP/eInclusion/carers.html>) has tried to fill. Method : 54 ICT-based interventions addressing needs of older people or their family caregivers have been identified in 12 European countries through internet search, literature review and expert interviews. Reports have been delivered for each case studied, and cross-analysed to better understand their potential impact at micro, meso and macro level. Results : Little evidence was found for positive outcomes at micro-level, including improvements in users' health-related quality of life and social inclusion. At meso-level, implementation of 1st/2nd generation telecare contributes to reduce hospitalization and institutionalization rates of older users, as well as to cost savings for local care providers. At macro-level, only one intervention shows concrete effects on a larger scale through a targeted program evaluation, while most ICT-based interventions do not use any tool to assess their impact, and can thus demonstrate only technology acceptance or users' satisfaction. Conclusion : The lack of relevant evidence at all levels, as well as difficulties in comparing and generalising results, strongly urge practitioners to improve impact assessment methodologies and researchers to develop a better general framework of ICT potentials at a conceptual, theoretical and methodological level in this area. Keywords : ICT, caregiver, older people

OP27 121-S

WORK, LABOR AND EMPLOYMENT II

OP27 121-S-1

AGEISM AT WORK AND ITS IMPACT ON HEALTH, JOB SATISFACTION AND LABOR FORCE PARTICIPATION

Ernest GONZALES¹, Lisa MARCHIONDO² (1. *George Warren Brown School of Social Work, Washington University in St. Louis, USA*; 2. *Department of Psychology, Wayne State University, USA*)

Introduction : A large body of research has examined how racism and sexism impacts health and work. Scant evidence has examined ageism. Given the burgeoning of an aging workforce, we aim to examine how ageism impacts health, job satisfaction, and work/retirement expectations and behaviors. Selective incivility theory guided this investigation. Method : Data were drawn from the Health and Retirement Study. Inclusion criteria were working full-time in 1998, participated in every wave between 1998 and 2008, and completed information for all variables of interest: ageism, labor force status and expectations, job satisfaction, health, and control measures; resulting in a sample of 5,909. Bivariate, logistic and time-pooled fixed effects regressions were utilized both cross-sectionally and prospectively. Results : Higher levels of ageism were reported by men, non-Caucasians, lower educated and those who were young-old. Ageism was strongly and positively related to indicators of mental health (felt depressed, everything an effort, sleep was restless, felt lonely, not happy, felt sad, couldn't get going, not enjoyed life) as well as the global mental health measure (CESD). Ageism was positively associated with job dissatisfaction, expectations to stop working all together during retirement, reduce hours or become self-employed; there was a trend to change employment. Conclusion : Effects of ageism go beyond not being promoted, hired, or trained; it effects health, job satisfaction and informs work-retirement plans.

Interventions in the workplace are needed to reduce ageism within the workplace. Such interventions may promote healthy lives and, in turn, lead to working in advanced ages. Keywords : ageism, older workers

OP27 121-S-2

AGE-MANAGEMENT MEASURES AND THE IMPACT ON WORKABILITY, MOTIVATION AND PICTURES OF AGEING - FINDINGS FROM A GERMAN SURVEY

Gerhard NAEGELE (*Gerontology, TU Dortmund University, Germany*)

Introduction : In the course of demographic trends, older workers will continue to gain importance for economy and society. Findings show, that German staff executives primarily ascribe practical knowledge, work ethics, quality awareness, loyalty, theoretical knowledge and mental capacity to older employees; teamwork, creativity, flexibility, willingness or ability to learn on the other hand is more likely seen among younger employees (Bellmann 2008, IW Koln 2009). Method : The paper will present key results from an own recent and representative German survey which was realized in a project financed by the Federal Ministry of Family, Senior Citizens, Women and Youth in 2010. Results : The paper will focus on: - age-management measures from the perspective of older workers - pictures of ageing in German companies from the perspective of older workers and of managers - the impact of age-management measures of workability, motivation and satisfaction. Conclusion : Also a conclusion and transfer to Korean background will be drawn. Keywords : Age management, Workability, Pictures of Ageing

OP27 121-S-3

THE PROBLEMS AND ADVANTAGES OF OLDER WORKERS

Audrey GUY (*Business, Law and Government, University of Canberra, Australia*)

Introduction : The encouragement of older people to stay in the workforce can benefit three groups: older people themselves, the labour market and the national economy. This can only be successful if the very different needs of these groups are addressed; in particular the specific needs of older people. Method : Research using Australian data suggests that there is an unmet demand for work amongst older people including the unemployed and the underemployed. The mismatch between employers wanting experienced workers and insufficient work may be the result of employers failing to recognise the different needs and advantages associated with older workers. Older people often require a shorter working week and flexible hours, particularly those with commitments such as carer responsibilities. Some prefer irregular or home based work. They are less interested in promotion and higher wages. They can offer reliability and company loyalty and are less likely to seek other work, attributes which are beneficial to the employer. The older employee gains other advantages such as companionship, both within the workplace and through work related functions, and retains a sense of purpose in their lives. It gives them a position in society and the self esteem associated with this. Results : The financial aspect from the employees' viewpoint is largely in the hands of government. The amount of taxation and loss of superannuation entitlements can be manipulated by government departments and need to be seen to be beneficial by the employee. Conclusion : All three groups stand to gain from older people's participation in the workplace. Keywords : Older workers

OP27 121-S-4

AGEING PRODUCTIVELY: LONGITUDINAL PATTERNS

AMONG OLDER AUSTRALIANS

Vanessa LOH¹, Hal KENDIG² (*1. Ageing, Work and Health Research Unit & CEPAR, The University of Sydney, Australia; 2. Centre for Research on Ageing, Health and Wellbeing & CEPAR, The Australian National University, Australia*)

Introduction : Population ageing, increasing longevity, and economic uncertainty have generated global concern for economic and social sustainability in both developed and developing countries. In Australia, there is increasing policy attention to maintaining productivity through continuing participation of older adults in paid work and other productive activities including volunteering, caregiving, and household work. This paper examines ways in which various forms of productivity changed for older Australians between 2002 and 2010. Method : The analysis is based on three waves (2002, 2006, and 2010) of longitudinal data obtained for 3,729 individuals aged 45 to 68 in 2002 from the Household Income and Labour Dynamics in Australia (HILDA) survey. Results : We found that productive engagement, particularly in less formalised, non-market-based activities such as volunteering, caregiving, and household work, remains prevalent amongst Australians in mid- to later-life, with the majority indicating involvement in multiple activities concurrently. However, time spent on productive activities is highly variable and exhibits an overall decline as people age. There appears to be a trend towards more productive ageing with the most recent cohorts showing greater engagement and less decline over time, particularly in paid work, as they move through the same age groups as earlier cohorts. Conclusion : These findings are discussed in the context of Australian policy initiatives addressing older people's continuing contributions in both the workforce and wider community including those outlined in the Government's Intergenerational Report (2010) and the 2012 Government Response to the Final Report on the Economic Potential of Seniors. Keywords : productive contributions, paid and unpaid work, ageing policy

OP27 122-C

OSTEOPOROSIS

OP27 122-C-1

ASSOCIATION OF FONG AND THSD7A GENES WITH THE PREVALENCE OF VERTEBRAL FRACTURE IN 2427 CONSECUTIVE AUTOPSY CASES

Heying ZHOU¹, Seijiro MORI¹, Ikuyo KOU², Noriyuki FUKU³, Makiko MIENO³, Tomio ARAI³, Motoji SAWABE³, Masashi TANAKA³, Shiro IKEGAWA², Hideki ITO¹ (*1. Center for Promotion of Clinical Investigation, Tokyo Metropolitan Geriatric Hospital, Japan; 2. Laboratory for Bone and Joint Diseases, Center for Genomic Medicine, RIKEN, Japan; 3. Department of Genomics for Longevity and Health, Tokyo Metropolitan Institute of Gerontology, Japan; 4. Department of Medical Informatics, Center for Information, Jichi Medical University, Japan; 5. Department of Pathology, Tokyo Metropolitan Geriatric Hospital, Japan*)

Introduction : We previously reported 2 osteoporosis-susceptibility genes, formiminotransferase N-terminal sub-domain containing gene (FONG) and thrombospondin, type 1, domain-containing 7A (THSD7A), in which we identified 2 common single-nucleotide polymorphisms (SNPs), rs7605378 (FONG) and rs12673692 (THSD7A). The former was associated with a predisposition to osteoporosis and the latter with bone mineral density. To further elucidate the importance of these polymorphisms in the pathogenesis of osteoporosis, we examined their association with the incidence of vertebral fracture. Method : DNA extracted from the renal cortex of

2427 consecutive Japanese autopsies (1331 men, mean age: 79 years; 1096 women, mean age: 82 years) were examined in this study. The presence or absence of vertebral fracture during each subject's lifetime was determined by a thorough examination of the clinical records as well as autopsy reports. Results : After adjustments for sex and age at autopsy, logistic regression analysis revealed that homozygotes for the risk alleles of rs7605378 (A-allele) or rs12673629 (A-allele) possess an increased risk of vertebral fracture. The subjects simultaneously homozygous for both the risk alleles of rs7605378 (AA genotype) and rs12673629 (AA genotype) showed significantly higher risk of vertebral fracture (odds ratio 2.401, 95% confidence interval 1.305-4.416, $P = 0.0048$) than those who had at least 1 non-risk allele of either rs7605378 (AC/CC genotypes) or rs12673629 (AG/GG genotypes). Conclusion : Japanese subjects homozygous for the risk alleles of rs7605378 and rs12673629 may have a higher risk of vertebral fracture. Keywords : FONG, THSD7A, vertebral fracture

OP27 122-C-2

EFFECTS OF KNEE EXTENSOR MUSCLE STRENGTH ON THE INCIDENCE OF OSTEOPENIA AND OSTEOPOROSIS AFTER SIX YEARS

Yasumoto MATSUI¹, Marie TAKEMURA¹, Atsushi HARADA¹, Fujiko ANDO², Hiroshi SHIMOKATA³ (1. Department of Orthopedic Surgery, National Center for Geriatrics and Gerontology, Japan; 2. Department of Health and Medical Sciences, Aichi Shukutoku University, Japan; 3. Department for Development of Preventive Medicine, National Center for Geriatrics and Gerontology, Japan)

Introduction : The association of knee extensor muscle strength with bone mineral density (BMD) has been reported in cross-sectional epidemiological studies, but it remains unclear whether or not this is the case with longitudinal change. Thus, we investigated whether or not the knee extension strength can predict the incidence of osteopenia or osteoporosis after 6 years, then compared the difference between sexes. Method : Subjects were 1255 community-dwelling Japanese men and menopausal women, aged 40-81 years. BMD of lumbar spine and femoral neck was assessed by dual-energy X-ray absorptiometry (DXA) twice at 6-year intervals. Subjects were divided into three groups, normal, osteopenia, and osteoporosis, depending on their YAM (young adult mean BMD) % value. Longitudinal analyses were conducted to determine the odds ratio, controlled for age and BMI, given that those who were normal in the initial stage developed osteopenia after 6 years, for every 1 SD increase in knee extension strength, as well as those who first had osteopenia and then developed osteoporosis. Results : The longitudinal analysis showed the clear effect of muscle strength on the loss of BMD in the femoral neck but not in the lumbar spine. The effect differed by gender, affecting the early stage of bone loss in men (OR 0.56, 95% CI 0.37-0.67, $p < 0.01$) and the late stage in women (OR 0.65, 95% CI 0.44-0.96, $p < 0.05$). Conclusion : The results suggest the importance of knee extension strength to maintain the bone health of the proximal femur in aging. Keywords : Longitudinal epidemiological study, Knee extensor strength, Bone mineral density

OP27 122-C-3

ALL-CAUSE AND CAUSE-SPECIFIC MORTALITY AFTER HIP FRACTURE AMONG CHINESE WOMEN AND MEN: THE SINGAPORE CHINESE HEALTH STUDY

Gerald Choon-Huat KOH¹, Bee Choo TAI², Li Wei ANG³, Derrick HENG⁴, Jian Min YUAN⁵, Woon Puay KOH⁶ (1. Saw Swee Hock School of Public Health, National University of Singapore, Singapore; 2. Saw Swee Hock School of Public Health, National University of Singapore, National University Health System, Singapore;

3. Epidemiology and Disease Control Division, Ministry of Health, Singapore; 4. Public Health Group, Ministry of Health, Singapore; 5. Department of Epidemiology, University of Pittsburgh Graduate School of Public Health, USA; 6. Duke-NUS Graduate Medical School, Singapore)

Introduction : To determine all-cause and cause-specific mortality risk in the first 5 years after hip fracture in an Asian Chinese population. Method : The Singapore Chinese Health Study is a population-based cohort of 63,257 middle-aged and elderly Chinese men and women in Singapore recruited between 1993 and 1998. This cohort was followed up for hip fracture and death via linkage with nationwide hospital discharge database and death registry. As of 31 December 2008, we identified 1,166 hip fracture cases and matched five non-fracture cohort subjects by age and gender for each fracture case. Cox proportional hazards and competing risks regression models with hip fracture as a time-dependent covariate were used to determine all-cause and cause-specific mortality risk, respectively. Results : Increase in all-cause mortality risk persisted till five years after hip fracture [adjusted hazard ratio, aHR=1.58 (95% CI:1.35-1.86) for females and aHR=1.64 (95% CI:1.30-2.06) for males]. Men had higher mortality risk after hip fracture than women for deaths from stroke and cancer up to one year post-fracture but women with hip fracture had higher coronary artery mortality risk than men for five years post-fracture. Men had higher risk of death from pneumonia while women had increased risk of death from urinary tract infections. There was no difference in mortality risk by types of hip fracture surgery. Conclusion : All-cause mortality risk persisted for 5 years after hip fractures in men and women. There are gender-specific differences in effect size and duration of excess mortality risk from hip fractures between specific causes of death. Keywords : Hip Fracture, Mortality, Chinese

OP27 122-C-5

COMPARISON OF FRAX, GARVAN AND QFRACTURE TOOLS IN PREDICTING FRACTURE RISK IN PATIENTS ATTENDING OSTEOPOROSIS CLINICS

Tahir MASUD, Jenny THAIN, Darren AW, Aamer ALI, Thanda AUNG, Wei CHUA, Opinder SAHOTA, Namal WEERASURIYA, Lyndsey MARSHALL, Fiona KEARNEY (Geriatric Medicine, Nottingham University Hospitals NHS Trust, United Kingdom)

Introduction : FRAX, Garvan and QFracture are commonly used web-based fracture prediction tools used to help guide management decisions in osteoporosis. This study compared fracture prediction between these three tools in women attending osteoporosis clinics. Method : Clinicians used a questionnaire to collect information required to populate the three tools in women attending osteoporosis clinics from which 10 year fracture predictions were calculated and compared. FRAX and Garvan, unlike QFracture, allow for inclusion of femoral-neck bone density. Effect of falls on fracture prediction was explored for Garvan and QFracture (FRAX does not include falls history). Results : 106 women (mean age=69.1years,SD=12.4) were studied. 34.9% were fallers, 73.6% had prevalent fractures and 66.0% were osteoporotic at any site (hip or spine, $T < -2.5$). The mean 10 year any (major) fracture risks in percentage (95% CIs) for FRAX, Garvan and QFracture were 18.3% (10.9-25.7), 46.4% (35.6-57.3) and 12.1% (5.5-18.7) respectively. The mean 10 year hip fracture risks were 7.1% (2.2-12.0), 29.1% (19.1-39.1) and 6.0% (1.2-10.8) respectively. There was a significant difference in the mean 10 year any fracture risk between non-fallers versus fallers using the Garvan tool [39.4% vs 63.7%; $p < 0.001$] whereas QFracture was unable to distinguish between the groups [12.0 vs 12.4%; $p = 0.8$]. Conclusion : Compared to

FRAX, the Garvan tool grossly overestimated risk of any and hip fractures. QFracture underestimated risk of any fractures compared to FRAX, although hip fracture prediction was similar. Only Garvan predicted a higher fracture risk in fallers. Clinicians should be aware of the differences and variations in fracture prediction between the web-based tools. Keywords : Fracture prediction FRAX

OP27 122-C-6

RISK FACTORS FOR COMPLICATIONS OF OSTEOPOROSIS IN OLDER PEOPLE

Gabriel - Ioan PRADA¹, Ioana ALEXA², Raluca NACU³, Eliza TAPELEA³, Speranta Petria PRADA³, Irina IGNAT³, Ioana FITA¹ (1. Clinical Department, Ana Aslan National Institute of Gerontology and Geriatrics, and Carol Davila Univ. of Medicine, Romania; 2. Clinical Department of Geriatrics, Gr.T. Popa University of Medicine and Pharmacy, Romania; 3. Clinical Department, Ana Aslan National Institute of Gerontology and Geriatrics, Romania)

Introduction : Osteoporosis is one of the most frequent diseases encountered in older people, its prevalence increasing with age. The objective of this study was to identify risk factors that enhance the odds of having osteoporosis complications in older people. Method : We performed a retrospective case-control study on 628 patients consecutively admitted to our clinical departments. We included 297 subjects (16% males and 84% females) in study group ('case') and 331 patients (24% males and 76% females) in control group. Age range in control group was 50 to 64 years, and in study group was \geq 75 years. Results : Advance age, decreased mineral bone density, altered vision and equilibrium disorders were main risk factors for fractures in general (Odds Ratios 0.69, 0.63, 0.51, 0.39, respectively). Sedentary life style was most important risk factor for neck femur fracture (Odds Ratio 0.61), the lowest importance having high alcohol consumption (Odds Ratio 0.21). Hypocalcaemia (Odds Ratio 0.35) and low dietary calcium (Odds Ratio 0.26) are risk factors for vertebral and Pouteau-Colles fractures, irrespective of age. Smoking is most important factor for all types of fractures (0.48). Most important for Pouteau-Colles fractures was orthostatic hypotension (0.42) and it was a lesser important risk factor for femur neck fractures (0.21). The latter were more prevalent in females ($p < 0.01$), while vertebral fractures were more prevalent in men ($p < 0.05$). Conclusion : An early diagnostic and a careful follow-up of risk factors for complications in older people with osteoporotic fractures will improve survival and increase quality of life. Keywords : osteoporosis, complications, risk factors

OP27 123-C

HEALTH CARE SYSTEM

OP27 123-C-1

THE INTEGRATED SYSTEMATIC CARE FOR OLDER PEOPLE (ISCOPE)-STUDY

Jeanet BLOM, Wendy DEN ELZEN, Anne VAN HOUWELINGEN, Margot HEIJMANS, Jacobijn GUSSEKLOO (Public Health and Primary Care, Leiden University Medical Center, Netherlands)

Introduction : The number of older people with a combination of somatic, functional, mental or social problems is rising. The problems these older people are struggling with are not always known to care-providers. Although a pro-active way of working by GPs is advocated, the feasibility and cost-effectiveness is yet unknown. Aim: The introduction of a structural monitoring system to detect older people of ≥ 75 years with a combination of functional, somatic, mental or social problems (complex problems). For those with complex problems a

care plan is executed. Method : Design: cluster randomised trial. Population: all older persons of ≥ 75 years in 59 general practices. Questionnaire: contained 4 domains (functional, somatic, mental and social). For participants with problems on ≥ 3 domains general practitioners (GPs) made a care plan using a functional geriatric approach. The care plan incorporated indicated diagnostic strategies, interventions, medication review, home care, social work or bringing together caregivers involved. The GPs in the control group continued care as usual. Outcome measures: competence to perform ADL independently, quality of life, satisfaction with delivered care, process measures, cost-effectiveness of the intervention. Results : The questionnaire was sent to 11,617 persons. Response rate 62.7 % ($n=7285$, mean age 81, 61% female). Twenty-six percent ($n=1,921$) of the respondents had problems on ≥ 3 domains. For 225 randomly chosen persons with complex problems in 30 GP practices a care plan was made. Some 600 participants with complex problems were followed in usual care. Conclusion : Details of the screening procedure and outcomes of the ISCOPE strategy will be presented. Keywords : pro-active care, general practice, screening

OP27 123-C-2

GLOBAL APPLICATION OF FINDINGS FROM A SYSTEMATIC REVIEW OF TRANSITIONAL CARE FOLLOWING HOSPITALIZATION FOR ACUTE STROKE OR MYOCARDIAL INFARCTION

Janet Prvu BETTGER (School of Nursing, Duke University, USA)

Introduction : Globally, myocardial infarction (MI) and stroke are the leading causes of death and the third and fourth leading causes of disease burden, respectively. Older adults experiencing these acute events are rarely living without co-morbidities and are significantly more likely to require multiple strategies of care to prevent adverse outcomes as they transition from the hospital back home. The purpose of this study was to describe 'transitional care' interventions for older adults and for patients hospitalized with acute stroke or MI, the evidence for their benefit or harm, and the opportunity to translate these findings with the availability of different health care resources. Method : Of the 5783 citations identified, 62 articles representing 44 studies of transitional care (27 acute stroke and 17 MI) from 16 countries met inclusion criteria. Results : A transitional care taxonomy for stroke and MI was developed to guide future program development, research and evaluation of the four intervention types that emerged: hospital-initiated support ($N=14$), patient and family education ($N=7$), community-based support ($N=20$), and chronic disease management ($N=3$). Overall, evidence suggests hospital-initiated support reduces hospital length of stay for stroke patients and mortality for MI patients. There was insufficient evidence and significant heterogeneity across studies for other intervention types. Secondary review of transitional care models found effective for other chronic conditions further enhanced the taxonomy. Conclusion : While the importance of transitional care is recognized, evidence of the effectiveness for MI and stroke is limited. The existing literature establishes a foundation for continued research and evaluation of practice-based interventions around the globe. Keywords : transitional care, systematic review, research translation

OP27 123-C-3

VISITING HEALTH CARE SERVICE'S EFFECTS ON GERIATRIC DEPRESSION AND FRAILTY IN KOREAN ELDERLY GROUP

Young Ji KIM, Soongnang JANG, Gui Ok JUNG (College of Nursing, Chung Ang University, Korea)

Introduction : As geriatric people are rapidly increasing in Korea, frailty and depression are important health issues in elderly group. Visiting Health Care Service(VHCS)'s goal was to deliver sustained long-term care and to improve elderly health status. Previous studies have only examined limited topics not effect of comprehensive services. The objective of this study is to identify the effect of VHCS to geriatric depression and frailty in elderly group in Korea. **Method :** The design for this study was retrospective descriptive. We used data for approximately 50,000 elderly people in Seoul. Data were collected from 2008 to 2011 by visiting nurses. The level of depression was measured by an GDS-15 and the level of frailty was captured by an instrument developed by the Japanese Ministry of health. **Results :** 17.50% of the elderly were considered moderate or severe depression and 18.86% of subjects were considered frail elderly. Using a logistic regression analysis from 2008 to 2011, results show a decreasing linear trend in odds ratios (OR) for depression and it was statistically significant(OR=.827 95% CI =.819-.835,p<.0001). There was also a decreasing linear trend in OR for frailty and it was statistically significant(OR=.777, 95% CI =.770 -.784, p<.0001). **Conclusion :** Results show a decreasing linear trend in depression and frailty in elderly group received long-term visiting health care service by visiting nurses. We expect visiting health care service is helpful for decreasing depression and frailty in Korean elderly group. **Keywords :** visiting health care service, geriatric depression, frailty.

OP27 123-C-4

HOME-BASED CASE MANAGEMENT FOR FRAIL OLDER PEOPLE (+65): EFFECTS ON HEALTHCARE UTILISATION

Magnus SANDBERG¹, Jimmie KRISTENSSON², Patrik MIDLOV¹, Ulf JAKOBSSON¹ (1. Department of Clinical Sciences, Malmo, Lund University, Sweden; 2. Department of Health Sciences, Lund University, Sweden)

Introduction : The aim was to investigate the effects of a home-based case management intervention for frail old people (+65) on healthcare utilisation. **Method :** The design was a randomised controlled trial (n=153) with participants randomly assigned to either intervention (n=80) or control group (n=73). The one year case management intervention comprised home visits made by a nurse and a physiotherapist. Group differences concerning in and outpatient care were investigated for 12-6 and 6-0 months before, and 0-6 and 6-12 months after baseline. **Results :** In the intervention group there was a significantly lower mean number of emergency department visits that did not lead to hospitalisation 6-12 months after baseline compared with the control group (0.08 vs. 0.37, p=0.041). For the same period the proportion of total emergency department visits leading to hospitalisation was significantly higher in the intervention group than in the control group (83.3 vs. 53.1%, p=0.012). There was a significantly lower mean number of total contacts with a physician in private outpatient care 0-6 and 6-12 months after baseline in the intervention group compared to the control group (1.01 vs. 1.71, p=0.050; 0.88 vs. 1.70, p=0.005). No significant differences were found for inpatient care. **Conclusion :** The case manager intervention in the present study seems to have some effect on healthcare utilisation, especially on contacts with physicians in outpatient care. The effect seen on emergency department visits, where those in the control group were not hospitalised to the same extent suggesting that the control group may not been as well monitored. **Keywords :** Case management, Frail elderly, Healthcare utilisation

OP27 123-C-5

AN ANALYSIS OF THE REFERRAL PATTERN OF PATIENTS REFERRED TO AN POST-DISCHARGE SUPPORT

PROGRAM IN HONG KONG

Edmund Kwok Yiu SHA, Elaine Yee Lan CHENG, Edward Man Fuk LEUNG (Medicine & Geriatrics, United Christian Hospital, Hong Kong)

Introduction : Integrated Discharge Support Program is a pilot program launched in Hong Kong from 2008 till 2011 to plan and support the discharge of high risk elderly from the hospital. The aim of the program is to support elderly patients to settle in their own homes and reduce unplanned hospital readmission upon hospital discharge. **Method :** Under the program, a hospital based Discharge Planning Team had been set up to provide comprehensive geriatric assessment to high risk elderly patients admitted to acute hospital in Hong Kong and formulate discharge care plan according to the needs of elderly patients. High Risk Elderly Patients were selected according to their admission problem like stroke or hip fracture, or according to the risk prediction of HARRPE, and also high risk patients identified by medical and nursing colleagues in ward. **Results :** The present paper analyzes the referral pattern of 8896 patients recruited into the IDSP (Integrated Discharge Support Program) from Mar 2008 to Sept 2011. Findings include the demographic pattern of the referral, their social support network, the medical condition, risk indicators and their post-discharge readmission pattern. **Conclusion :** The Integrated Discharge Support Program is effective in supporting frail elderly patients on discharge from hospital. **Keywords :** Discharge Support Program

OP27 123-C-6

DEMENTIA: A POPULATION HEALTH APPROACH

Melinda MARTIN-KHAN¹, Catherine TRAVERS², David LIE³ (1. Centre for Research in Geriatric Medicine, University of Queensland, Australia; 2. Centre for Research in Geriatric Medicine, School of Medicine, University of Queensland, Australia; 3. Centre for Trauma, Loss & Disaster Recovery, Metro South Mental Health, Queensland Health, Australia)

Introduction : The increasing prevalence of dementia poses enormous social, health and economic challenges. In the absence of a cure, strategies to prevent, delay the onset of, or reduce the impact of dementia are required to contain a growing disease burden, and health and care costs. A population health approach has the potential to substantially reduce the impact of dementia. The aim of this study was to examine elements of a comprehensive population health strategy and barriers to its implementation. Study outcomes have implications at national and jurisdictional policy development levels. **Method :** International dementia frameworks and strategies were reviewed to identify existing approaches for a population health focus on dementia. **Results :** Dementia frameworks are being developed that include population health approaches. Eight relevant frameworks were identified: Australia, United Kingdom, Scotland, Wales, France, Netherlands, Norway and South Korea. Common elements included early diagnosis and intervention, and increasing community awareness as key objectives. Some frameworks also included a promotion of the links between a healthy lifestyle and reduced risk for dementia. The central theme of quality of care and post-diagnostic support were common in several national strategies although whole-of-community approaches to dementia were lacking. Important enablers of population health approaches to dementia include financial mechanisms, workforce development, health systems change, information development, partnership arrangements and overall governance. **Conclusion :** A limited evidence base (especially for illness prevention), diagnostic and technical limitations, and policy and implementation issues are significant barriers in maximising the potential of population health approaches in this area. **Keywords :**

Dementia, Policy, Population Health

OP27 125-C

PERIPHERAL VASCULAR DISEASE

OP27 125-C-1

HIGHER PULSE WAVE VELOCITY IN ELDERLY ALGERIAN AS COMPARED TO EUROPEAN WOMEN OF THE SAME AGE

Ghassan WATFA¹, Mohamed TEMMAR², Laure JOLY¹, Anna KEARNEY-SCHWARTZ¹, Youcef MERABIA³, Bensalah SELT⁴, Mustapha YAHIA⁵, Paolo SALVI⁶, Michel SAFAR⁷, Carlos LABAT⁸, Athanase BENETOS¹ (1. *Geriatrics, University Hospital of Nancy, France*; 2. *Cardiology, Cardiology Centre, Algeria*; 3. *Cardiology, El Menia Hospital, France*; 4. *Health, Directorate of Health, Algeria*; 5. *Diabetology, Diabete Center, Algeria*; 6. *Cardiology, IRCCS Istituto Auxologico Italiano, Italy*; 7. *Diagnosis and Therapeutic Center, Paris Descartes University & AP-HP, France*; 8. *Inserm, U961, Faculty of Medicine, France*)

Introduction : Increased arterial stiffness (AS), is an independent predictor of cardiovascular risk of particular interest in the elderly populations. Most of the existing studies regarding the AS have been performed in industrial countries while few or no data are available in emergent populations. We aimed to compare AS, as evaluated by carotid-femoral pulse wave velocity (cfPWV) in an Algerian elderly population to an age and gender-matched European population. **Method :** 321 Algerian subjects aged 81.1 ± 4.9 years and 321 age and gender-matched Europeans subjects aged 80.8 ± 5.2 years, were included. All underwent measurement of cfPWV. **Results :** Algerian subjects had higher cfPWV values (14.9 ± 3.3 m/sec) than their European counterparts (13.4 ± 3.1 m/sec) ($p < 0.00001$) even after adjustment for age, gender, body mass index, heart rate (HR), mean blood pressure (MBP) and diabetes. This difference was mainly due to a higher PWV in Algerian women (14.9 ± 3.4 m/sec) as compared to European women (12.7 ± 2.7 m/sec); $p < 001$. In both populations, age, MBP and HR and presence of diabetes were positively associated with cfPWV, whereas female gender was inversely associated with cfPWV only in the European population. **Conclusion :** Elderly Algerian women thus have higher PWV in as compared to elderly European women. Higher BP and HR, metabolic factors and socioeconomic conditions may explain at least in part the increased arterial stiffness observed in elderly Algerian women. Interventions in this emerging population should be a priority in order to address these risk factors by acting on current lifestyle. **Keywords :** Aging, arterial stiffness, ethnicity

OP27 125-C-3

MORTALITY AND CARDIOVASCULAR EVENTS ARE BEST PREDICTED BY LOW CENTRAL/PERIPHERAL PULSE PRESSURE AMPLIFICATION BUT NOT BY HIGH BLOOD PRESSURE LEVELS IN ELDERLY NURSING HOME SUBJECTS. PARTAGE STUDY

Athanase BENETOS¹, S. GAUTIER¹, Carlos LABAT², P. SALVI³, F. VALBUSA⁴, F. MARINO⁵, O. TOULZA⁶, D. AGNOLETTI⁷, M. ZAMBONI⁸, D. DUBAIL⁸, P. MANCKOUNDIA⁹, Y. ROLLAND¹⁰, O. HANON⁸, C. PERRET-GUILLAUME¹¹, P. LACOLLEY¹², M. SAFAR⁷, F. GUILLEMIN¹³ (1. *Department of Geriatrics, University Hospital of Nancy, Inserm, France*; 2. *U961, Faculty of Medicine, Inserm, France*; 3. *Department of Cardiology, IRCCS, Istituto Auxologico Italiano, Italy*; 4. *Division of Internal Medicine, Sacro Cuore Hospital, Italy*; 5. *Department of Geriatrics, University Hospital of Verona, Italy*; 6. *Department of Geriatrics and Inserm*

U1027, Department of Geriatrics and Inserm U1027, Toulouse University Hospital, France; 7. *Diagnosis Center, Hotel-Dieu Hospital, France*; 8. *Broca hospital EA 4468, University Descartes Paris 5, France*; 9. *Department of Geriatrics, University Hospital of Dijon, France*; 10. *Department of Geriatrics and Inserm U1027, Toulouse University Hospital, France*; 11. *Department of Geriatrics, University Hospital of Nancy, France*; 12. *U961, Faculty of Medicine, Universite de Lorraine, France*; 13. *INSERM CIC-EC, University Hospital of Nancy, France*)

Introduction : The aim of the longitudinal PARTAGE study was to determine the predictive value of blood pressure (BP) and pulse pressure amplification, a marker of arterial function, for overall mortality (primary endpoint) and major cardiovascular (CV) events, in subjects over 80 years living in nursing home. Assessment of pulse indices may be important in the evaluation of the cardiovascular risk in very elderly frail subjects. **Method :** A total of 1126 subjects (874 women) were enrolled (mean age 88 ± 5 y), living in French and Italian nursing homes. Central (carotid) to peripheral (brachial) pulse pressure (PP) amplification (PPA) was calculated with the help of an arterial tonometer. Clinical and 3-day self-measurements of BP were conducted. During the 2-year follow-up, 247 died and 228 had major CV events. **Results :** The PPA was a predictor of total mortality and major CV events in this population. A 10% increase in PPA was associated with a 24% ($p < 0.0003$) decrease in total mortality and a 17% ($p < 0.01$) decrease in major CV events. Systolic BP, diastolic BP or PP were either not associated or even inversely correlated with total mortality and major CV events. **Conclusion :** In very elderly individuals living in nursing homes, low PPA from central to peripheral arteries strongly predicts mortality and adverse effects. Assessment of this parameter could help in risk estimation and improve diagnostic and therapeutic strategies in very old, polymedicated persons. In contrast, high BP is not associated with higher risk of mortality or major CV events in this population. **Keywords :** blood pressure, elderly, mortality, nursing home, pulse pressure amplification

OP27 125-C-4

IMPLICATIONS OF MICROVASCULAR DISEASE IN AGE-RELATED FUNCTIONAL LOSS AND DISABILITY

Dae H. KIM¹, Anne NEWMAN², Paulo CHAVES³, Kushang PATEL⁴, Ronald KLEIN⁵, Mark SARNAK⁶, Lewis LIPSITZ¹ (1. *Division of Gerontology, Department of Medicine, Beth Israel Deaconess Medical Center, Harvard Medical School, USA*; 2. *Department of Epidemiology, University of Pittsburgh, USA*; 3. *Department of Medicine, Florida International University, USA*; 4. *Department of Anesthesiology and Pain Medicine, University of Washington, USA*; 5. *Department of Ophthalmology, University of Wisconsin, USA*; 6. *Department of Medicine, Tufts Medical Center, USA*)

Introduction : The burden of vascular disease is associated with age-related functional loss and disability. However, the implications of microvascular disease, as compared with macrovascular disease, remain poorly understood. **Method :** We conducted a prospective cohort study among 2452 participants (mean 79 years) in the Cardiovascular Health Study who had available measures of microvascular disease (brain, retina, and kidney) and macrovascular disease (brain, carotid, coronary, and peripheral artery) in 1996-1999. The summary index was created for each disease and examined cross-sectionally for cognitive function, physical function, and mood; and prospectively for mortality until 2009 and active life expectancy in 2005-2009, defined as number of days with < 3 activities of daily living dependencies. **Results :** The majority of participants had

evidence of predominantly microvascular (9%), predominantly macrovascular (37%), or both (42%). Compared with participants with minimal disease, those with microvascular disease had lower cognition and more depression symptoms, whereas those with macrovascular disease had lower cognition and slower gait only when microvascular disease coexisted. Both microvascular (range: 0-10) and macrovascular disease (0-12) indices predicted mortality (hazard ratios: 1.25 and 1.10 per unit increase, respectively; $p < 0.001$ for both). In quantile regression, the negative impact of microvascular disease on the 25th percentile of active life expectancy seemed stronger in the presence of advanced macrovascular disease (extensive - minimal microvascular disease: -39, -83, or -171 days for minimal, modest, or extensive macrovascular disease, respectively; $p < 0.001$ for interaction). Conclusion : The burden of microvascular disease appears to be more important than macrovascular disease in maintaining functional independence in advanced age. Keywords : Microvascular Disease, Disability, Successful Aging

OP27 125-C-5

PREVALENCE AND CHARACTERISTICS OF MAJOR VASCULAR DISEASES OF ELDERLY MEN IN THE INCHEON AREA

Insoo PARK¹, Il Yong SHIN¹, Jang Yong KIM¹, Eunmi KONG², Ji-Eun JUNG², Yong Sun JEON², Soon Gu CHO², Kee Chun HONG², Seok-Hwan SHIN³ (1. Division of Vascular and Endovascular Surgery, Department of Surgery, The Catholic University of Korea, College of Medicine, Korea; 2. Departments of Radiology, Inha University School of Medicine, Korea; 3. Departments of Surgery, Inha University School of Medicine, Korea)

Introduction : Peripheral vascular disease (PVD), disproportionately affects the elderly, is a major cause of morbidity and mortality in elderly population. As Korea is an aging society (WHO classification) and projected to be an aged society in 10 years, PVD has emerged as an important social and medical issue in Korea. But the prevalence was rarely reported. The purpose of this study is to define the prevalence of carotid artery stenosis (CAS), abdominal aortic aneurysm (AAA), and peripheral arterial occlusive disease (PAOD) of lower limb in the Incheon area. Method : Elderly men (≥ 65 years) were referred randomly from the Incheon Federation of Korean Senior Citizens' Association (from Nov 2008 to Dec 2012) to Inha University Hospital, Incheon, Korea for a PVD screening program. The subjects were screened for CAS and AAA as duplex. CAS was defined as $\geq 50\%$ internal CAS and AAA as ≥ 3 cm aortic diameter in minor axis. PAOD of lower limb was screened by measurement of ankle-brachial index (ABI); ABI of ≤ 0.9 was considered abnormal. Results : 2189 subjects were screened including 214 octogenarians (9.8%). Mean age was 72.3 ± 5.2 years. Combined conditions were hypertension (55.9%), diabetes mellitus (25.2%), coronary artery disease (14.3%), dyslipidemia (20.5%), obesity (36.4%) and smoking history (53.3%). CAS was detected in 10.0% (219/2189) subjects. Fifty-two (2.4%) were diagnosed with AAA. PAOD was detected in 89 subjects (4.1%). Conclusion : Prevalence of PVD in Korea is not lower compared to that of western countries, especially the USA and the UK. A nationwide program for timely detection and treatment for PVD should be developed. Keywords : Peripheral arterial occlusive disease, Carotid artery stenosis, Abdominal aortic aneurysm

OP27 125-C-6

VALUE YOUR INDEPENDENCE (VENOUS LEG ULCERS AND EXERCISE)

Jane O'BRIEN¹, H. EDWARDS¹, K. FINLAYSON¹, G. KERR² (1. School of Nursing, Institute of Health and Biomedical Innovation,

Queensland University of Technology, Australia; 2. School of Exercise and Nutrition Sciences, Institute of Health and Biomedical Innovation, Queensland University of Technology, Australia)

Introduction : The objective of this study is to provide evidence for the benefits of exercise for adults with venous leg ulcers on healing and self-management of chronic venous insufficiency (CVI). The outcomes from an exploratory study (Study 1) will be discussed in relation to the formation of a multi-factorial self-management intervention to promote lower limb exercise for people experiencing venous leg ulceration, which is being trialed in Study 2. Method : Study 1: Ten participants with venous leg ulceration participated in semi-structured interviews. The interviews focused on investigating participants' experience of exercise pre/during venous leg ulcer occurrence. Interviews were thematic content analysed to determine major themes and categories. Study 2: 20 participants ($n = 10$, intervention; $n = 10$, control) have currently been recruited for a randomised controlled trial to test the effectiveness of the intervention on healing and self-management of CVI. A multivariable model will be used to identify any differences in outcomes between groups. Results : Preliminary analysis from Study 2 indicates a positive trend of the intervention on healing, with a clinically important improvement at this stage, which will be discussed in this presentation. Conclusion : Patients with venous leg ulcers have been reported as being less physically active than age-matched controls. This intervention aims to provide support for patients to be able to conduct lower limb exercises to promote venous return thereby improving healing outcomes for adults with venous leg ulcers. Keywords : Venous leg ulcers, Exercise, Randomised controlled trial (RCT)

OP27 126-C

POLYPHARMACY

OP27 126-C-1

DEVELOPMENT OF A EUROPEAN LIST OF POTENTIALLY INAPPROPRIATE MEDICATION (PIM) FOR OLDER PERSONS: A CONSENSUS-BASED APPROACH

Anna RENOM GUITERAS¹, Gabriele MEYER¹, Simone BERNARD², Stefanie HOLT-NOREIKS², Petra THURMANN³ (1. School of Nursing Science, Faculty of Health, Witten/Herdecke University, Germany; 2. Department of Medicine, Faculty of Health, Witten/Herdecke University, Germany; 3. Department of Medicine, Faculty of Health, Chair Clinical Pharmacology, Witten/Herdecke University; Philipp Klee-Institut Clinical Pharmacology, Germany)

Introduction : Several drugs are classified as potentially inappropriate for older persons because of their pharmacological effects and/or increased risk for causing adverse drug reactions. Different country specific PIM lists are available. A European PIM-list for older persons is lacking so far and will therefore be developed and validated in this project, nested in the 7th Framework European Right Time Place Care study. Method : 1) Development of a preliminary PIM-list based on the German PRISCUS list, the French PIM list by Laroche et al., and including drugs from other international PIM lists (Beers, Fick et al., McLeod et al.). 2) Recruitment of experts on geriatric medication from England, Estonia, Finland, France, Netherlands, Spain and Sweden. 3) Structured expansion of the preliminary list by experts. 4) Development of a final list using a two-round, web-based Delphi survey in which experts will assess the proposed drugs appropriateness, recommend dose adjustments and suggest therapeutic alternatives. 5) Validation of the final list using recently collected prescription data from approximately 2000 older persons with dementia from the same countries. Results : The preliminary expanded

PIM-list has been developed and expanded by 8 international experts, and contains 266 drugs belonging to 28 therapeutic subgroups. Twenty-six experts are participating in the Delphi survey at the moment. The list will be ready for validation in May 2013. Preliminary final results will be presented at the IAGG World Congress in 2013. Conclusion : The European PIM-list can be used in clinical practice and for analysing and comparing the prescribing patterns across European countries. Keywords : aged , inappropriate prescribing, potentially inappropriate medications

OP27 126-C-2

PREVALENCE AND DETERMINANTS OF POLYPHARMACY AMONG OLDER PATIENTS IN A PERIURBAN HOSPITAL IN KAMPALA, UGANDA

Joseph Gyagenda OGAVU (*Medicine, Nsambya Hospital, Uganda*)

Introduction : Polypharmacy, the simultaneous use of five or more medications, has been well documented and is a topic of much concern for those looking to improve the quality of care for the older patients. Elderly patients often develop complicated and multi-factorial health states that require extensive pharmacotherapy, leaving this population at risk of exposure to drug-drug interactions and other adverse events. It also costs the health care system dearly. Many medications are potentially inappropriate (PIMs) and are against Rational Use of Medications (RUM). Literature, predominantly from the Western world, supports an association between adverse events and the number of drugs taken by older patients. There is a scarcity of information on the same in the developing world. This study seeks to evaluate and document the prevalence and determinants of polypharmacy in the older population receiving medical care at a periurban hospital in Uganda. Method : A cross-sectional descriptive study of drug prescriptions among patients aged 60 years and above admitted to the Medical wards and attending the medical outpatient clinics of a periurban hospital in Kampala, Uganda. Preliminary Results: The study is hoped to provide baseline information on the prevalence and determinants of polypharmacy among older patients in Uganda. Preliminary Conclusions: The results of this study might be critical to raising physicians' awareness of polypharmacy while helping to ensure safe, effective and appropriate use of medication particularly in the older persons in Uganda. Keywords : Polypharmacy, Older, Uganda

OP27 126-C-4

ASSOCIATIONS BETWEEN MEDICATION AND RECURRENT FALLS IN ELDERLY PATIENTS-AFTER AN INJURIOUS FALL

Marjan ASKARI¹, Saied ESLAMI¹, Alice C. SCHEFFER², Stephanie MEDLOCK¹, Sophia E DE ROOIJ², Nathalie VAN DER VELDE², Ameen ABU HANNA¹ (*1. Medical informatics, Academic Medical Center, Netherlands; 2. Internal and Geriatric Medicine, Academic Medical Center, Netherlands*)

Introduction : Polypharmacy and the use of certain drugs have been associated with increased risk of falling in elderly patients. However, it is not yet clear whether for recurrent fallers the fall-risk-increasing drugs can be extrapolated, since they form a distinct high-risk group. Therefore, we investigated which classes of drugs are associated with recurrent falls in elderly patients. Method : Between 2004 and 2010 patients who visited the emergency department of an academic medical center because of a fall were invited to fill in a validated questionnaire pertaining to the patient and falls. We translated the self-reported medications on the questionnaire into ATC codes. Multivariate logistic regression analysis was performed to identify the

independent association between medication classes and recurrent falling. Results : Among the 2258 participants 39% had a recurrent fall. A significant independent association was found between recurrent falls and drugs for acid related disorders (adjusted odds ratio (aOR) 1.29; CI 1.03-1.60), analgesics (aOR:1.22; CI: 1.06-1.41), ophthalmologicals (aOR 1.51; CI: 1.10-2.09), nasal preparations (aOR 1.49; CI: 1.07-2.08), anti-Parkinson drugs (aOR 1.59; CI: 1.02-2.46), antipsychotics (aOR 2.21; CI: 1.08-4.52), and antidepressants (aOR 1.64; CI: 1.13-2.37). Conclusion : Known fall-risk-increasing drugs, such as psychotropic drugs, also increase the risk of recurrent falls but we found relatively new classes that showed significant association with recurrent falls. These classes potentially act as markers of frailty/comorbidity. Our findings underline the importance of selective prescribing and potential drug withdrawal. Keywords : Recurrent falls, medication, falls.

OP27 126-C-5

PRESCRIBING FOR OLDER PEOPLE DISCHARGED FROM THE ACUTE SECTOR TO RESIDENTIAL AGED CARE FACILITIES

Peter HOPCROFT¹, Nancye M. PEEL¹, Arjun POUDEL², Ian A. SCOTT³, Leonard C GRAY¹, Ruth Eleanor HUBBARD¹ (*1. Centre for Research in Geriatric Medicine, The University of Queensland, Australia; 2. School of Pharmacy, The University of Queensland, Australia; 3. Department of Internal Medicine, Princess Alexandra Hospital and School of Medicine, The University of Queensland, Australia*)

Introduction : Medication management in residential aged care facilities (RACFs) is complex. Residents often have multiple comorbidities yet they are frail, with reduced life expectancy and high risk of adverse drug reactions. Here, we aimed to investigate medication prescribing for older inpatients discharged from the acute sector to RACFs. Method : This study included 206 patients (mean 84.8y± 6.76) discharged into RACFs from 11 acute care hospitals in Australia. The interRAI Acute Care assessment tool was used to record medications and to collect data on each patient's physical, cognitive and psycho-social functioning. Results : Patients were prescribed a mean of 8.51 regular medications at admission to acute care and 8.67 on discharge to their RACF. They had multiple comorbidities (mean 6.03± 2.23). At discharge, 49 (23.8%) were completely dependent in basic activities of daily living (ADL), 122 (59.3%) were cognitively impaired, 105 (51%) incontinent of urine and 204 (99%) needed full assistance with instrumental ADLs. At discharge, 27 (13.1%) patients were prescribed < 5 medications with excessive polypharmacy (≥10 drugs) observed in 78 (37.9%). Aspirin and anti-aggregates were the most frequently prescribed medications (110, 53.4%), followed by antiulcer drugs in 106 (51.5%) patients. Other prevalent medications included antidepressants (25.7%), benzodiazepines (18.9%), antipsychotics (16.5%) and opioids (16%). Conclusion : For frail older people, admission into hospital is an opportunity to rationalize prescribing, weighing up the benefits of pharmacotherapy against significant risks of polypharmacy. Yet in this study, patients discharged to RACFs from hospital continue to be exposed to extensive polypharmacy and medications with uncertain risk-benefit ratio. Keywords : polypharmacy; institutionalisation; frailty

OP27 127-C

LONG-TERM CARE

OP27 127-C-1

TELEHEALTH FOR NURSING HOMES: UTILISATION OF

SPECIALISTS SERVICES

Melinda MARTIN-KHAN¹, Elizabeth BEATTIE², Sisira EDIRIPPULIGE³, Leonard C. GRAY⁴, Trevor RUSSELL⁵, Anthony SMITH³ (1. Centre for Research in Geriatric Medicine, University of Queensland, Australia; 2. School of Nursing and Midwifery, Faculty of Health, Queensland University of Technology, Australia; 3. Centre for Online Health, School of Medicine, University of Queensland, Australia; 4 Centre for Research in Geriatric Medicine, School of Medicine, University of Queensland, Australia); 5 Telerehabilitation Research Unit, School of Health and Rehabilitation Sciences, University of Queensland, Australia)

Introduction : Telehealth has often been advocated as a method of providing services to rural or remote patients who have limited access to specialist assessment or management of care needs. Telehealth has been recognised as a method of supporting urban patients, who may be living close to specialist services, but are too frail. The aim was to determine the nature and volume of telehealth services that might be provided to a large, urban, residential care facility. Method : Specialist care consultations were identified by research nurses using documentation in patient records, appointment diaries, electronic billing services and on-site observations at a 441-bed long term care facility. To account for facility size and activity, consulting rates were expressed as the number of consultations per year per 100 beds. Results : Over a six-month period there were 3333 consultations (1511 consultations per year per 100 beds). Most consultations were for general practice (n=2589, 78), a rate of 1174 GP consultations per year per 100 beds.. There were 744 (22%) consultations for specialities other than GPs. A total of 146 events related to an emergency or unplanned hospital admission. The remaining medical consultations (n=598, 18%) related to 23 medical specialities. The largest number of consultations were for surgery (n=106), podiatry (n=100), nursing services including wound care (n=74), imaging (n=41) and ophthalmology (n=40). Conclusion : Many services which are currently being provided on-site to metropolitan residential care facilities could be provided by telehealth in both urban and rural facilities. This study provides crucial data for planning future telehealth services for residential care. Keywords : residential care, geriatrics

OP27 127-C-2

NUTRITIONAL ASSESSMENT OF ELDERLY PATIENTS IN LONG-TERM HOSPITAL USING MNA-SF AND PREDICTION OF OCCURRENCE OF PNEUMONIA

Sadao YOSHIDA (Department of Internal Medicine, Okinawa Rehabilitation Center Hospital, Japan)

Introduction : Japan faces severe problems caused by super aged society. As one of them, number of death due to pneumonia is increasing. Pneumonia is the most major cause of death in Japanese elderly. Increase of patients of pneumonia influences increase of medical expenses. Pneumonia could be caused by dysphagia following cerebral vascular disease or dementia. Nutritional status could affect the occurrence of pneumonia. We examined if nutritional assessment predict occurrence of pneumonia in elderly or not. Method : Forty eight elderly patients (> 65 yr) admitted in long-term hospital in Kitanakagusuku, Okinawa. Nutritional status was assessed with BMI (cut-off 18.5 kg/m²), Subjective Global Assessment (SGA), Mini Nutrition Assessment (MNA-SF) and serum albumin (cut-off 3.5 g/dl). Patients were observed for 6 month. Number of occurrence of pneumonia was accumulated. Results : Average number of occurrence of pneumonia in case classified as undernutrition with MNA was 1.03±3.48 events / 6 month (n=30). In contrast, average number of

occurrence of pneumonia in case classified as at risk or well-nourished with MNA was 0.22±0.30 events / 6 month (n=18). Pneumonia is easy to develop in patients classified as undernutrition with MNA (p=0.032). Frequencies of pneumonia tend to elevate in patients with BMI < 18.5, classified as undernutrition with SGA and with serum albumin < 3.5. However, there were no significance (p>0.05). Conclusion : Undernutrition is major risk of pneumonia in elderly. MNA is effective for prediction of occurrence of pneumonia in elderly. Appropriate assessment and management of nutritional status of elderly might be important for prevention of pneumonia. Keywords: pneumonia, MNA, nutrition

OP27 127-C-3

DECREASED PREVALENCE AND SEVERITY OF WOUNDS IN RESIDENTIAL AGED CARE: THE EFFECTIVENESS OF THE CHAMPIONS FOR SKIN INTEGRITY MODEL OF EVIDENCE BASED WOUND MANAGEMENT

Kathleen FINLAYSON¹, Helen EDWARDS², Anne M. CHANG¹, Michelle GIBB¹, Christina PARKER¹ (1. Institute of Health and Biomedical Innovation, Queensland University of Technology, Australia; 2. School of Nursing, Queensland University of Technology, Australia)

Introduction : The incidence of pressure injuries, skin tears and leg ulcers increases with age and comorbidities, thus wounds are a significant issue for residents in aged care facilities. The aim of this project was to preserve skin integrity through the implementation of a model to promote evidence based wound prevention, assessment and management in the residential aged care environment. Method : Pre and post data were gathered via clinical and chart audit of random samples of residents, n=200 (pre), n=201 (post); in addition to surveys and interviews of health professionals, residents and carers from seven Residential Aged Care Facilities. The Champions for Skin Integrity model was based on evidence based strategies to promote transfer of evidence into practice and was implemented over a six month period sequentially in each facility. Results : Implementation of the Champions for Skin Integrity (CSI) model resulted in increased implementation of evidence based wound management and prevention, associated with a significant decrease in the prevalence of pressure injuries (p<0.001) and leg ulcers (p=0.004), and significantly decreased severity of skin tears (p=0.019) and pressure injuries (p=0.003). Additional benefits included improved staff confidence and knowledge and increased awareness of residents, families, carers and staff of evidence based wound management and prevention strategies. Conclusion : This study demonstrated that implementation of the CSI model promoted implementation of evidence based wound management and improved health for residents. In addition, information was gained on the effectiveness of strategies to facilitate implementation of evidence based wound care. Keywords : evidence-based wound management, residential aged care

OP27 127-C-4

DIFFUSION OF DYSPHAGIA REHABILITATION

Mana YAMORI¹, Ayaka TANIHATA², Takeshi UMEHARA³ (1. Health and Welfare, Prefectural University of Hiroshima, Japan; 2. Rehabilitation, Arida Saiseikai Hospital, Japan; 3. Rehabilitation, Bobath Memorial Hospital, Japan)

Introduction : Recently, some politicians, economists, surgeons, and general practitioners allege strong objection for gastrostomy in geriatric patients with dysphagia. However there are few reports on the effects of dysphagia rehabilitation and gastrostomy in the mass media. Therefore many patients and their families refuse to have gastrostomy

even in acute or convalescent, they might lose opportunity to recover. Analyze the negative coverage, information about the effects of dysphagia rehabilitation and gastrostomy has not penetrated to doctors and staffs who work in geriatric long-term care facilities, and to Japan society. Method : 312 medical / nursing staff (Staff group), 133 general adults answered the right and wrong judge questionnaire. It consists of 20 questions ; 4 questions for the general condition of dysphagic patients, 7 for environmental control, 2 for cognitive phase of swallow, 3 for oropharyngeal phase, 2 for food management, and 2 for gastrostomy. Results : Staff group shows more than 90% diffusion in 15 questions, although the information about relation between malnutrition and dysphagia, silent aspiration, and oropharyngeal anatomy have not become widespread. Especially the diffusion in nurses and care givers are less homogeneous than other occupations. General group also do not have those information or about environmental control. Conclusion : The general society, nurses and care givers who work in geriatric long-term care facilities must be informed appropriately about dysphagia rehabilitation and gastrostomy by medical doctors and speech language hearing therapists who work with many dysphagic patients. The argument against gastrostomy could have after sufficient rehabilitation and precise care. Keywords : dysphagia rehabilitation, gastrostomy, diffusion

OP27 205-S
ECONOMICS OF AGEING

OP27 205-S-1
HEALTH LITERACY AND RETIREMENT SAVINGS IN LATER YEARS

Hyungsoo KIM, Jennifer L. HUNTER, Ann VAIL (*Family Sciences, University of Kentucky, USA*)

Introduction : Numerous studies suggest that health literacy improves health outcomes; similarly scholarly literature indicates financial literacy increases financial outcomes in later years. But how, and to what extent, health literacy contributes to improving financial outcomes has not been examined. This study articulates the role of health literacy on retirement savings. Method : This study proposes a model to explain the mechanisms between health literacy and retirement savings. To test this model, data from the Health and Retirement Study (HRS) are used. The HRS is a representative and panel study of middle-aged and older Americans (50+). The 2010 HRS is a rare data set with both measures of health literacy and detailed financial information. Regression analyses are conducted for estimating 1) the impact of health literacy on out of pocket medical expenses (OOP), and 2) the role of health literacy on net worth in later years. Results : High health literacy is associated with lower OOP: \$2,226 less spending of OOP than low health literacy for near retirees (age 50-64) for the two previous years. Near retirees with high health literacy have 3.7 times higher levels of retirement savings than those with low health literacy. The impact of OOP on retirement savings is significant but negligible. Conclusion : These findings indicate that health literacy is an important factor to affect net worth for financial security in later years as well as a determinant of OOP. These findings also provide information to motivate individuals to increase health literacy for retirement savings as well as for healthy lifestyle. Keywords : Knowledge on Health, Out of Pocket Medical Expenses, Retirement Wealth

OP27 205-S-2
ANALYSIS ON THE MEDICAL DEMAND OF ALZHEIMER'S PATIENTS UNDER THE CONSIDERATION OF MEDICAL COSTS GENE

Shu-Hua SHEN¹, Miaofen YEN², Shou-Lin YANG³, Chiung-Ying LEE⁴, Hsien-Jane CHIU⁵ (*1. Institute of Allied Health Sciences & Nursing, National Cheng Kung University, Jianan Mental Hospital, DOH, Taiwan; 2. Nursing, College of Medicine, National Cheng Kung University, Taiwan; 3. Department of Business Administration and Graduate Institute of International Business, National Cheng Kung University, Taiwan; 4. Finance, Chang Jung Christian University, Taiwan; 5. Superintendent Office, Jianan Mental Hospital, D.O.H., Taiwan*)

Introduction : In this study, we employ the travel cost method (TCM) and altruism concepts to establish a negative binomial regression model for outpatient medical demand. We apply this model to consider the medical costs of dementia-related outpatient visits with accompanying caregivers. We consider the time and transportation costs of caregivers and evaluate the factors that influence the medical demands of Alzheimer's outpatient visits. Method : We employ the mini-mental State exam (MMSE), geriatric depression scale short form (GDS-15), and Barthel index to evaluate and conduct preliminary screening of older adults in Tainan City, Taiwan, and select 201 dependent older adults with a risk to develop Alzheimer's disease (≥ 65 y) to participate in this study. Our subsequent analysis examines the dementia-related medical records of participants from the January 1, 2009 to December 31, 2010. Results : The findings on influential factors for medical demand show that medical visits reduce as the time cost of accompanying caregiver visits increases. Conclusion : However, the frequency of medical visits increases with the level of patients' financial independence. In addition, patients that also suffer from other chronic illnesses have a further reduced number of visits related to the chief complaint of dementia. Keywords : Medical Costs Gene

OP27 205-S-3
DEVELOPMENT AND VALIDATION OF A MEASURE OF LIVING STANDARDS FOR OLDER PEOPLE

Mary BREHENY¹, Christine STEPHENS², Fiona ALPASS², Brendan STEVENSON², Kristie CARTER³, Polly YEUNG¹ (*1. School of Health and Social Services, Massey University, New Zealand; 2. School of Psychology, Massey University, New Zealand; 3. School of Medicine and Health Science, University of Otago, New Zealand*)

Introduction : Living standards are an effective way to assess socioeconomic status in relation to health but controversy remains about their assessment, particularly for older people. Sen's capability framework shifts attention from material conditions to opportunities for choice enabled by material resources. To develop this promising approach, this paper reports on the development of a measure of living standards for older people based on Sen's capability framework. Method : Six living standards domains were established from thematic analysis of 143 interviews with people aged over 65 years in New Zealand. Questionnaire items were developed and tested to assess the extent to which older people had the freedom to pursue these domains. The 73 items were tested for face validity in interviews. Following this, a revised version was posted to 2,000 people aged over 65 years randomly selected from the New Zealand electoral roll and 1064 completed questionnaires were returned. Results : Item screening for response rates and spread reduced the items to 34. Confirmatory factor analysis of these 34 items suggested that the six theoretical domains were supported. Following model development, 25 items assessing the six domains were selected. Conclusion : Results to date show that this measure of living standards (LS-Cap) is a promising instrument to assess living standards. A capabilities approach to living standards solves the problems of the meanings of material goods by focussing on

the freedom to access valued needs. Inequalities in these freedoms are related to inequalities in living standards and health across the gradient. Keywords : Living Standards, Capability Approach, Inequalities

OP27 205-S-4

THE WELFARE PARADOX IN KOREAN NATIONAL PENSION SCHEME

Kwang-Seok LEE¹, Sung-Ho KANG² (1. Dept. of Public Administration and Public Policy, Kyung-pook National Univ., Korea; 2. Team Head/Associate research fellow, Pension Research Department, Korea National Pension Research Institute, Korea)

Introduction : This paper aims at the explanation of welfare paradox in Korean National Pension Scheme(KNPS). Welfare paradox means that if one function in KNPS is emphasized, the other functions should be weakened. The research seems to show that the vision or time-span of the Scheme-designers is important. Korean Scheme-designers were lacking in the long-term vision in the starting point, which resulted in the policy change and priority change in the next stage. That is the paradoxical relationship between short-term and long-term goals. The policy change and priority change brought the distrust in the Scheme into being to Koreans, which led them to National Pension Dismantlement Movement. Method : The main methodology includes IPA (Interpretative Phenomenological Analysis) in addition to literature research, and archival research. Two researchers search the materials, turn them into the data, which show the future problems both from the financial viewpoint and from the elderly life viewpoint in KNPS. And the researchers visit the policy-makers, the committee members, and the pension scheme beneficiaries, and have interviews with them as to what is the main cause of the policy change and priority change. Results : Following the research by Bruner et al.(1956:50), the institutional process takes preparation, incubation, illumination, and verification. In the starting point the important issue was how to fix KNPS, which led to the priority of the guarantee of elderly life over the financial stability. As time passes, the relationship between the guarantee of elderly life and the financial stability shows the paradoxical one. Conclusion : KNPS' long-term vision. Keywords : Korean National Pension Scheme, paradox, Interpretative Phenomenological Analysis

OP27 205-S-5

AGE-FRIENDLY CITIES IN QUEBEC (CANADA): IMPLEMENTATION AND EVALUATION OF SEVEN PILOT PROJECTS TO 578 AFC

Suzanne GARON¹, Marie BEAULIEU², Mario PARIS² (1. Research Center on Aging, Universite de Sherbrooke, Canada; 2. Gerontology, Universite de Sherbrooke, Canada)

Introduction : This presentation aims to describe the implementation and evaluation processes of the AFC in Quebec, Canada (AFC-QC). AFC-QC started with 7 pilot projects in 2008 and is now in implementation in 578 municipalities in 2012. Firstly, we will focus on the 7 pilot projects by exemplifying actions implemented in several municipalities and exposing issues associated with success or failure of AFC-QC implementation. Secondly, it will demonstrate the influence of knowledge and know-how developed in the pilot projects in the expansion to the 572 more recent AFC-QC municipalities. Method : The AFC-QC evaluation process is inspired by the program theory models in evaluation, i.e. logic model (Chen, 1990; 2005; 2010) and realistic model (Paslow & Tilley, 1997). The focus is on understanding the changes introduced by AFC-QC from the perspectives of older adults and stakeholders, and identifying objective

and subjective elements that contribute to AFC-QC implementation success or failure. The evaluation process requires the use of mixed method (cases studies and survey). Results : Actions implemented in the municipalities are coherent with the needs and problems of older adults identified during the social diagnostic step. Actions aim to improve transportation, housing, social inclusion, urban planning, and health care services for older adults. Conclusion : Traditionally, stakeholders, agencies and organizations work in silos, but within AFC-QC steering committees, they are exposed to a new form of governance where coordination between members of the steering committee is essential. In all, AFC-QC contributes to the understanding of effective social changes that intend to include older adults in communities. Keywords : Age-friendly cities, community building, evaluation, partnership, collaboration, mixes methods, Queb

OP27 205-S-6

PREDICTORS OF CAREGIVERS' CONSIDERATION FOR INSTITUTIONALIZATION OF ELDERLY CARE RECIPIENTS WITH ALZHEIMER'S DISEASE AMONG THREE DIFFERENT ETHNICITIES

Hyunju SHIM (Social Work, Washington University in St.Louis, USA)

Introduction : The increasing number of older adults in the US suggests accordingly increasing older populations with Alzheimer's Disease (AD). Culturally relevant and reliable practices are needed for caregivers of individuals with AD. To promote deeper understanding of diverse ethnic caregivers' consideration for institutionalization, the aim of the current study is to examine the factors that influence caregivers of different ethnic origins, in deciding about institutionalization, using the secondary analysis of the Resources for Enhancing Alzheimer's Caregiver Health II (REACH) data. Method : The study used 2002-2004 REACH II baseline data with 615 caregivers [n=204(Hispanic), n=211(Caucasian), & n=200 (African-American)] and their care recipients with Alzheimer's disease. Employing a model of ethnic differences in caregiving variables (Pinquart & Sorensen, 2005), seven variables of interest were identified. A binary logistic regression was used to predict the caregivers' having consideration/no consideration about institutionalization. Results : The results indicate that caregivers' ethnicity and stress were strong predictors of caregivers' consideration about institutionalization ($p < .001$). Interestingly, caregivers' ethnicity was only significant for Hispanic ($p < .001$) and not for African Americans. Other significant predictors include caregivers' use of transportation service and caregiving hours ($p < .05$). The only significant characteristic of care recipients was their IADL level ($p < .01$). Conclusion : Social workers and policy makers should not be misinformed that being an ethnic minority makes caregivers immune from feeling stressed. To promote understanding among policymakers, practitioners, and older persons and their families, a project to build the knowledge-sharing platform will be introduced. Keywords : family caregivers, Alzheimer's Disease, ethnicity

OP27 206-S

DEMENTIA AND COGNITIVE IMPAIRMENTS

OP27 206-S-1

GLOBALISING THE STUDY AND ANALYSIS OF ALZHEIMER'S DISEASE: A DIGITAL EARTH MODEL

Hamish ROBERTSON¹, Nick NICHOLAS², Joanne TRAVAGLIA³, Andrew GEORGIU³, Julie JOHNSON³ (1. Ageing Research Centre, Neuroscience Research Australia, Australia; 2. Ageing Research Centre, Prince of Wales Hospital, Australia; 3. Faculty of Medicine, University of NSW, Australia)

Introduction : Alzheimer's disease (AD) is no longer only a problem for the wealthy global north. Ageing population cohorts are emerging across many low to middle income countries and this trend is set to continue into the middle of this century. As chronic disease increasingly characterises the global burden of disease, AD and its correlates will become increasingly important in the management of health care design, funding and delivery at the global level. **Method :** We show how emerging spatial science technologies, geographic information systems and digital earth models, can support AD planning, surveillance, treatment and management at the global level. This involved projecting world AD prevalence out to 2050 by country. **Results :** The result is a digital earth model showing the current and projected prevalence of AD at the country and sub-country level. At the Australian level we analysed local prevalence projections and aged care infrastructure including primary care, hospitals and aged care facilities. These results provide a spatial analysis of the future of AD and aged care delivery issues up to the year 2050. **Conclusion :** AD can be modelled across the whole earth including national and regional geographies. We use Australia to show how this approach can include health infrastructure and workforce to build a planning and monitoring tool relevant to rich and poor countries. Lastly, because the key technologies are becoming increasingly accessible to users, we show how the global burden of AD can be supported by international cooperation utilising these emerging technologies. **Keywords :** spatial, GIS, visualisation

OP27 206-S-2

MILD COGNITIVE IMPAIRMENTS BEFORE AND SIX MONTHS AFTER CARDIAC SURGERY INCREASE MORTALITY RISK AT MEDIAN 11 YEAR FOLLOW-UP: A COHORT STUDY

Phillip J TULLY (*Dept. Cardiac Surgery, Flinders Medical Centre, South Australia, Australia*)

Introduction : The effects of mild cognitive impairment (MCI) on mortality risk after cardiac surgery are unknown. **Method :** Patients were assessed on a battery of six neurocognitive measures before cardiac surgery (N = 521) and at six month follow up (N = 377/521, 72.4%). MCI classification was based on cognitive test scores 1 SD below age and sex matched normative data, and classified according to amnesic, non-amnesic and mixed MCI subtypes. Survival analyses adjusted for significant covariates and interaction effects with depression. **Results :** In minimum 7 year follow-up there were 5,407 person years for analysis (median survival 11.1 years, interquartile range 7.9 to 13.1) and 176 deaths (33.8% of total) occurred by the census date. Before cardiac surgery, patients with a mixed MCI (adjusted hazard ratio (HR) = 2.53; 95% confidence interval (CI), 1.57-4.06, p<.001) and non-amnesic MCI (adjusted HR = 1.51; 95%, 1.00-2.32, p=.05) were at greater mortality risk. Analyses with six month neurocognitive measures corroborated that the mixed MCI group were at higher mortality risk (adjusted HR = 2.35; 95%, 1.30-4.25, p=.005). When change in neurocognitive functioning over time was analysed, a nearly twofold higher mortality risk was evident amongst patients with a continuing-MCI evident at baseline and six months (adjusted HR = 1.83; 95%, 1.08-3.10, p=.03). No significant mortality risk was attributable to incident-MCI or resolved-MCI. **Conclusion :** These data suggest that a mixed MCI subtype, and continuing MCI before and six months after cardiac surgery, is associated with long term mortality, independent of depression. **Keywords :** mild cognitive impairment, heart disease, psycho-geriatrics

OP27 206-S-3

DIFFICULTIES IN CARING FOR PEOPLE WITH DEMENTIA AT A GROUP HOME - PERSPECTIVE OF "REFLECTION IN ACTION" THROUGH INTERVIEWS AND PARTICIPANT OBSERVATIONS

Kyoko HORI (*Faculty of Human Welfare, Seigakuin University, Japan*)

Introduction : Providing care for the demented elderly is an important problem in Japan, where the population is aging rapidly. This study was designed to develop a psychological understanding about caring for the demented elderly at a group-home, where users utilize their remaining abilities, from the perspective of interactions between care-workers and users. **Method :** Qualitative research methodology was used because the context of dementia care was considered to be important. Exploratory analysis was conducted with data on care-workers talking about their work, being obtained through participant observations. **Results :** Results indicated that care-workers had difficulties in understanding elderly people with dementia having Behavioral and Psychological Symptoms of Dementia (BPSD). Care-workers could manage care during the daytime with the help of colleagues. By contrast in the midnight, BPSD aggravated problems and lead to stress, fear and breakdowns in care workers because they have to take care all alone. As a result, they felt that the most significant source of difficulties in caring was users with midnight BPSD. **Conclusion :** These results are discussed from the perspective of "reflection in action" introduced by D. A. Schon. It was suggested that a gap has been created between care-workers' intentions and the practice of care. Moreover, it was also indicated that care-workers are unable to attend to the structure of this gap. As a result, they cannot control their care strategies, set goals, conduct and modifying strategies, and examine the results. It is optional that psychological supports can play a role in enabling care-workers to control care strategies under changing conditions. **Keywords :** Caring for the elderly people with dementia, Psychological perspective, Interaction

OP27 206-S-4

DESIGNING A PILOT STUDY TO TEST THE EFFECTS OF TIMESLIPS ON PERSONS WITH DEMENTIA

Mercedes BERN-KLUG (*School of Social Work & Aging Studies Program, The University of Iowa, USA*)

Introduction : Half of US nursing home (NH) residents have dementia. Persons with dementia (PWD) cannot fully participate in NH activities because of memory loss. TimeSlips, a group story-telling activity developed by Dr. Anne Bastings especially for people with dementia, relies on imagination rather than memory. The purpose of this pilot study is to develop a protocol that can be administered by students to test for the effects of TimeSlips on mood and behavior of PWD. **Method :** Different measures for assessing cognitive status, self-reported mood and observed behavior were tested for ease, sensitivity, and time. A final set of instruments was decided upon after three data collection episodes (each lasting three hours and each one week apart) and then refined during the next three weeks of TimeSlips sessions. After baseline, data were collected one hour before the intervention, during the intervention, and one and two hours post-intervention. PWD were asked to report on mood and students observed behavior. **Results :** Self-reported mood was assessed with a 5 level faces tool (sad face, neutral, happy) and the GDS as well as a social interaction tool developed for TimeSlips as part of the pilot study. The final observation checklist was an adaptation of the Cohen-Mansfield Agitation Inventory. **Conclusion :** It is possible to measure the effects of TimeSlips on PWD using self-reported mood and a behavioral checklist. The next step is to test TimeSlips on a larger sample of

PDW stratified by cognitive impairment. Keywords : social inclusion, quality of life, Alzheimer's disease

OP27 206-S-5

COLOMBIAN ALZHEIMER'S CAREGIVERS: ¿ CUIDADORES ?

Lyda Consuelo AREVALO-FLECHAS (*St. David's School of Nursing, Texas State University, USA*)

Introduction : The word caregiver has been translated to Spanish as the word 'cuidador', a word not completely understood in meaning or use by Spanish speaking Latinos/Hispanics. Additionally, the word caregiving lacks a universally accepted one-word translation to Spanish. Because language is the vehicle that provides meaning to a person's reality, the aim of the study was to explore the expressions and words used by Spanish speaking Colombians to describe their experience of being responsible for the well-being of a relative living with Alzheimer's disease or a related dementia (ADRD). Method : Ethnographic interviews and participant observation of 45 Colombian ADRD caregivers. The interviews and initial content analysis were conducted in Spanish. Results : Colombian caregivers did not use the descriptor 'cuidador' to talk about their experience and duty towards their relatives living with ADRD. The word 'cuidador' was reported as the term used in printed media intended to provide information and support. There was a general distaste for what the participants perceived as a 'label' imposed on them by media and scientific literature. Cultural values of respeto and familismo were explained in the participants' narratives. Conclusion : The use of words that are culturally and linguistically congruent with a person's values may set the right stage for a relationship in which support may be offered and accepted. Latinos caring for a loved one living with ADRD may be more willing to accept support and guidance when they are acknowledged above all as family members carrying out a family duty that implies sacrifice and difficulty, but can be satisfying. Keywords : Dementia, caregiving, Latinos

OP27 206-S-6

SEX IN LATER LIFE: A GENDER PERSPECTIVE

Duck Soon SON¹, Yeong-ran PARK², Chan Hee PARK³, Soon Wha KANG³, Kyung Soon PARK³, Eun Wha CHUNG³, Soo Kyung AHN³
(1. Department of Social Welfare, Yongin Songdam University, Korea; 2. Division of Silver Industry, Kangnam University, Korea; 3. Graduate School of Social Welfare, Kangnam University, Korea)

Introduction : Sex in later life has become a topic of interest not only in gerontological research but also in service settings. The purpose of this research is to analyze the experiences of Korean men and women regarding sex in older age. Method : A survey was conducted on approximately eight hundred older men and women using 16 senior centers in Korea. A structured questionnaire was used to collect information about the socio demographic characteristics, attitudes towards sex and sexual behavior, services use experience and needs. Results : The results will be elaborated from a gender perspective, and the similarities and differences between older men and women regarding attitudes towards sex and their behaviors will be highlighted. Conclusion : The results from this research will be used to promote understanding of the issues of sex in later life, and further implications will be drawn for designing gender sensitive intervention programs. Keywords : sex later life gender perspective

OP27 207-S

AGEING AND PSYCHOSOCIAL THEORY II

OP27 207-S-1

IS SUBJECTIVE AGE A SELF-PROTECTING STRATEGY? RESULTS FROM A FIVE-YEAR PANEL STUDY OF SUBJECTIVE AGE AND MENTAL WELL-BEING IN THE SECOND HALF OF LIFE

Marijke VEENSTRA, Svein Olav DAATLAND (*NOVA, Norwegian Social Research, Norway*)

Introduction : Wanting to be younger than one's actual age may operate as a maladaptive identity strategy whereas feeling younger may serve as a compensatory, adaptive, strategy in terms of ageing processes. There are few longitudinal studies assessing the stability of subjective age in general and its relation with mental well-being over time in particular. Hence, the direction of causality remains unclear and mental well-being may be a cause rather than a consequence of youthful identities. The objective of this study is to assess stability and change in subjective age and its causal relation with mental well-being over five years. Method : Two waves from the NorLAG panel study from 2002 and 2007; a community-based panel study of Norwegians aged 40 years + (N=2,400). Measures include Felt age and Ideal age discrepancies, and the Positive and Negative Affect Scale (PANAS). Structural Equation Modelling is used to assess stability and the direction of causality between domains of subjective age and mental well-being. Results : Felt age discrepancies are stable over five years: respondents indicated that on average they felt 7.6 years younger than their actual age. Ideal age discrepancies increased slightly over time, from 16.5 to 17.3 years. In addition, wishing to be younger than one's actual age has a negative effect on Positive Affect five years later, whereas feeling younger was not associated with well-being. Conclusion : Stability in felt age discrepancies may reflect an 'optimal illusion'. Ideal age tends to stabilize around age 40 and may then become more dysfunctional with increasing age. Keywords : Subjective age, Successful ageing, Subjective well-being

OP27 207-S-2

DEVELOPMENT OF A CONCEPTUAL MODEL FOR PERSON-ENGAGED DEMENTIA CARE

Gretchel AJON-GEALOGO (*School of Nursing, University of Texas Health Science Center San Antonio, USA*)

Introduction : In the U.S., adult day programs have become the care alternative of choice reported by caregivers of community-dwelling older adults with dementia because of its cheaper cost compared to other dementia care interventions. However, a strong theoretical underpinning is lacking for interventions that promote person/consumer engagement in this vulnerable population. A complex adaptive system framework is needed to analyze dementia care interventions across microsystem, mesosystem, and macrosystem levels. Therefore, the aims of this study are to: (1) Develop preliminary measures for microsystem variables: an independent variable (dementia care communication triad), outcome variable (health-related quality of life) and mediating variable (strength of person/consumer engagement in care delivery); (2) Refine existing measures for safe care and program costs; (3) Describe the contextual characteristics of an adult day program specializing in dementia care for community-dwelling older adults. Method : A mixed methods approach employing organizational ethnography and descriptive correlational design will be used. The following questions will be addressed: (1) What are the characteristics of an adult day program for community-dwelling persons with dementia? (2) What meta-inferences can be drawn from the data? (3) What are the convergent and/or divergent characteristics of these meta-inferences? Results : Results are expected to inform the development of clear definitions for

each variable, the establishment of accurate measures for these variables, and a description of multi-level interfaces with outcomes. Conclusion : Using a mixed methods design is appropriate for theory building, as it identifies essential components of dementia care relative to microsystem-level health-related quality of care, mesosystem-level safe care delivery, and macrosystem-level program and consumer costs. Keywords : dementia, person-centered care, complex adaptive systems, mixed methods

OP27 207-S-3

THE FOURTH AGE AS A SOCIAL IMAGINARY

Chris John GILLEARD, Paul Frederick HIGGS (*Mental Health Sciences, University College London, United Kingdom*)

Introduction : The idea of a human life cycle is embedded in most societies with its division into a period of growth, a period of stability and a period of decline. Until recently the period of decline - old age - has been represented as a homogeneous entity with positive and negative aspects whose salience varied over time and place. Method : Beginning in the second half of the twentieth century, later life has become fragmented. What Castoriades termed the social imaginary of old age has lost much of its old coherence. The rise of the third age - a cultural field determined by active consumerism the politics of identity and a rejection of becoming 'old' - has excluded many of the more abject aspects of old age from later lifestyles. Results : The result is the emergence of a new social imaginary based around the idea of a fourth age, in which all the fears of ageing are located, whose boundaries are shaped on the one hand by the rejection or exclusions evident in third age culture and on the other by the abjections of agedness, in terms of an irremediable mental and physical frailty. Conclusion : The consequences of formulating the fourth age in such terms will be drawn out for both health and social policy in individual societies and in an apocalyptic demography that represents the growing agedness across societies as a potential global catastrophe. Keywords : social imaginary fourth age

OP27 207-S-4

IS THE "STRUGGLE FOR RECOGNITION" THE NEXT STEP IN CRITICAL GERONTOLOGY STUDIES?

Mario PARIS¹, Suzanne GARON², Marie BEAULIEU² (*1. Gerontology, University of Sherbrooke, Canada; 2. Social Work, University of Sherbrooke, Canada*)

Introduction : Critical studies in gerontology are far from having one solo standpoint. Indeed, many social theory approaches coexist (e.g. feminist theory, political economy, poststructuralism, etc.) under the term Critical Gerontology. However, researchers in gerontology have not yet considered seriously the latest works from Frankfurt School and applied it to aging and old age studies. Method : We build our answer from the theory of struggle for recognition from the German philosopher Axel Honneth. He is one of the leading philosophical thinkers of Critical Theory and the actual Director of the Institute of Social Research in Frankfurt. Based on Hegel and Mead, he has developed a philosophical theory that focuses on conditions of individual achievement in modern society which take place through three patterns of intersubjective recognition: love, rights, and solidarity (Honneth, 1995). The Theory of recognition allows individuals to experience personal dignity and a social integrity. Results : This theoretical framework permits to identify some social pathologies associated with aging and old age. For example, the appreciation of older people from a successful and productive aging standpoint leads us to reflect on the nature of recognition toward aging and old age. Indeed, such a representation is imbued with ideological elements and

is not immune to certain excesses, particularly the invisibility of old age. At the end, we identify some research avenues for Critical Gerontology. Conclusion : In the end, our presentation will answer to sociologist Vitor Marshall's question (2009): "What is new about critical gerontology?" Keywords : Critical Theory, Old Age, Recognition

OP27 207-S-5

COMPETING RISKS ANALYSIS OF GOING TO NURSING HOME PLACEMENT AND MORTALITY AMONG ADULTS WITH INTELLECTUAL DISABILITIES

Hyun Ja LIM¹, Lilian THORPE², Prosanta MONDAL¹ (*1. Community Health & Epidemiology, College of Medicine, University of Saskatchewan, Canada; 2. Psychiatry, College of Medicine, University of Saskatchewan, Canada*)

Introduction : Depressive symptoms have been linked to decreased active life expectancy in general population. Adults with intellectual disabilities (ID) are commonly prescribed antipsychotics/anticonvulsants for behavioural problems, both of which are potential contributors to increased adverse health outcomes. Method : Population-based, community-dwelling adults with childhood onset ID were recruited during 1995-2000, and followed until 2011. Competing risks analysis using Cox cause-specific and sub-distribution hazards models were conducted to estimate/to illustrate the effect of risk factors and the cumulative incidence functions for the study outcomes: NHP and death. Results : 233 participants (43% females) were followed for an average of 13 years (s.d= ±4.1). Of those, 28 people (12%) went to NHP and 61 (26.2%) died before NHP. Multivariable cause-specific and sub-distribution hazards models consistently showed that age, behavioral depression (anxious, crying spells, fearful, overly sensitive, sadness), and mood were significant factors for NPH. Mood symptoms result in 1.54 times increased hazard of NPH, after controlling for age and behavioral depression (HR=1.54, 95% CI: 1.1-2.17, p=0.01). However, age, physical depression (body stress, eating problem, low energy, sleep problem), a seizure history at baseline were significant predictors of mortality. A seizure history at baseline significantly increased mortality risk, after controlling for age and physical depression (HR=2.44, 95% CI: 1.23-4.87, p=0.01). Conclusion : As expected, aging is significantly associated with the risk of NHP and death. Our study showed that there was an association between behavioral and physical depression symptoms and increased NHP and mortality, respectively. Clinicians should consider depressive symptoms as a serious risk to increased adverse health outcomes. Keywords : competing risks analysis, depressive symptoms, nursing home placement, mortality

OP27 208-S

SEX AND SEXUALITY

OP27 208-S-1

SEXUALITY AND DISCRIMINATION IMPACTS ON HEALTH AND WELLBEING OF OLDER PEOPLE

Charles WALDEGRAVE (*Social Policy Research Unit, Family Centre, New Zealand*)

Aim: This presentation will provide results from the New Zealand Longitudinal Study of Ageing (NZLSA). The specific aim of this paper will be to explore the specific relationships of sexuality and discrimination respectively with health and wellbeing. Methods: Amartya Sen's capabilities approach has formed the conceptual basis of the theoretical framework of this research programme (Sen, 1999).

An extensive survey of a national random sample of 3,317 older New Zealand citizens aged between 50 to 84 years was carried out in the second half of 2010. The survey questionnaire included questions on sexuality (Sexual Functioning Scale) and discrimination (Everyday Discrimination Scale). These variables were tested for statistical associations with a range of health and wellbeing measures, including CASP 12, and WHOQoL 8. Findings: The results demonstrated higher incidence of sexual contact and lower levels of discrimination than predicted. They also revealed significant associations, indicating that older people who engage in sexual activity show higher levels of wellbeing and those who are discriminated against show lower levels of health. The findings add weight to Sen's notion that human freedom and functional capability are at the centre of human wellbeing. Relevance: The results demonstrate the important associations sexuality and discrimination have with wellbeing. Furthermore they address stereotypes about older people being unable to participate or are disinterested in sex. The discrimination data identifies the types of discrimination older people experience and the dangers of double discrimination like age and gender or age and race. Keywords : Sexuality, discrimination, health

OP27 208-S-2

WIDOWHOOD, INTERGENERATIONAL FAMILY SUPPORT AND LIVING ARRANGEMENT AMONG OLDER ADULTS IN CHINA: BASED ON GENDER LENS

Yunzhu JIA (*Policy and Law Studies Section, Women's Studies Institute of China, China*)

Introduction : Widowhood becomes an extended experience for old adults in China because of increased life expectancy, particularly for older women. While intergenerational family support and living arrangement of older adults has changed greatly during the past decades in China because of huge population migration and life style transformed. Method : Drawing on the Senior Citizens Survey date of the Third Wave Survey on the Social Status of Women in China, jointly launched and organized by the All-China Women's Federation (ACWF) and National Bureau of Statistics (NBS), which carried out on December 1, 2010. Results : This paper explores the patterns, status and associates of widowed older adults' living arrangement and intergenerational support in China, using logistic model. Conclusion : Preliminary findings suggest that the widow older women have closer intergenerational support and higher probability of live together with children than widower. Controlled the age, health status, educational attainment, housing and income resource, whether older adults give a hand to their children on housework make sense on their living arrangement, give money to their children can great increase the probability of older widower live together with their children, while take care of grandchildren decrease the probability of living together with children for widow older women. The paper try to explain the gender difference based on gender lens. Keywords : widowhood, living arrangement, intergenerational support

OP27 208-S-3

AN EVALUATION OF THE SENIOR EMPLOYMENT PROGRAM OF SENIOR WELFARE CENTER IN CHANGWON BASED ON BLENDED RETURN ON INVESTMENT

Yu Mi JANG¹, Carol KIM² (*1. Social Welfare Department, Changsin University, Korea; 2. Foreign Languages Department-English, Changshin University, Korea*)

Introduction : This study attempts to evaluate social and economic benefits of the Senior Employment Program (SEP) by using the

approach used to evaluate REDF and NEF. The Blended Return on Investment (BROI), Economic Return on Investment (EROI) and Social Return on Investment (SROI) of the SEP are calculated and compared which are then used to assess the possibility of continuing the SEP and social values and influences that the SEP has on the senior community. Method : A preliminary social enterprise obtained authorization from Changwon City Hall, a community welfare center, and a commercial enterprise obtained authorization from Korea Labor Force Development Institute for the Aged. Each organization's BROI is calculated and compared using the formula stated below. Results : Under the conditions where the performance period is 2 years, discount rate 3.5%, average inflation rate 4.0% according to the Bank of Korea in Year 2011, and the level of significance $\pm 20\%$, EROI, SROI, and BROI are all found to be the highest in the case of the SEP in the preliminary social enterprise. Conclusion : EROI and SROI of the SEP are all high in all three organizations. This means the SEP is socially beneficial. The variables that affect BROI are not the increase in the income tax, but the decrease in government subsidies and the increase in the net income as well as the average monthly income and the number of the senior clients in the SEP. The major interest of senior citizens would be having more senior clients embracing the SEP. Keywords : Blended Return on Investment (BROI), Senior Employment Program (SEP), Sensitivity Analysis

OP27 208-S-5

OLDER IMMIGRANTS' ACCESS TO THE INTERNET AND ONLINE PATIENT-DOCTOR COMMUNICATION

Younsook YEO¹, Soonhee ROH², Jisung PARK³ (*1. College of Social Work, University of South Carolina, USA; 2. Department of Social Work, University of South Dakota, USA; 3. Retirement Research Center, Samsung Life Insurance Co., Korea*)

Introduction : Despite increasing demand for Internet-based communication with healthcare providers, little is known about online patient-doctor communication among older immigrants in the United States. The purposes of this study are to (1) describe the prevalence of the digital divide, controlling for sociodemographic variables, and (2) examine factors associated with Internet use and online patient-doctor communication between U.S.-born and foreign-born older adults (50 or older). Method : Multivariate logistic regression was estimated using nationally representative data collected in 2005 and 2008 by the National Cancer Institute for the Health Information National Trends Survey (N = 7,324). Results : Foreign-born older adults were less likely than their U.S.-born counterparts to use the Internet ($\exp(b) = 0.65, p < .01$). Interestingly, once older immigrants became wired, they were more likely than U.S.-born counterparts to communicate online with doctors (15% vs. 11%). Among the wired U.S.-born older adults, talking with doctors about health information they found on the Internet, trusting in online health information, using more healthcare services, and living alone were significantly associated with online patient-doctor communication. Among the wired older immigrants, however, online patient-doctor communication was significantly associated with having cancer and having no disability. Conclusion : Older immigrants lagged far behind their U.S.-born counterparts in access to the Internet. However, once they became wired, they actively participated in online patient-doctor communication for medical care. Considering that the Internet can help reduce language barriers and enhance autonomy among older immigrant populations, efforts to reduce the digital divide may include more computer training programs for older immigrants in the community. Keywords : social support, elderly immigrants, online health communication, Internet access

OP27 209-S

SOCIAL PARTICIPATION II

OP27 209-S-1

E-CONVERGENCE, THE LIFE BLOOD OF ACTIVE AGEING

Kallirroi NIKOLI (National Committee of Ageing/as Expert on Ageing, SOCIAL AID OF HELLAS/in consultative status with ECOSOC/UN, Greece)

Introduction : The e-Convergence is a measurable approach of reaching successful ageing through e-knowledge and e-information (During the presentation we will give appropriate index) The recent financial crisis illustrated the intrinsic needs for shifting priorities. Leaders, Social Workers, Senior Citizens, are aware Ageing Sustainability is an effort to grow and thrive well beyond the 21st c. second decade. It is here and rather to stay. Catalyst research has shown that societies outperform where e-information diffused as a tool of knowledge and not as a game of killing boredom. e-knowledge is a major step towards Ageing Sustainability promoting social inclusion and intergenerational cohesion Societies understand that e-informed and skilled Aged persons are the best answers to the asked model of our global society: a) global accepted principles b) high standards of life c) information as the lifeblood of active ageing e-informed Ageing creates leaders for a globalized up-to-date Voluntarism without borders. Method : To reach e-convergence needs to be passed through several steps of knowledge: Ageing has rigidity, Ageing frailty, Ageing has fixed ideas, the 21st c. Ageing are not homogenized. The e-Convergence be implemented successfully some key prerequisites: Friendly social environment, Healthy vitality coming from within e-Convergence for embracing Voluntarism is a method with parameters will be shown in graphics. Some of the tools will be e-lessons in an environment without discriminations and segregate from other ages. Results : The high mark of e-convergence towards Ageing Sustainability leads to successful Ageing Success is a process through Volunteering-Independent fulfilled life. Conclusion : Implementation of e-Convergence. Successful Ageing through Voluntarism. Through Integression. Social Participation as equal Partner in our global society. Keywords : e-convergence Ageing Sustainability

OP27 209-S-2

PARTICIPATING IN COMMUNITY: OLDER ASIAN IMMIGRANTS TAKING ON RESPONSIBILITY IN NEW ZEALAND SOCIETY

Valerie WRIGHT-ST. CLAIR¹, Shoba NAYAR² (1. Research Cluster for Active Ageing, AUT University, New Zealand; 2. Centre for Migrant and Refugee Research, AUT University, New Zealand)

Introduction : New Zealand has an increasingly ethnically diverse ageing population, in particular from the Asian region; yet little is known about how these older migrants contribute to communities and wider society. This study explored the processes by which Indian, Chinese and Korean elder migrants engage in voluntary work in Auckland, New Zealand. Method : A grounded theory methodology framed this study. Participants were men and women, aged 60 years and over at the time of interview, identifying as Indian, Chinese or Korean. Purposive sampling was used to recruit 74 participants for 9 focus groups across the three communities. Theoretical sampling was used to complete up to a further 30 individual interviews (10 with each community). Semi-structured interviews conducted in English, Hindi, Mandarin and Korean were audio recorded, transcribed verbatim, and translated where relevant to English for analysis. Data were analysed using grounded theory methods. Ethics approval was obtained from Auckland University of Technology Ethics Committee. Results: Participants engaged in a diverse range of voluntary activities,

both within their families and own ethnic community, and wider society. These activities included looking after grandchildren, knitting garments for children in hospital, working voluntarily in community organisations such as 'Red Cross' and libraries, and volunteering at Auckland city homeless shelter. Conclusion : This study reveals that elder Indian, Chinese, and Korean migrants make a significant social contribution. Participants expressed a sense of duty to give back to New Zealand society in recognition of the multiple ways in which government assists them to live in the country at an older age. Keywords : Older immigrants, Social participation, Civic society

OP27 209-S-5

TRAJECTORIES OF ELDERLY'S LIFE SATISFACTION AFTER THEIR RETIREMENT: A LONGITUDINAL GROWTH CURVE MODEL FOR CHANGE

Dongbae KIM¹, Byungsun YOO², Youngkwang OH¹, Yohan JUNG¹ (1. Graduate School of Social Welfare, Yonsei University, Korea; 2. Gyeonggi Welfare Foundation, Korea)

Introduction : This study has a purpose to analyze trajectories of life satisfaction of the elderly after their retirement and how the characteristics of individual and social relationship have an effect on the life satisfaction. Method : This study has investigated the Korean elderly (age ≥ 55), using the data from three waves (1st wave (2005) ~ 3rd wave (2009) of the Korean Retirement and Income Panel (KReIS). Data analysis has been used to identify the predictors of the intercept and slope related to the life satisfaction after retirement, focusing the trajectories of the elderly's life satisfaction after retirement and individual characteristics and social relationship with application of the growth curve model by Amos 20.0. Results : First, the intercept of the elderly's life satisfaction after retirement was somewhat below average. Life satisfaction averagely increased little by little from 1st wave to 3rd wave. Second, by conducting the growth curve model, the study revealed that the intercept of the elderly's life satisfaction after retirement is high on individual characteristics (sex, educational level, economic status, health status) and in social relationship (family relations). Furthermore, individual characteristics (sex, educational level, economic and health status) asserted the meaningful variables in the slope of elderly's life satisfaction after retirement, otherwise there were no meaningful variables in social relationship. Conclusion : A variation of the elderly's life satisfaction after retirement has showed a wide variable breadth by the individual characteristics than the social relationship. It is a clue to indicate the importance of the individual preparation for the old age with economic and health status for improving the elderly's life satisfaction after retirement. Keywords : The Elderly, Life satisfaction after retirement, Individual Characteristics, Social relationship, Gr

OP27 209-S-6

AN ANALYSIS ON THE PREFERENCE OF LEISURE PROGRAM AND SENIOR'S SEGMENTATION OF SENIOR CENTER USING PREFERENCE PROGRAMS IN KOREA

J.H KIM¹, H.I Kim², J.I Wassel¹, (1. Gerontology, University of North Carolina at Greensboro, USA; 2. Physical Education, Cheong Ju University, Korea)

Introduction : The purpose of this study is to provide viable materials for the development of leisure programs for senior welfare centers for the betterment of senior's quality of living. Method : To conduct this study, image-based poster and 7 virtual image cards were created. A total of 406 people were surveyed at Senior Centers and their valid responses of the subjects were analyzed through SPSS 18.0. A conjoint analysis yielded relative importance of each factor and then a

perceptual map was acquired through a multidimensional scaling with the Part-worth estimate. Results : First, the most important program among the leisure's mentioned was the sports health. Second, the most preferred combination program of seniors was the combination of sports health and song/music program. Third, seniors preferred sports health and music programs, but Internet Information, Language Education and Art creation programs were not. There were old program such as song/music, Language Education and dance included in the category. On the other side, the new programs were Spots Health, Internet Information and Art Creation. Fourth, the five groups were identified through cluster analysis namely; Preference Sports health, Preference Sports health and Music, Dissatisfaction Welfare, Non preference Dance Program, Preference Internet Information, and Language Education groups. Fifth, Preference Internet Information, and Language Education groups showed the highest level in education and the dissatisfaction welfare program group showed the highest level during the period of participation in the said program. Conclusion : Programs should be presented and applied to meet the needs of the elderly. Ahead rather than weak and dependent elderly, healthy, self-reliant and active social policy issues for seniors, which have to have changes in the resource, have to be prioritized. Therefore, this research should be welcomed to help an aging society in favor to a program that is required by the elderly people and to let the program provides physical, mental, social, and intellectual improvement. Improving the quality of life of the elderly and operating a stable and vibrant elderly living have to be taken into course considerably. Keywords : Leisure programs, preference program, welfare center.

OP27 210-S LONG TERM CARE XIII

**OP27 210-S-1
IMPACT OF PRIVATE SOCIAL NETWORKS ON HOME CARE SETTINGS - CHALLENGES AND OPPORTUNITIES**
Martina ROES (*Institute for Quality and Case Management, University of Applied Sciences, Germany*)

Introduction : Network analysis focuses on the relations among actors and see individual people nested within networks of face-to-face relations with other persons. Often these networks of interpersonal relations become 'social facts' and take on a life of their own. A social network represents the close relations among a set of people. In Home Care, a case manager not only works with the patient but with their family members, their friends or the neighbors and with the professional staff (if needed). Method : 17 case managers (working for a private insurance company) were asked to draw pictures of the social network for one of their cases, which represents their view on the social (private and professional) network. The drawn network (social entities) included the role of all people, their way to interact with each other and information about how strong the connection seemed to be. Thus it was possible to calculate the stability of these networks and to identify 'structural holes'. Results : In six out of 17 cases the out-patient did not have a social network to support the care at home. In seven out of 17 cases the out-patient did have a social network, but a weak one; thus the ability to stay at home relied on the support from a direct family caregiver and the case manager. Only in 3 out of 17 cases a stable social network could be identified. Conclusion : Homecare services have to add the analysis of the stability of the social network in their assessment. Keywords : social networks, family caregiver, counseling

**OP27 210-S-3
AN EXERCISE INTERVENTION FOR FRAIL ELDERLY**

USING DAY-CARE SERVICES IN THE COMMUNITY IN JAPAN

Akane OHGANE¹, Yuto IMAI², Toru SOMEYA², Masaru OKAMOTO², Hiroyuki SHIMADA³, Naoshi SHINOZAKI⁴, Takao SUZUKI⁵ (*1. Sports & Health & Welfare, Yamaguchi University of Human Welfare and Culture, Japan; 2. Section for Research and Development, Wellness Frontier Co. Ltd., Japan; 3. Section for Health Promotion, National Center for Geriatrics and Gerontology, Japan; 4. Cornea Center, Tokyo Dental College Ichikawa General Hospital, Japan; 5. Research Institute, National Center for Geriatrics and Gerontology, Japan*)

Introduction : This study examines the effects of a new systematic exercise approach on physical functions in the frail elderly. The approach provides a 3-hour light and mixed exercise program to the elderly who attend day-care center. Method : There were more than 1220 participants for the study, and all were community-dwelling men and women (mean age \pm standard deviation = 74.5 \pm 9.5) with mild to moderate physical frailty. The group-based exercise was provided for 3 months to participants who were admitted to a day-care center at 8 towns in the Tokyo area. Mixed exercise programs consisted of rhythmic dancing performed in a seated position, gait training, balance training, operating fingers, and aerobic and resistance training by machines were performed in one room twice a week. Participants were assessed by functional measures before and after a 3-month intervention using the same methods. Functional measurements included grip strength, static balance with eyes opened, functional reach, a sit-and-reach test, bar-gripping reaction time, a 5m walking time, timed up and go, and a 2min step test. Results : All functional measurements stated above increased significantly ($P < 0.05$) in participants over the follow-up period. Conclusion : The light and mixed program provided for the frail elderly in day-care centers can improve the physical function in the Japanese elderly living in the community. Our results indicate that an appropriate exercise program can be effective for reducing frailty and increasing autonomy for the frail elderly under the Japanese long-term-care insurance system. Keywords : frail elderly, mixed exercise, day-care service

OP27 210-S-4 PREDICTORS OF UNPAID CAREGIVER'S HEALTH OUTCOMES IN THE U.S.

Yura LEE, Iris CHI (*School of Social Work, University of Southern California, USA*)

Introduction : Older adults with chronic disease require great amount of caregiving from their family members and this may cause considerable caregiving burden. Previous caregiving studies often focused on caregiver's general health status rather than specific health outcomes related to caregiving experiences. The purpose of this research is to investigate the predictors of caregiving-related health based on Pearlin's Stress Process Model. Method : "Caregiving in the U.S." data was collected in 2009 by interviewing caregivers, who provided unpaid care to a child or an adult in the last 12 months. The data included 858 White, 200 African-American, 201 Hispanic, and 200 Asian-American caregivers. For this study, 1,397 caregivers of adult age 50 and older were investigated. Multinomial logistic regression analysis was conducted to test the predictors of caregiving-related health, categorized into three responses ("made better", "not affected it", "made worse"). Results : The study result showed that Hispanic (OR=1.81, CI=1.01-3.25), spouse (OR=3.49, CI=1.23-9.92), and helping ADLs (OR=1.16, CI=1.02-1.31) were significant predictors of reporting "made it better" health versus "not affected it". On the other hand, African American (OR=0.49, CI=0.28-0.88),

adult/grandchildren (OR=1.59, CI=1.08-2.33), helping IADLs (OR=1.23, CI=1.09-1.39), physical (OR=1.18, CI=1.01-1.37) emotional (OR=1.86, CI=1.59-2.18), and financial strains (OR=1.25, CI=1.09-1.44) were significant predictors of reporting "worse" health versus "not affected it". Conclusion : This study suggests that unpaid caregivers need specified support based on their different race/ethnic backgrounds and different types of (physical, emotional and financial) strains they face. It also suggests more available services for both caregivers and care recipients to actively seek support and improve their quality of life. Keywords : unpaid caregivers, caregiving health

OP27 210-S-5

A QUALITATIVE STUDY ON THE INTRODUCTION OF MARKET-FRIENDLY POLICY AND ITS RESULTS OF THE NEW LONG-TERM CARE INSURANCE SYSTEM IN KOREA
Yongho CHON (*Elderly Welfare, Namseoul University, Korea*)

To cope with the rapid growth in its aging population, the Korean government introduced compulsory long-term care insurance (LTCI) for elderly people in July 2008, becoming the second country in Asia to establish social LTCI. The existing LTC infrastructures were unable to meet the increasing needs of elderly people, particularly as regards the number of service providers and the size of the care workforce in Korea. The Korean government decided to adopt market-friendly and deregulatory policies in developing a new LTC service infrastructure, an approach that has led to significant growth in the number of certified service providers and personal care workers in Korea. This study aims to understand how home visiting service providers experienced and evaluated the market-friendly policies in the Korean LTCI system. I conducted semistructured in-depth qualitative interviews with 20 home visiting service providers in a city. The findings suggest that interviewees had negative experiences with the marketisation of long-term care service owing to severe competition among service providers. They endeavored to increase the number of cases and some of them adopted illegal practices. The findings suggest that the government should be actively involved in minimizing such challenges. Keywords : Long-term Care, Care Worker, Market

OP27 211-S

HOUSING & ENVIRONMENT & TECHNOLOGY II

OP27 211-S-1

EXTRACARE, A HOME FOR LIFE?: A RESIDENT'S PERSPECTIVE

Paul NASH, Vanessa BURHOLT (*Centre for Innovative Ageing, Swansea University, United Kingdom*)

Introduction : The creation of new, and expansion of existing 'extracare' schemes demonstrates high levels of interest in assisted living environments for older people within the UK. The assumptions behind extracare developments are that they will enable older people to live for longer in their own homes, utilising a range of care and support services, promoting their health and well-being. Method : 180 older people in Wales participated in a mixed methodological approach using validated scales and quantitative measures with physical assessments and semi-structured interviews. Results : The Survey showed, of those in receipt of care, the fittest older people (cognitively & physically) resided in extracare facilities. Further, through one-to-one interviews, extracare residents were the least sure about their future. Residents highlighted concerns about their ability to remain in place citing perceptions about the inability of facilities to meet their changing needs especially regarding cognitive decline. Conclusion : By 2051 it is estimated that 17% (115.4 Million) of the

global population will be living with, and requiring some form of support for dementia (US Census, 2010). Of those people with dementia, increasing numbers will be living in assisted living/extracare environments. The Welsh Government pledged £41 million stating "...currently we do not know whether extracare accommodates the changing needs of both fit and frail older people.". Current findings demonstrate the need to inform both residents and policy makers about what can be expected from assisted living and whether it can indeed meet the needs of fit and frail older people. Keywords : Extracare Housing; Care levels; Dementia

OP27 211-S-2

FAIR SEX AND UNFAIR LIFE: THE SITUATION OF ELDERLY WIDOWS IN KERALA, INDIA

Jacob John KATTAKAYAM (*Dept of Sociology, University of Kerala, Centre for Gerontological Studies, India*)

Introduction : India's elderly population is growing very fast and those over 65 are overwhelmingly females. India is home to 42.4 million widows, constituting a marginalized group because of their low social status, living in deplorable conditions. They are often viewed as inauspicious. The increasing longevity among widows in Kerala has intensified their problem. 13 % of Kerala's population is above 60 years of age and majority are widows. Method : Stratified random sample survey consisting of 250 aging widows in Kerala on the basis of age group, marital, religious, educational and caste status, type of family and professional status are done. A conceptual framework has been developed for analysis. Results : Social customs inhibit women from re-marrying, resulting in an increased likelihood of women ending up alone. Social bias often results in unjust allocation of resources, neglect, abuse, exploitation, gender-based violence. Besides, lack of access to basic services and lack of ownership of assets aggravate their hardships. Psychological and emotional aspects of widows, especially the elderly are often taken for granted. Older widows are doubly affected due to the combined effects of aging and widowhood. Social security mechanisms in place are well below satisfactory level. Conclusion : Widows face difficulties like social, economic, health and emotional because of advanced age and ageist attitudes. Remedies for tackling their problems and improve their status are also suggested. Keywords : Elderly, Widowhood, Social Security

OP27 211-S-3

OLD AGE INSTITUTIONS: AN ENDURING SOCIAL AND PHYSICAL FORM

Andrew SIXSMITH (*Gerontology Research Centre, Simon Fraser University, Canada*)

Introduction : Institutions have been the backbone of the caring services for older people throughout the modern era. While we have witnessed the emergence and passing of different paradigms in our understandings and social responses to aging and old age, the essential form and role of the institution remains largely unchanged. This presentation will trace the (non)evolution of the institution as a socio-physical apparatus for the reproduction of coercive social relations that frame the everyday lives of many older people. Method : The research is based on a reflexive methodology that combines academic autobiography, family and social history of institutions in England to describe, understand and explain the nature of the old age institution in modern societies. Results : Institutions (asylums, workhouses, geriatric hospitals, nursing homes, residential schools, etc.) have consistently been subjected to scrutiny, notably by writers such as Goffman and Townsend. Yet despite these powerful critiques, the institution has

endured as a social and physical form, often relabeled and dressed-up, but essentially the same. The historical analysis argues that the contingencies of the institution as a socio-physical apparatus (the nature of communal life, the regimes of care, resourcing) continue to regulate and impoverish the lives of the inmates. Conclusion : The enduring presence of institutions in the care of older people reflects modern society's inability to effectively deal with the "problem" of dependent old people. Keywords : Institutions, reflexivity, dependency

OP27 211-S-4

THEORIES OF SURVEILLANCE AND AMBIENT ASSISTIVE LIVING

Ben MORTENSON¹, Andrew SIXSMITH², Ryan WOOLRYCH³
(1. *Gerontology Research Centre, Simon Fraser University, Canada;*
2. *Gerontology, Simon Fraser University, Canada;* 3. *Department of Gerontology, Simon Fraser University, Canada*)

Introduction : Through the use of home automation, activity monitoring, and ubiquitous computing, ambient assistive living (AAL) technology is intended to provide unobtrusive support of activities of daily living and to extend the quality and length of time older people can live in their homes. Although AAL is designed to support independence and autonomy, concerns have been raised with how activity monitoring may affect user's sense of privacy. Drawing on the contributions of Foucault and Goffman, the purpose of this paper is to compare and contrast potential experiences of surveillance in four settings: private homes without AAL, private homes with AAL, institutional settings (i.e., residential care facilities) and public spaces. Method: We employed Foucault's concepts of self-discipline and governmentality and Goffman's ideas of dramaturgical analysis and total institutions, as a way of contextualizing AAL in relation to the sense of observation experienced in other settings. Results: Activity monitoring in AAL contributes to an erosion of the boundary between public and private space. This conflation threatens the existence of backstage areas that may enable public performance, although they are less constraining than total institutions. AAL has the potential to create a pseudo-panopticon, in which monitoring is continuously ongoing, but the types of activities that are recorded may be only crudely documented (e.g., "lying in bed" may include sleeping, reading, or watching television). Conclusions: The findings suggest that the manner in which activity monitoring is developed and introduced needs to attend to the unintended negative consequences associated with use of this technologically-based "clinical gaze." Keywords : Surveillance, Ambient-Assisted Living, Privacy

OP27 211-S-6

EXPLORING THE HOUSING AFFORDABILITY OF OLDER HISPANIC HOUSEHOLDS (65+) IN THE UNITED STATES

Mira AHN¹, Sung-Jin LEE², Kathleen PARROTT³ (1. *Family and Consumer Sciences, Texas State University - San Marcos, USA;*
2. *Family and Consumer Sciences, North Carolina Agricultural and Technical State University, USA;* 3. *Apparel, Housing, and Resource Management, Virginia Tech, USA*)

Introduction : Among the increasing elderly population in the United States, especially older Hispanic population is the fast growing segment. According to the report from the Administration on Aging (AOA) in 2010, the Hispanic older population made up 6.8% of the older population in 2008. However, by 2019, the Hispanic population aged 65 and older is projected to be the largest racial/ ethnic minority in this age group. The purpose of this study is to explore the housing affordability of older Hispanic households (65+) in the United States. Method : A secondary data set, the biennial 2009 AHS, sponsored by

the U.S. Department of Housing and Urban Development (HUD) and conducted by the U.S. Census Bureau was used. With the sample for this study (N=595), binary logistic regressions were employed to find relationships between housing affordability and other variables. The dependent variable of this study is housing affordability (ratio of family incomes to housing expenses) and independent variables include socio-demographic and housing variables. Results : Selected findings are: the elderly Hispanics, who were older or U.S. citizens; who had larger incomes or a smaller number of household members; who lived in the South or a smaller structure size, were more likely to afford their housing. Conclusion : The results show housing affordability of the older Hispanic households in the United States is related to several demographic and housing factors. It implies some specific groups such as who are not citizens, younger, or living in non-Hispanic popular areas (non-South) have more housing challenges. Keywords : Elderly Hispanic population, Housing affordability, United States

OP27 212-R

INTEGRATED MODELS OF CARE II

OP27 212-R-1

MOBILEAGE: A HOSPITAL-BASED INTERVENTION FOR MEDICALLY IMPAIRED OLDER DRIVERS

James D. STOWE (*Trauma Services, University of Missouri Hospital, USA*)

Introduction : The MobileAge intervention is a form of hospital-based Mobility Transition Counseling (MTC) for older drivers with medical impairment. The intervention uses a collaborative, peer-led, and individualized format to aid the older driver in moving to alternative forms of transportation when they become unsafe to drive. The approach is in contrast to the popular, yet ineffective, approach of age-based screening for all older drivers. Method : Two US research and referral hospitals were used to evaluate the MobileAge intervention in a healthcare setting. Ninety older drivers with specific medical conditions were targeted random assignment to experience Mobility Transition Counseling (n = 90) or the control condition of regular hospital care (n = 30). Participants will receive two intervention sessions over a period of six months. Sustained email or phone contact helped to support the participant during implementation of a mobility plan. Repeated measures ANCOVA, and hierarchical multiple regression were used to assess outcomes. Results : Preliminary results appear to indicate increased readiness to cease driving, fewer risky driving behaviors, and increased self-rated health for the intervention group, while controlling for age, cognitive health, and race. Additional time in the intervention will be necessary to analyze full results. Conclusion : MobileAge may be an effective approach for aiding the most dangerous older drivers in moving to alternative forms of transportation. It avoids penalizing healthy, safe older drivers and can be implemented by non-physicians in a variety of healthcare settings. Keywords : transportation, mobility, drivers

OP27 212-R-2

ACCESSING INFORMATION BEFORE THE POINT OF NEED - A CADENZA INITIATIVE TO DIGITALIZE PRE-DISCHARGE PLANNING FOR OLDER PATIENTS AND THEIR FAMILY MEMBERS

Lisa P.L. LOW (*Nethersole School of Nursing, The Chinese University of Hong Kong, Hong Kong*)

Introduction : In this day and age, timely discharge is paramount. Discharge planning of older patients is a daunting time often

characterized by the challenges of time constraint and limited access to information. Yet, the discharge process and impacts of such challenges on the patients, families and nurses is lacking. An integrative perspective of the discharge process and needs from the patients, families and nurses in the phase 1 study will be presented from a 4-year study to digitalize discharge planning by developing an eLearning Information Package (eLIP) to help make decisions about discharge locations. Method : The perceived discharge needs of older patients from the hospital were examined through interviewing 181 participants in acute and convalescent hospitals. Data were analyzed using MAXQDA. Results : An overarching theme 'accessing information before the point of need' emerged, highlighting the need to know how to ask questions about 'what', 'where' and 'how' to access relevant and appropriate information about caring for older people following discharge. The time of receiving information was preferably 'before the point of need'. Some participants described confronting a time lapse and information being outdated when the patient did not have a 'real need' to receive such information. A categorization of discharge needs and perceived solutions were derived. Modes of obtaining information revealed verbal, written and electronic sources. Conclusion : Discharge process for older patients is characterized by a sense of urgency, quick decision-making to meet multiple needs, and limited participation among stakeholder groups. Digitalizing pre-discharge programmes will promote autonomy and overcome time constraints among its users. Keywords : Discharge, Needs, Older patients

OP27 212-R-3

NARRATIVE THERAPY IN RECONSTRUCTING THE MEANING OF LIFE OF STROKE SURVIVORS: FINDINGS FROM A RANDOMIZED CONTROLLED TRIAL

Esther Oi Wah CHOW (*Applied Social Studies, City University of Hong Kong, Hong Kong*)

Introduction : To examine the effectiveness of narrative therapy (NT), use of life narrative, in helping stroke survivors (SS) to externalize their experiences, reconstruct the identity and their meaning of life. Method : A randomized controlled trial was conducted to SS who had stroke within 2 years and aged over 59. SS participants were recruited from five different hospital clusters, and intervention was taken place in the older adults' district community centers. Fifteen intervention and fifteen control groups were carried out for eight weekly sessions. SSs were assessed at baseline, interim and post-intervention through face-to-face interviews. Repeated-measures ANOVA were used to assess the group changes throughout these three time-points on their self-esteem, proactive coping skills and meaning of life. Results : 181 SS were randomly assigned to intervention groups (n= 91) or control groups (n= 90). Significant group and time changes were found in self-esteem (F=4.78, p=.01), proactive coping skills (F=5.52, p=.004), and their meaning of life (F=4.49, p=.01) after the intervention. Conclusion: NT was found effective in enhancing SS' self-esteem, proactive coping skills and the meaning of life. NT could be an alternative or even a better psychosocial intervention option in helping the stroke survivors and caregivers to ensure their strengths and wisdom, reconstruct the preferred identity and hold the positive & appreciative perspective of life. Keywords : Stroke rehabilitation, life narratives, meaning of life

OP27 212-R-4

WHICH OLDER PEOPLE DECLINE PARTICIPATION IN A PRIMARY CARE TRIAL OF PHYSICAL ACTIVITY AND WHY? INSIGHTS FROM QUANTITATIVE AND QUALITATIVE DATA

Christina VICTOR¹, Annabelle ROGERS², Tess HARRIS², Allison WOODCOCK³, Sally KERRY⁴, Derek COOK⁵ (*1. School of Health Sciences and Social Care, Brunel University, United Kingdom; 2. Population Health Sciences and Education, St George's, University of London, United Kingdom; 3. Department of Psychology, Royal Holloway, United Kingdom; 4. Pragmatic Clinical Trials Unit, Queen Mary, University of London, United Kingdom; 5. Population Health Sciences and Education, St George's University of London, United Kingdom*)

Introduction : Physical activity (PA) studies with older people are often associated with low recruitment, yet little is known about non-participants. Our study aims to compare participants and non-participants in a primary care PA trial and explore reasons for non-participation. Method : 60-74 year old patients from three Thames Valley general practices were invited to participate in a pedometer-based walking intervention with nurse support. Demographic characteristics of 310 participants and 983 non-participants were compared using practice records. 310 participants and 165 non-participants completed surveys (including health status; PA levels). Non-participants rated reasons for non-participation, 15 were interviewed in more depth. Results : Trial Recruitment was 32% (310/983). Participants and non-participants were similar in age, gender, living with a partner and reported health conditions. Non-participants were more likely to report a faster walking pace (p=0.004) and lived in more deprived areas (Index of Multiple Deprivation p=0.003). Main survey reasons for non-participation were: already active (66%); time constraints (47%); lack of interest (27%). Barriers to participation from interviews included: reluctance to walk alone or in the evening; physical symptoms; slower pace in retirement; depression; time restraints; lack of interest in PA; trial duration. Conclusion : Similarities in age, gender and health conditions between participants and non-participants are reassuring, but participants tended to live in less deprived areas and reported slower walking speeds. Interviewees supported the idea of general practice based PA studies, but a shorter more flexible engagement and addressing physical symptoms and lack of confidence in pursuing PA may increase trial recruitment and uptake of practice-based PA endeavours. Keywords : Physical activity uptake

OP27 212-R-5

DOES A HOTLINE FOR GENERAL PRACTITIONERS IMPROVE THE CARE OF OLDER FRAIL PATIENTS? A PILOT STUDY

Nathalie SALLES¹, Leila DIALLO¹, Marie-neige VIDEAU¹, Marie FLOCCIA¹, Jerome CHARRIEU², Muriel RAINFRAY¹ (*1. Pole de Gerontologie Clinique, CHU Bordeaux, France; 2. Direction Generale, CHU Bordeaux, France*)

Introduction : Difficulties in managing complex situations for elderly people living in the community and lack of communication between primary care physicians and geriatric specialists may predict avoidable Emergency Department (ED) admissions for older patients. The aim of this study was to evaluate the impact of a hotline on reducing avoidable ED admissions for older patients. Methods: This experiment was set up by representatives of the Regional Union of General Practitioners (GP), and both the Pole of Gerontology and the Direction of the University Hospital of Bordeaux. The missions of the hotline were: 1) to meet the expectations of GPs by allowing a direct call with a geriatrician every day, Monday to Friday (9 AM to 7 PM) and 2) to give medical advices and alternatives to ED admissions, i.e., geriatric consultation, day hospital, and programmed geriatric medicine hospitalizations. Results: A total of 714 calls were recorded (Nov.

2010 - Feb. 2012) for the management of 230 older persons (mean age 86.2-6.2 years). The reasons for call were most of the time management of behavioral disorders (29.5%), unexplained asthenia (17%), repeated falls (13%) and complex social problems (10.3%). Only 4.3% of the patients were directly admitted to the ED and the hotline permitted to avoid ED admissions in 81.4% of cases. The hotline permitted to give advices to GPs (38.3%), and to organize geriatric consultations (5.3%), day hospital (9.2%) or hospitalization in geriatric medicine (42.9%). Conclusion : In conclusion, this hotline permitted to avoid ED admissions and to improve continuity of care for older patients. Keywords : hotline, GP, elderly

OP27 212-R-6

ACTIVATION OF THE PREFRONTAL AREA OBSERVED BY FNIRS: EFFECT OF SHAKING HANDS

Akemi KARIYA¹, Tatsumi YOSHINO², Satoshi IMAIZUMI³
(1. Health and Welfare Sciences, Gerontology Nursing, Prefectural University of Hiroshima, Japan; 2. Clinical Nurse, Kure Medical Center, Japan; 3. Health and Welfare Sciences, Prefectural University of Hiroshima, Japan)

Introduction : Hospitalization of elderly patients has been increasing in Japan. Management of delirium including hallucination and auditory hallucination after surgery and before and after treatment is important in many of these patients. The objective of this study was to collect basic data of changes in cerebral blood flow in order to develop a preventive intervention program before elderly patients develop delirium. Method : Cerebral blood flow in the prefrontal area and temporal lobe was measured using a near-infrared functional neuroimaging system in 12 college students from August to October, 2009. A total of 44 channel were used to measure the prefrontal area and temporal lobe. A Bonferroni t test ($p < 0.01$) was used to compare the data for the 7 volunteers in the main study, out of a total of 12 subjects and a t test ($p < 0.05$) for statistical analysis. Results : Blood flow based on oxy-Hb measurement decreased when subject performed calculations ($P < 0.001$). Oxy Hb was significant in the left temporal lobe. The act of Shaking hand performing a calculation establishes an amicable relationship, which is so far related to the prefrontal area. Therefore an increased oxyHb occurred or cerebral blood was activated, suggesting that Shaking hand maintained cognitive function. Conclusion : This study confirmed the effect of Shaking hands as a daily action based on changes in cerebral blood flow using f-NIRS, which can be a useful basic data in clinically care and preventive programs for delirium in elderly patients. Keywords : Elderly, delirium, shaking hands, functional neuroimaging (f-NIRS)

OP27 213-S

EDUCATION & TRAINING

OP27 213-S-1

BELOW THE SURFACE: AN EXPLORATION OF THE CHALLENGES OF COLLABORATIVE RESEARCH

Jacque EALES¹, Robin MEANS², Norah KEATING¹ (1. Department of Human Ecology, University of Alberta, Canada; 2. Faculty of Health and Life Sciences, University of the West of England, United Kingdom)

Introduction : The emphasis upon interdisciplinary research by major funders permeates the current research milieu despite the extensive literature on the challenges of collaboration in practice and the more limited literature on research collaboration itself. This paper explores the collaborative experiences of a group of gerontological researchers. Method : The focus group format was used to ask Eleven Canadian

and UK researchers to describe one positive and one negative experience of collaborative research at a workshop at the University of Alberta. The group interview was recorded on digital voice recorders and transcribed verbatim. A combination of content analysis and axial coding was used to draw out key issues at each stage of the life span of a project (establishing projects; their ongoing life; and outcomes). Results : In terms of establishing projects, the sub themes of motivations for involvement, how teams were established and whether or not common research goals existed emerged as critical to whether or not positive or negative experiences occurred. With regard to the ongoing life of projects, governance, understanding stakeholders, communication and dealing with difficult personalities were the sub themes which emerged. In terms of outcomes it became clear researchers sometimes achieved good outcomes despite unsatisfactory experiences of doing the research but that on occasions one can be faced with little choice but to withdraw from the research altogether. Conclusion : It is argued that researchers need to engage with the messy realities of collaborative research and be willing to build bridges and not barriers when the inevitable tensions inherent in this dynamic research approach appear. Keywords : connectivity; social participation; volunteering

OP27 213-S-2

TOWARD A BETTER QUALITY OF LIFE AMONG LOW-INCOME OLDER PERSONS IN URBAN AREAS

Rina Kurniasri KUSUMARATNA, Adi HIDAYAT (Public Health, Faculty of Medicine, Trisakti University, Indonesia)

Introduction : Older persons have impaired functional status, cognitive function, and depression, affecting health status and quality of life (QOL). Improving their QOL and reducing barriers to health care access are major goals of healthy ageing. The aim of study was to assess functional status, cognitive function, depression and QOL among urban low-income older persons, to develop preventive actions for achieving healthy ageing. Method : Cross-sectional study on 136 low-income urban residents aged 60+ years. Assessment of socio-demographic profile, functional status, cognitive function and depression was by 45-minute face-to-face questionnaire-based interviews, and QOL by SF-36. Recruitment was by convenience sampling from two non-institutional groups in Jakarta, managed by non-profit community foundations (PUSAKA). Respondents met Indonesian low-income criteria. Analysis of sample characteristics and variable distribution was by descriptive statistics, differences in proportions by chi-square test and differences in means of independent factors to SF-36 scores by Kruskal-Wallis test, at $p < 0.05$. Results : Respondents' mean age was 67 ± 6.2 years (range 60 - 96 years); 86% was female, 72% illiterate, 76.5% without social activities, 31.6% underweight, and 24.2% overweight. Around 30.1% had poor QOL. Age, functional independence, cognitive function and depression ($p < 0.05$) had a significant association, particularly within physical and mental domains. Conclusion : Interventions are needed that assist urban low-income older persons to manage functional independence, cognitive function and depression. Educational and multidisciplinary approaches are needed to support better QOL at community level. Keywords : Quality of life, low-income, older persons

OP27 213-S-3

DEVELOPMENT AND INITIAL VALIDATION OF THE ATTITUDES TOWARD EDUCATION FOR OLDER ADULTS (AEOA) SCALE

Hyejin KIM, Neil ABELL, Leah Powell CHEATHAM (College of Social Work, Florida State University, USA)

Introduction : The purpose of this study is to validate a new scale assessing attitudes toward elderly education. Educational programs teaching basic computer skills and how to use the Internet have been expanded in the digital era. Senior centers are significant providers of such educational programs, and social workers are highly involved with the programs. Assessing social workers' attitudes toward elderly education is critical to increase the effectiveness of the educational programs. **Method :** The 42 items in the initial pool for the Attitudes toward Education for Older Adults (AEOA) scale were developed by focusing on the three subconstructs of attitudes (cognition, emotion, and behavior) across three age groups (young-old, mid-old, and old-old). The survey was administered to 252 college students in 2012. Several reliability and validity analyses were conducted. **Results :** 38 items were retained in the final AEOA scale. All α coefficients were over .80; stratified α was .96; and the results of SEMs were acceptable. In terms of the validity, CFA indicated a good model fit: the chi-square ratio lower than 2.5, the CFI greater than 0.95, and the RMSEA and the SRMR lower than 0.08. Respondents who were older, who had work experiences with older adults, and who had positive attitudes toward older adults and aging ($r = .37, p < .01$) were positively associated with the AEOA scale. **Conclusion :** The AEOA scale was successfully developed and validated. The scale expands this area of gerontological research and provides a new tool for better assessing attitudes regarding educational opportunities for older adults. **Keywords :** older adult education, attitudes toward older adults, scale development

OP27 213-S-4

THE EFFECTS OF INCORPORATING INTERGENERATIONAL LEARNING INTO SOCIAL GERONTOLOGY COURSE

Stephanie Yu-Ching CHEN (*Adult and Continuing Education & Elder Education, National Chung Cheng University, Taiwan*)

Introduction : Many researches indicate that college students manifest slightly negative attitudes toward older adults and are reluctant to engage in occupations that entail services for elders. This study incorporated intergenerational learning into social gerontology course to improve college students' attitudes toward older adults and adopted a nonequivalent pre-post test design to evaluate the teaching effects. **Method :** The experimental group consisted of 22 college students studying "Social Gerontology," whereas the control group consisted of 26 students taking "Advanced Audio-Visual Communication." In the experimental group, we invited 25 people aged of 55 years or above to attend the class for the semester and reorganized the course design with intergenerational co-learning and reflective activities. In the control group, the students were required to perform a group assignment regarding an elderly person's life story in a digital form without elders attending the class. The evaluation tools included quantitative indicators such as knowledge about aging, attitude toward elders and behavior intention toward elders, fulfillment rates for teaching objectives, and teaching satisfaction. Furthermore, qualitative information, such as course observation, weekly reflective journal and final report for students, was included. **Results :** The results showed that all three indicators regarding aging had significant differences, the fulfillment for teaching objectives corresponded with the previous results, and the teaching satisfaction evaluations indicated high scores. **Conclusion :** Based on these results, we propose that long-term participation in intergenerational learning is an impetus not only for transforming college students' aging knowledge and attitudes toward elders but also their inclination to serve elders. **Keywords :** Intergenerational learning, elder education

OP27 213-S-5

THE MODEL DEVELOPMENT OF QUALITY ASSURANCE FOR ELDERLY CARE ASSISTANT

Siriphan SASAT¹, Branom RODCUMDEE¹, Tuanjai PUKDEEPROM²
(1. *Faculty of Nursing, Chulalongkorn University, Thailand*;
2. *Medical Department, Surathani General Hospital, Thailand*)

Introduction : Socio-economic trends in Thailand are challenging the ability for older adults to remain in their homes can cared for by family members when health care needs emerge. Nearly half (48%) of older Thai people have chronic illnesses (TGRI, 2008) which may lead to increasing disability, dependency and need long-term care. Families and older persons, seeking extra help in the home has fueled the growth of the elderly care assistant industry. Without clear quality assurance guidelines for training programs, elder care assistants may function beyond the scope of their abilities with the potential for elder abuse or being exploited themselves. **Method :** A qualitative research method with focus group interviews and public hearings were conducted with key stakeholders to study the preferable characteristics of care assistants and a quality assurance model for elder care assistant training programs. **Results :** Content analysis revealed that desirable characteristics of elderly care assistants should consist of 3 components; knowledge, attitude and practice. The model development of quality assurance for elderly care assistant consisted of 8 components; applicants, admission, teaching and learning, management, financial and budget, graduate, follow-up graduate, and system and mechanism of quality assurance. Each component can be explained in 3 types of quality measures, including a descriptive index, a qualitative index and quantitative indicators. **Conclusion :** All elder care assistant training schools are encouraged to incorporate quality assurance methods and to evaluate the application process in their training programs. **Keywords :** Elder Care Assistant, Model Development, Quality Assurance

OP27 214-S

END-OF-LIFE CARE II

OP27 214-S-1

FACTORS OF GOOD COLLABORATION FOR END-OF-LIFE CARE AT HOME: QUESTIONNAIRE SURVEY TO JAPANESE HOMECARE NURSES, CARE MANAGERS AND HOME HELPERS

Noriko YAMAMOTO-MITANI¹, Yuko OKAMOTO², Ayumi IGARASHI², Miho SUZUKI¹, Masakazu NISHIGAKI¹, Maiko WATANABE¹ (1. *Adult/ Palliative Care Nursing, U of Tokyo, Japan*;
2. *Gerontological Nursing, Tokyo Medical & Dental U, Japan*)

Introduction : There is a pressing need to learn how we can collaborate inter-professionally in providing end-of-life care for the elderly at home. **PURPOSE:** To identify factors of "good collaboration" as it is evaluated by the professionals. **Method :** Participants were homecare nurses, care managers, and home helpers with experiences of collaboration with the other two professionals in providing end-of-life care. In a cross-sectional questionnaire survey, we asked them to report actual collaborative activities for a recent case as well as their evaluation regarding their collaboration for this case. Logistic regression analyses were used to examine the factors of good collaboration. **Results :** Questionnaires from 109 nurses, 129 care managers, and 63 home helpers were used where data were available on collaborative activities among all three parties. Among homecare nurses, working with a care manager with whom they had multiple collaborative experiences, the client being independent for their toileting soon before the death, and sharing information regarding the

client's end-of-life decision with home helper at 1 month before dying, were significant factors. For care managers, the client being dependent for their toileting, needing palliative care and having such symptoms as edema or fever at 1 month before dying were significant factors. For home helpers, working at the agency with fewer collaborative agencies, having inter-agency conference 1 week before dying, and sharing information with homecare nurse regarding the current condition 1 month before dying, were significant factors. Conclusion : The results highlighted characteristics of how each professional seeks to collaborate in providing end-of-life care. Keywords : End-of-life care, interprofessional collaboration, homecare nurses

OP27 214-S-2

CARE MANAGERS' CONFIDENCE IN PROVIDING END-OF-LIFE CARE FOR THE OLDER PERSON AT HOME IN JAPAN

Maiko WATANABE¹, Noriko YAMAMOTO-MITANI¹, Yuko OKAMOTO², Ayumi IGARASHI², Masakazu NISHIGAKI¹, Miho SUZUKI¹ (1. *Adult Nursing / Palliative Care Nursing, University of Tokyo, Japan*; 2. *Gerontological Nursing, Tokyo Medical and Dental University, Japan*)

Introduction : Care managers are expected to coordinate end-of-life care services for the older person at home in Japan. The objective of this study was to examine care managers' confidence in providing end-of-life care for the older person at home and its factors. Method : Subjects of this cross-sectional survey were care managers from 1,200 agencies in Japan that were selected randomly from the national database. Subjects were asked about their overall confidence in providing end-of-life care for the older person at home. Their demographic characteristics and professional experience were also asked. Multiple logistic regression analysis was used to examine the factors of care managers' confidence. Results : Four-hundred and fifty eight valid responses (response rate = 39.4%) were obtained. Ninety-four (20.2%) were men, their mean age was 49.2 years (SD = 8.8), and years of experience as care managers was 7.1 years (SD = 3.1). Background professional licenses were: 228(49.8%) care workers, 129 (28.2%) nurses, 28 (6.1%) home attendants, and 50 (10.9%) social workers. Care managers who expressed confidence in providing end-of-life care at home was 335 (59.9%). Multiple logistic regression analysis showed that significantly more care managers with registered nursing license showed confidence in end-of-life care than those without nursing license (OR 2.71, 95% CI 1.26-4.74) after adjusting for demographic variables as well as variables pertaining to their experiences as care managers. Conclusion : To improve confidence in care managers' end-of-life care, we need to learn more the educational needs of those without nursing license and provide them appropriate education. Keywords : End-of-life care, Confidence, Care managers

OP27 214-S-3

ONLINE RESOURCES SUPPORTING END OF LIFE CARE

Jennifer TIEMAN (*Palliative and Supportive Services, Flinders University, Australia*)

Introduction : Patterns of disease, dying and death are changing as the world's population ages, and as serious life-limiting illnesses such as dementia, cardiovascular and respiratory diseases, and cancer increase. People affected by the need for palliative care such as patients and aged care residents and their family, carers and friends as well as the health professionals providing their care, need access to evidence-based information on end-of-life issues. Method : A project to develop an online resource to meet the palliative care information needs of health and social professionals and of health consumers was funded by the Australian Government's Department of Health and Ageing in

2006. Working with clinical, community and policy stakeholders from across Australia, the project team designed, developed and tested a web-based set of palliative care resources. Results : The CareSearch website (www.caresearch.com.au) was launched in May 2008. Among the resources to support clinicians and health consumers are knowledge hubs (including a Residential Aged Care Hub), patient and carer information and tools, search filters that facilitate access to the existing and emerging literature and evidence, and a research data management system. Each month, more than 40,000 visitors use the site and over 400,000 content pages are viewed. Conclusion : The CareSearch Project has developed evidence-based resources to support palliative care across the community. The needs of older people as they approach the end-of-life have been explicitly recognised in the structure and content of the website. Keywords : palliative, end of life, website

OP27 214-S-4

THE INVISIBLE NETWORK OF 'HANDS ON' CAREGIVERS AT THE END OF LIFE

Catherine Mary BURNS¹, Currow C. DAVID², Amy P. ABERNETHY³ (1. *Discipline of Palliative & Supportive Services, School of Medicine, Flinders University, Australia*; 2. *Professor, Palliative & Supportive Services, School of Medicine, Flinders University, Australia*; 3. *Division of Medical Oncology, Department of Medicine, Duke University Medical Center, USA*)

Introduction : Aim This population study seeks to explore the nature of bereavement over the life course and examine caregiver activity within this setting. Method : An Australian study conducted an annual randomized health population survey (n=23,706) to obtain a sample of self-identifying bereaved (n=7915). This group was closely representative of the total population in most key socio-demographic details including gender, marital status, income, occupation, place of residence and birth. Results : People of all ages indicated they undertook 'hands on' care at the end of life. The core group of 'active caregivers' did so on a daily or intermittent basis (22%), with a further 7% engaged on a rare basis. They were related to the deceased either as close family, that is a spouse, parent or child or as a sibling, extended family member or a friend. People married for a long time sought to care for their spouses till death including some people aged over 80 years. Surprisingly, 14% of active caregivers were young, aged between 15 and 29 years. A distinctive profile based on availability drove caregiving amongst the middle years. Females most likely to provide daily 'hands on' care had frequently never married or were widowed. Siblings, Extended Family members and Friends accounted for more than half (n=1222) of the 2028 respondents. Conclusion : This substantial network of supportive caregivers is mainly invisible to the health team. Clinical practice changes are urgently needed to identify potential social support that could be an important resource for patient end of life planning and care. Keywords: end-of-life care, caregivers, 'invisible network'

OP27 214-S-5

IMPACTS OF A PALLIATIVE CARE PROGRAM ON OLD AGE HOME STAFF'S WILLINGNESS, COMPETENCIES AND SELF-CARE: A PROSPECTIVE COHORT STUDY

M.F. Edward LEUNG¹, M.C. Samantha PANG², Y.L. Helen CHAN³, Y.K. Erica NG¹ (1. *Research and Development Division, Hong Kong Association of Gerontology, Hong Kong*; 2. *School of Nursing, The Hong Kong Polytechnic University, Hong Kong*; 3. *The Nethersole School of Nursing, The Chinese University of Hong Kong, Hong Kong*)

Introduction : Promoting palliative care to frail older people has

widely been advocated. While considerable attention has been given to identifying care needs of the older people, little is known about the readiness of the care home staff for the care provision. Method : This was a prospective cohort study aimed to examine the impacts of a Palliative Care Program in four old age homes. It is a multidisciplinary comprehensive program with educational and clinical components. A specialized room was also set up for residents in need of intensive palliative care. The effects of the program were evaluated at baseline (T1) and after 12 months (T2). Of the various outcome measures, influence of the program on care home staff was assessed in terms of their willingness, competencies and self-care related to palliative care provision by means of a 16-item questionnaire. Results : There were 247 and 225 completed questionnaires at T1 and T2 respectively. Almost half of the respondents were frontline staff, with more than five years of clinical experience. Their mean scores at baseline were 3.31 ± 0.60 (willingness), 2.81 ± 0.68 (competencies), and 3.31 ± 0.66 (self-care). Significant improvement was noted in competencies (mean change: $+0.16$, $p=0.012$) and self-care (mean change: $+0.27$, $p=0.000$) over the study period. Conclusion : Findings of the study showed the program is effective in improving knowledge and skills for the care delivery, in particular among the frontline staff. The program was also effective in enhancing self-care in view of stress arise from caring for residents near the end of life. Keywords : End-of-life

OP27 215-S **CENTENARIANS & LONGEVITY**

OP27 215-S-1 **CROSS-NATIONAL COMPARISONS IN FUNCTIONAL CAPACITIES AMONG CENTENARIANS**

Jimyoung CHO¹, Keonyeop KIM², Peter MARTIN³, Hyunjee KIM⁴, Marcia G. ORY⁵, Leonard POON⁶ (1. Center for Applied Health Research; School of Rural Public Health, Scott & White Healthcare; Texas A&M Health Science Center, USA; 2. School of Medicine, Kyungpook National University, Korea; 3. Gerontology Program, Iowa State University, USA; 4. School of Medicine, Chungnam National University, USA; 5. School of Rural Public Health, Texas A&M Health Science Center, USA; 6. Institute of Gerontology, University of Georgia, USA)

Introduction : The importance of functional capacity among oldest-old adults is now well documented. The purpose of this study was to investigate cross-national differences in functional capacities of centenarians from two countries: United States and South Korea. Method : One hundred and seventeen centenarians from the Georgia Centenarian Study in the United States (US) and seven hundred eighty centenarians from a census survey of the Korean National Statistical Office were used. Ten items of functional capacity were compared: using the telephone, shopping, doing housework, taking medicines, handling money, eating, dressing, walking, getting in and out of bed, and taking a bath. Results : Results showed that the Georgia centenarians were more likely to report fewer problems going shopping, taking medicines, handling money, eating, dressing, walking, and taking a bath than the Korean centenarians. Chi-square comparisons yielded significant differences in using the telephone, $\chi^2(1, N= 897) = 334.33$, $p < .001$; shopping, $\chi^2(1, N= 897) = 150.38$, $p < .001$; taking medicines, $\chi^2(1, N= 897) = 29.05$, $p < .001$; handling money, $\chi^2(1, N= 897) = 19.63$, $p < .001$; eating, $\chi^2(1, N= 897) = 15.90$, $p < .001$; dressing, $\chi^2(1, N= 897) = 22.77$, $p < .001$; walking, $\chi^2(1, N= 897) = 6.48$, $p < .05$; and taking a bath, $\chi^2(1, N= 897) = 71.63$, $p < .001$. Conclusion : These results emphasize the importance of considering cross-national differences in functional capacity in very late life. This study highlights the role of culture in everyday life

among oldest-old adults and longevity in different geographical and social contexts. Keywords : Centenarians, Functional Capacity, Cross-national comparisons

OP27 215-S-2 **ALTERNATIVE MEASURES OF HEALTH RATINGS FOR PREDICTING MORTALITY: IS PAST OR FUTURE ORIENTATION MORE IMPORTANT?**

Kenneth F. FERRARO, Lindsay R. WILKINSON (Center on Aging and the Life Course, Purdue University, USA)

Introduction : The purpose of this study was to compare the prognostic validity of alternative measures of health ratings, including those that tap temporal reflections, on adult mortality. Method : The study uses a national sample of 3,032 Americans surveyed in 1995, with vital status tracked through 2005, to compare the effect of three types of health ratings on mortality: standard indicator for self-rated health (SRH), social comparison form of SRH, and health ratings that incorporate temporal dimensions. Logistic regression was used to estimate the odds of mortality associated with alternative health ratings while adjusting for health conditions, lifestyle factors, and status characteristics. Results : Although self-rated health was a consistent predictor of mortality, temporal orientation to health was an independent predictor. Future health expectations were more important than past (recalled change) in predicting mortality risk: people with more positive expectations of future health were more likely to survive. Conclusion : The findings reveal the importance of future-time perspective for older people, and suggest that it is more useful to query older people about their future health expectations than how their health has changed. Keywords : survival, health ratings

OP27 215-S-3 **TRAJECTORIES OF POSITIVE AGING: OBSERVATIONS FROM THE WOMEN'S HEALTH INITIATIVE STUDY**

Oleg ZASLAVSKY¹, Nancy Fugate WOODS², Barbara COCHRANE³, Andrea LACROIX⁴ (1. Department of Nursing, University of Haifa, Israel; 2. Biobehavioral Nursing and Health Systems, University of Washington, USA; 3. Family and Child Nursing, University of Washington, USA; 4. Public Health Science Division, Fred Hutchinson Cancer Research Center, USA)

Introduction : Our analyses of data from the Women's Health Initiative participants yielded a two-factor index of positive aging: physical-social functioning and emotional functioning. Next, we described trajectories of positive aging indicators over time and differentiated among women by identifying those baseline characteristics that predict trajectory group membership. Method : Women ages 65 years and older who enrolled in one or more clinical trials and had data collection points on the positive aging indicators were included in these analyses (N=2,281). We used Group Based Trajectory Modeling to identify distinct subgroups of individuals, following a similar pattern of change over time on both dimensions of positive aging and multinomial logistic regression to identify baseline predictors of these trajectories. Results : A 5-trajectory model has been chosen to represent the data. These trajectories included Low Maintainer, Low Improver, Moderate Decliner, Moderate Maintainer and High Maintainer groups for Physical-Social function and Low Maintainer, High Improver, Moderate Decliner, Moderate Maintainer, High Maintainer groups for Emotional function. Using the Low Maintainers as the reference category High Maintainer group of Physical Social function was younger, lighter, had fewer symptoms of depression, chronic conditions or other somatic symptoms, was predominantly non-white, had less pain, was more physically active, had higher

optimism and had either moderate or mild alcohol consumption. Conclusion : This research has demonstrated that aging women are heterogeneous in terms of positive aging indicators over time. A number of distinct baseline characteristics had significant effect on a membership in each of the longitudinal trajectories. Keywords : positive aging, longitudinal trajectories, women's health initiative

OP27 215-S-4

DERIVING NORMATIVE VALUES FOR THE MMSE AND ACE-R FOR THE OLDEST-OLD

Melissa J. SLAVIN¹, Katrina GISKES¹, Charlene LEVITAN², Nicole A. KOCHAN², Henry BRODATY¹, Perminder S. SACHDEV² (1. Dementia Collaborative Research Centre, The University of New South Wales, Australia; 2. Centre for Healthy Brain Ageing, The University of New South Wales, Australia)

Introduction : The Mini-Mental State Examination (MMSE) and the revised Addenbrooke's Cognitive Examination (ACE-R) are tools used to estimate current cognitive status and screen for possible dementia. Their diagnostic utility among the oldest old (i.e. 95+ years) is limited due to lack of normative data and failure to account for sensory impairment. Method : Data from 200 men (29.5%) and women aged ≥95 years (mean age=97.3, SD=2.3 years) enrolled in the Sydney Centenarian Study (Australia) were used to establish normative values for these scales, and their association with a range of sociodemographic and sensory factors was examined. Results : Missing data, largely due to sensory impairment, was a significant issue: 18.3% of participants had a reduced MMSE denominator of 28 or below, 14.5% had a reduced ACE-R denominator of 90 or below. Scores were prorated for missing data, and still normative values for this age group were considerably lower than currently-used cut-offs derived from younger age groups. Mean prorated MMSE was 21.7 (SD=6.1), mean prorated ACE-R was 63.1 (SD=18.1). Residents of residential aged care facilities, participants with 10 years or less education, and participants with hearing or visual impairments were more likely to have low scores. Conclusion : Normative data specific to this age group are required for valid diagnostic classification, and such data need to take into account sensory impairment. The difficult task of teasing apart the relative contribution of sensory impairment versus genuine biological ageing is discussed further. Keywords : Cognition, Normative, Oldest-old

OP27 215-S-5

CHRONOLOGICAL EVALUATION OF SOCIO-ECONOMIC STATUS AND HEALTHY LIFE EXPECTANCY INDICATORS OF JAPANESE URBAN ELDERLY AND ASSESSMENT OF CAUSAL INTER-RELATIONSHIPS

Suwen YANG, Tanji HOSHI, Shuo WANG, Naoko NAKAYAMA, Fanlei KONG (Graduate School of Urban Environmental Science, Tokyo Metropolitan University, Japan)

Introduction : This study was conducted to make a chronological evaluation over 3 years of socio-economic status (SES) and healthy life expectancy (HALE) indicators (including activity limitation, chronic diseases and self-rated health) among Japanese urban elderly. Method : A questionnaire survey was administered to all people aged 65 years and over in A city in Tokyo in September 2001, and 13,195 (response rate of 80.2%) people answered. Then, a follow-up study was conducted in 2004. The data on 8,162 subjects were collected for analysis. Data analysis was performed using Structural Equation Modeling (SEM) by AMOS 17.0 for Windows. Results : The data were well fit by the models, with a NFI of 0.976, CFI of 0.978 and RMSEA of 0.033. SES in 2001 was observed to be significantly

predictive of each indicator, but the effects were minor for both sexes. The activity limitation in 2004 was found to be well explained by SES, self-rated health and chronic diseases (R² = 0.64 of men and R² = 0.66 of women). Chronic diseases were predictive of both self-rated health and activity limitation; however, the indirect effect of chronic diseases on activity limitation via self-rated health was stronger rather than its direct effect. Conclusion : It was suggested that SES as significant predictors of HALE; reducing chronic diseases and self-rated good health maybe predictive of decreasing activity limitation of elderly populations. Further research needs to be done to assess independent contributions of each HALE indicator on future mortality of the elderly. Keywords : socio-economic status ,healthy life expectancy indicators , structural causal relationship

OP27 215-S-6

LONGEVITY BLUE ZONES: A FIRST ATTEMPT TO IDENTIFY COMMON LONGEVITY DETERMINANTS

Michel POULAIN¹, Gianni PES², Anne HERM³, Christina CHRYSOHOOU⁴ (1. Estonian Institute for Population Studies, Tallinn University, Belgium; 2. Department of Clinical and Experimental Medicine, Università degli Studi di Sassari, Italy; 3. Estonian Institute for Population Studies, Tallinn University, Estonia; 4. Department of Cardiology, Athens Medical School, Greece)

Introduction : Longevity may be related to individuals (individual longevity) or to a populations as a whole (population longevity). When searching for the determinants of population longevity, the chance to find more powerful predictors is increased when most persons concerned are born and live in the same place and are more likely to share the same genetic make-up, early life conditions, traditional habits including the local diet. Method : The concept of Longevity Blue Zone (LBZ) has been defined as a rather limited geographical area where people share the same lifestyle and environment and whose exceptional longevity has been validated convincingly. This study is a first attempt to find common longevity determinants across the four LBZs identified so far. Results : LBZ populations are geographically and/or historically isolated. Island and mountains are favorable locations. The common characters that emerged from our surveys are a traditional lifestyle including locally produced food, an intense physical activity prolonged above 80, a reduced level of stress and large family and community support for the oldest olds. Conclusion : This is likely to have facilitated the accumulation of ideal conditions capable to limit the impact of the negative health factors found in most Western populations. These people experienced the epidemiological transition - and its implications - in relative recent times, and have succeeded in creating a delicate balance between the benefits of the traditional lifestyle and those of modernity (increased wealth, better medical care). All these factors could have promoted an ideal milieu for the emergence of long-lived phenotypes at the population level. Keywords : Longevity Centenarians Bluezones

OP27 216-S

FALLS I

OP27 216-S-1

CONCERN ABOUT FALLING IN OLDER WOMEN WITH A HISTORY OF FALLS: ASSOCIATIONS WITH HEALTH, FUNCTIONAL ABILITY, PHYSICAL ACTIVITY AND QUALITY OF LIFE

Radhika PATIL, Kirsti UUSI-RASI, Pekka KANNUS, Saija KARINKANTA, Matti PASANEN, Harri SIEVANEN (Accident and Osteoporosis Unit, The UKK-Institute for Health Promotion Research, Tampere, Finland)

Introduction : Fear of falling has been linked to activity restriction, functional decline, decreased quality of life (QoL) and increased risk of falling. Factors that distinguish persons with high concern about falling from those with low concern have not been systematically studied. This study aims to identify and explore potential health-related, functional and psychosocial factors that correlate with fear of falling in community-dwelling women aged 70-80 years, who had fallen in the past year. **Method :** Baseline cross-sectional data of 409 women recruited from Tampere, Finland as participants of a randomised controlled trial for falls prevention (NCT00986466) were used. Participants were classified according to their level of concern about falling using the Falls Efficacy Scale International (FES-I). Multinomial logistic regression analyses were performed to study associations between health-related variables, functional performance tests, current level of physical activity, QoL scores and FES-I score. **Results :** 68% of the participants reported moderate/high concern (FES-I ≥ 20) about falls. Multinomial logistic regression showed that highly concerned women were significantly more likely to have poorer health, lower functional ability and QoL. Lower scores for instrumental activities of daily living, outdoor mobility and QoL, and perceived hindrance due to impaired balance contributed independently to greater concern about falling. **Conclusion :** Concern about falling was highly prevalent in our sample of community-living older women. Particularly, poor perceived general health and mobility constraints contributed independently to the difference between high and low concern of falling. Knowledge of these associations may help in developing interventions to reduce fear of falling and avoidance of activity in old age. **Keywords :** aging, fear of falling, falls efficacy, functional ability, well-being, correlates

OP27 216-S-2

UNDERSTANDING FALL RISK IN ACUTE MENTAL HEALTH SETTINGS

Angela DICKINSON¹, Venkat NARAYANAN², Charles SIMPSON¹, Christina VICTOR³, Caroline GRIFFITHS², Deborah HUMPHREY² (1. Centre for Research in Primary and Community Care, University of Hertfordshire, United Kingdom; 2. Older Adults, Oxford Health NHS Foundation Trust, United Kingdom; 3. School of Health Sciences and Social Care, Brunel University, United Kingdom)

Introduction : Falls are the most commonly reported patient-safety incident in mental health settings for older people with approximately 36,000 falls reported from these settings annually in the UK. Risk of falling is exacerbated by mental health problems and their treatments. However, we have little understanding of how fall risk is perceived by patients in these care settings or staff and senior managers. This paper will present initial findings from a mixed-methods exploratory case study. **Method :** Retrospective analysis of routine falls reporting data for a 12 month period, non-participatory observation (300+ hours), focus-groups with staff (n=5) and interviews with patients (n=23), staff (n=20) and senior managers (n=6). **Results :** Falls were not evenly distributed across the course of the day, with peaks occurring in the morning, and early afternoon. Temporally-determined flows of activity (e.g. meal times) and use of space by staff, patients and visitors to the ward contribute to these patterns and are potential contributory factors to falls in these settings. **Conclusion :** Understanding of falls by patients with mental health conditions reflect the extrinsic and intrinsic perspectives of older people in other settings, however, psychiatric medication, patient behaviour and unfamiliar environment is perceived to add to fall risk by patients and staff. Routinely collected data, enhanced by patient and staff reflection and observation can aid understanding of factors contributing to falls in acute mental health settings. Data of this nature could be used by

organisations seeking to manage risk, improve patient safety, and develop appropriate interventions. **Keywords :** Falls, Mental health

OP27 216-S-3

FALLS PREVENTION RESEARCH IN DEVELOPING COUNTRIES: CHALLENGES AND OPPORTUNITIES

Shanthi JOHNSON (Kinesiology and Health Studies, University of Regina, Canada)

Introduction : Falls are a major threat to the health of older adults. In addition, many older adults have compromised functional capacities marked by indicators such as mobility limitations associated with increased rates of falls. While it has been estimated that seventy percent of the world's older adults are and will be in developing countries, most of the research in the area of functional capacity and falls emerge from developed countries. As a result, considerable research gap exists in the context of developing countries. **Method :** The methods includes a systematic review of the literature; **Results :** This presentation will highlight several conceptual and methodological challenges and opportunities for functional capacity and falls research through the analysis of publications in this area including the functional capacity, frailty, and falls studies in India. Specific attention will be paid to issues related to study design, sampling issues, definitions of constructs, measures, and data collection. Opportunities to promote culturally appropriate innovative research and to develop evidence-based health promotion strategies such as exercise program as well as falls prevention programs for older adults are discussed. **Conclusion :** Falls prevention research is important in the context of both developed and developing countries. Further research is needed especially from the developing countries perspective. **Keywords :** falls prevention, developing countries, injury prevention

OP27 216-S-4

HOME EXERCISE FOR OLDER PEOPLE WITH MILD BALANCE DYSFUNCTION: RESULTS OF IMPLEMENTATION OF A SUCCESSFUL RANDOMISED TRIAL THROUGH COMMUNITY HEALTH SETTINGS

Keith D. HILL¹, Claudia MEYER², Frances BATCHELOR³, Sue WILLIAMS³, Kirsten MOORE³, Leslie DOWSON³, Karen BORSCHMANN⁴, Julie SIMPSON⁵, Shyamali DHARMAGE⁵, Xiao Jing YANG³ (1. School of Physiotherapy, Curtin University, Australia; 2. Faculty of Health Sciences, La Trobe University, Australia; 3. Public Health Division, National Ageing Research Institute, Australia; 4. School of Physiotherapy, The University of Melbourne, Australia; 5. School of Population Health, The University of Melbourne, Australia)

Introduction : Older people with mild balance dysfunction often do not seek health professional advice. This presentation reports findings from a randomised controlled trial (RCT) evaluating effectiveness of a home based exercise program to improve balance in older people with mild balance dysfunction, and a followup study evaluating implementation of the approach through community health centres. **Method :** The RCT involved 165 community dwelling older people reporting concerns regarding balance, identified as having mild balance impairment (mean age 80 years). The intervention group received an individualised home exercise program (balance, strength, walking), and intermittent home visits by a physiotherapists for 6 months to review the program. Control participants were encouraged to maintain usual activities. In the Implementation Trial (IT), 29 physiotherapists (six community health centres) were trained in the approach utilised in the RCT, and implemented the program for 71 older people (77.3+/-6.5 years) with mild balance dysfunction.

Results: In the RCT, 72% of the exercise group completed the exercise program, and achieved significant improvement relative to the control group for Functional Reach, Step Test, hip abductor strength, and gait step width ($p < 0.0024$). Almost 25% of the exercise group regained balance within normal limits. Similar results occurred in the Implementation Trial, with 80% completing the program, 26% regaining balance within normal limits, and significant improvements in Functional Reach, Step Test and quadriceps strength ($p < 0.05$). Conclusion : An individualised home exercise program that was effective in improving balance in older people with mild balance dysfunction in a RCT was equally effective when implemented through through community health centres. Keywords : balance, exercise, elderly

OP27 216-S-5

TRANSLATING FALLS PREVENTION KNOWLEDGE FOR COMMUNITY-DWELLING PEOPLE WITH DEMENTIA: HOW AND WITH WHOM?

Claudia MEYER¹, Sophie HILL², Keith HILL³, Briony DOW⁴
(1. School of Physiotherapy, LaTrobe University, Australia; 2. Australian Institute for Primary Care and Ageing, LaTrobe University, Australia; 3. School of Physiotherapy, Curtin University, Australia; 4. Health Promotion Division, National Ageing Research Institute, Australia)

Introduction : A mixed method systematic review was undertaken to explore empirical evidence of knowledge translation (KT) interventions, plus perceptions of communication and participation, in preventing falls in community-dwelling older adults living with dementia. Method : Eight health and gerontology databases were searched (1990-2012). Search terms were “falls” and “community”, with identification of papers about KT interventions, including hand-searching of reference lists. Included studies had a population of community-dwelling people living with dementia and/or their caregivers. Interventions of falls prevention KT and outcomes were based on a unique taxonomy encompassing fall-related factors and communication/ participation in healthcare. Results : Two hundred and seven of 14311 titles/abstracts were retrieved as full-text. Two independent reviewers identified ten articles for detailed data extraction. Three randomized controlled trials; two pre-post design; and five qualitative papers, of mixed quality, were subjected to a mixed method synthesis. KT interventions included ‘inform and educate’ (5); ‘support behavior change’ (3); ‘teach skills’ (4); and ‘facilitate communication and/or decision-making’ (1). Outcomes for quantitative papers included falls, injury, hospitalization and residential care admission rates; health behaviour; involvement in care; and health status. Qualitative papers identified ‘perceptions of older people for communication of falls prevention strategies’. Mapping of the qualitative and quantitative literature provided insights for provision of falls prevention programs - the importance of the caregiving dyad; accommodation of individual preferences; and health professional involvement. Conclusion : This review provides a rich and practical understanding of translating falls prevention knowledge for people living with dementia, identifying both useful strategies and gaps for further research. Keywords : falls, dementia, knowledge translation

OP27 216-S-6

THE DETERMINANTS OF FALL PREVENTION BEHAVIORS AMONG OLDER ADULTS: KNOWLEDGE, ATTITUDES, AND SOCIAL RESOURCES

Chih-I TENG¹, Chia-Ming CHANG² (1. Institute of Gerontology, College of Medicine, National Cheng Kung University, Taiwan;

2. Division of Geriatrics and Gerontology, Department of Internal Medicine, National Cheng Kung University Hospital, Taiwan)

Introduction : Considerable evidences indicated the effectiveness of a number of interventions on falls prevention. While translating these evidence-based researches into practice, practitioners and health care professionals have been facing reluctant attitudes and low compliance from older people. This research is aiming for an in-depth study among older adults’ knowledge, attitudes and the social resources related to fall prevention, in order to explore the interactions as well as key factors among these determinants and behaviors. Method : The structured questionnaire assessed the determinants of fall prevention behaviors, including knowledge, attitudes and social resources related to fall prevention. Older adults aged 65 or more were sampled from an emergency department of a medical center in southern Taiwan. Demographic information, underlying diseases, fall history and presentations at the ED were collected. Results : A total of 200 questionnaires were enrolled. The presence of fall prevention resources was associated with fall prevention knowledge and attitudes. In addition, fall prevention behaviors were adopted worse among older adults with poor knowledge or negative attitudes toward fall prevention behavior. Conclusion : This study revealed further evidences of the interactions among social resources, knowledge and attitudes of older adults’ behaviors related to fall prevention. Fall prevention intervention in future should target at these determinants to design suitable messages, choose effective dissemination channels and build supportive environment (like multiple medical and social services) to promote the benefit of fall prevention and improve older adults to uptake fall prevention behaviors. Keywords : older adults, fall prevention behaviors

OP27 218-B

CENTENARIAN AND POSITIVE AGING

OP27 218-B-1

WHY NONAGENARIANS DO NOT BECOME CENTENARIANS IN BRAZIL?

Angelo Jose G. BOS, Andrea Ribeiro MIRANDOLA, Andressa LEWANDOWSKI, Andre RIBEIRO (Institute of Geriatrics and Gerontology, Pontifical Catholic University of Rio Grande do Sul, Brazil)

Introduction : The 2000 Brazilian Census identified 261,200 90+ years old habitants. After 10 years only 24,236 (9.3%) were 100 years old according to the 2010 Census. This study aimed to identify and report on the causes that led 236,964 nonagenarians in 2000 not been centenarians in 2010. Method : Through consultation of the National Death Registration database (DATASUS) we identify the leading causes of death among those who were nonagenarians in 2000, born before July 1st, 1910. Between 2000 to 2010 the number of deaths from specific causes was recorded. The specific causes of death were described according to the ICD10. The analyzes were performed using data from two censuses (2000 and 2010) and by DATASUS (2000 to 2010). Results : We identified 221,977 deaths (93.7%) between 2000 to 2010 in those born before July 1st 2010. The five leading causes of death of potential centenarians were: 'Death Without Health Care' in 31,429 (14.2%), followed by 'Other Abnormal Signs and Symptoms' (undefined causes) of 24,731 deaths (11.2%), 'Cerebrovascular diseases' with 22,335 deaths (10.1%), 'Other Heart Disease' with 20,713 deaths (9.3%) and 'pneumonia' with 19,544 (8.8%), accounting for over 50% of the deaths. Conclusion : We found a significant number of deaths without medical assistance. We believe that the lack of attention given to the health of Brazilians aged 90 or older would be

the leading cause of death in this segment of the population that has grown 80% in the period surveyed, in contrast to the 1.4% fall in the number of centenarians in the country. Keywords : Longevity survival, Death cause, Pontential centenarians

OP27 218-B-2

CLINICAL AND FUNCTIONAL PHENOTYPES OF SUPERCENTENARIANS IN JAPAN

Yasumichi ARAI¹, Hiroki INAGAKI², Yukiko ABE¹, Michiyo TAKAYAMA³, Yasuyuki GONDO⁴, Nobuyoshi HIROSE¹ (1. Geriatric Medicine, Keio University, Japan; 2. Research Team for Promoting Independence of the Elderly, Tokyo Metropolitan Institute of Gerontology, Japan; 3. Center for Preventive Medicine, Keio University, Japan; 4. Clinical Thanatology and Geriatric Behavioral Science, Osaka University, Japan)

Introduction : Exponential growth of the number of centenarians in these two decades offers an opportunity to examine a new elite group that is supercentenarians (SC). Method : We followed 249 Tokyo centenarians study cohort (mean age 100.5 years) and 353 semisupercentenarians (SSC, mean age 106.2) study cohort for all-cause mortality by annual telephone or mail survey, and identified 85 SC (110 years or older, 7 men and 78 women) by April 2011. All SC were visited by geriatricians at least one time before or after they reached 110. We evaluated SC's medical history, activities of daily living (Barthel index), cognitive function (mini-mental scale examination, MMSE), and blood chemistry, and compared with those of younger centenarians (YC, centenarians who died between 100-104 years), and SSC (died between 105-109 years). Results : As compared to YC and SSC, SC were characterized by lower prevalence of hypertension (p=0.051), and higher prevalence of fragile fracture (p=0.022). There was no significant difference in the prevalence of stroke, coronary heart disease, or non-skin cancer between YC, SSC and SC. When they were at age 100-101, SC exhibited higher score of Barthel index and MMSE (both p<0.001) and higher serum albumin levels than YC or SSC at the corresponding age. Conclusion : These results suggest that SC represent a more elite phenotype of healthy aging than YC and SSC. Keywords : longevity, centenarians, functioning

OP27 218-B-3

STRESS RESPONSE AND EXCEPTIONAL LONGEVITY: CLUES FROM THE HPA AXIS OF CENTENARIAN ROTTWEILER DOGS

David J. WATERS¹, Aimee H. MARAS², Huiping XU³, Seema S. KENGERI², Emily C. CHIANG², Naomi N. KARIUKI⁴ (1. Center for Exceptional Longevity Studies, Gerald P. Murphy Cancer Foundation, Department of Veterinary Clinical Sciences, Center on Aging and the Life Course, Purdue University, USA; 2. Center for Exceptional Longevity Studies, Gerald P. Murphy Cancer Foundation, USA; 3. Department of Biostatistics, Indiana University School of Medicine, USA; 4. Department of Veterinary Clinical Sciences, Center on Aging and the Life Course, Purdue University, USA)

Introduction : An age-related loss of hypothalamic-pituitary-adrenal (HPA) axis resilience can result in hypercortisolism, which has been linked to an array of adverse outcomes including cognitive impairment, insulin resistance, immune suppression, and progressive cancer growth. To better understand the biological mechanisms and adaptive capacities that contribute to highly successful aging, we studied exceptionally long-lived Rottweiler dogs that, similar to human centenarians, had achieved a duration of longevity that exceeds by more than 30% their breed-specific norm. Method : We

hypothesized that highly successful aging might be associated with a preservation of HPA resilience and life-long avoidance of hypercortisolism. The HPA axis of 28 canine centenarians was evaluated by determining: basal plasma cortisol, aldosterone, and ACTH concentrations; post-ACTH challenge plasma cortisol and aldosterone concentrations; and urine cortisol:creatinine ratios. Results: HPA axis evaluation revealed three categories of canine centenarians. Forty-three percent of dogs had normal basal cortisol with youthful response to ACTH challenge. Forty percent of dogs had low basal cortisol levels, yet preserved a youthful response to ACTH challenge. Seventeen percent of dogs showed deterioration of the aldosterone arm of the HPA axis. None of the canine centenarians had hypercortisolism. Conclusion : Taken together, our results from canine centenarians suggest that hypercortisolism resulting from impairment of the HPA axis is not an obligate phenotype intrinsic to the aging process. Further, the discovery of an adaptive, low basal cortisol endophenotype in some of these dogs emphasizes the importance of studies that rely upon challenge, rather than basal measures, to determine how physiological resilience contributes to exceptional longevity. Keywords : hypothalamic-pituitary-adrenal (HPA) axis, stress response, canine centenarian

OP27 218-B-4

EXCEPTIONAL LONGEVITY IN FEMALE ROTTWEILER DOGS IS NOT ENCUMBERED BY INVESTMENT IN REPRODUCTION

Emily C. CHIANG¹, Seema S. KENGERI¹, Aimee H. MARAS¹, Cheri L. SUCKOW¹, David J. WATERS² (1. Center for Exceptional Longevity Studies, Gerald P. Murphy Cancer Foundation, USA; 2. Center for Exceptional Longevity Studies, Gerald P. Murphy Cancer Foundation, Department of Veterinary Clinical Sciences, Center on Aging and the Life Course, Purdue University, USA)

Introduction : To better understand the potential trade-off between reproductive investment and longevity in females, we studied pet dogs to determine whether intensity of reproduction (total number of offspring) encumbered the likelihood of exceptional longevity. Method: This hypothesis was tested by collecting and analyzing lifetime medical histories, including complete reproductive histories, for a cohort of canine "centenarians" exceptionally long-lived Rottweiler dogs that lived more than 30% longer than the breed's average life expectancy. Reproductive intensity (number of litters, total number of pups) and tempo of reproductive effort (age at first reproduction, mean inter-birth interval, age at last reproduction) in 78 oldest-old female Rottweilers (>13 years old) were compared to a cohort of 97 female Rottweilers that had usual longevity (age at death 8.0 - 10.75 years). Results : We found no evidence that a mother's physiological investment in offspring was associated with disadvantaged longevity. Instead, similar to some studies in women, our data showed an inverted U-shaped trend, suggesting that moderate investment in reproduction may promote longevity. Late reproductive success, a much-studied surrogate of maternal fitness in women, was not a strong predictor of longevity in this canine cohort. Instead, independent of reproductive investment, the duration of lifetime ovary exposure was significantly associated with highly successful aging. Conclusion : Our results from exceptionally long-lived pet dogs, which represent the first step toward probing the longevity cost of reproduction in this emerging model of human healthspan, provide rationale for further investigative efforts to understand the ovary-sensitive biological factors that promote healthy longevity in women and pet dogs. Keywords : pet dog, longevity trade-off, U-shaped dose response

OP27 218-B-5

CELLULAR AND HUMORAL FACTORS OF INNATE IMMUNITY OF CENTENARIANS WITH MORBIDITY

Victor SEMENKOV¹, Tamara YURINA², Elena KOVALENKO³, Gennady LUTSENKO³, Maria GRECHIKHINA³, Alexander SAPOZHNIKOV³ (1. Immunology, Centre of Gerontology of Medical State University, Russia; 2. Immunology, Centre of Gerontology of Russian State Medical University, Russia; 3. Immunology, Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry RAS, Russia)

Introduction : Innate immunity presents the ancient system of organism's defense against pathogens by means of natural killer cells, different types of phagocytes, system of complement, Phagocytes consume foreign microorganisms, and produce reactive oxygen species (ROS). Method : Peripheral venous blood from 25 centenarians (90-101 years) and 30 old patients (60-90 years) with cardiovascular diseases, respiratory illnesses, gastrointestinal disorders, cerebrovascular disease and so on was used for examination. Interferon- α and γ was induced by stimulation of whole blood cells with Newcastle disease virus or PHA. Phagocytosis of *St. aureus* by leucocytes was determined. The luminol-dependent chemiluminescence was used to measure the level of ROS production by neutrophils. HSP70 expression in neutrophils was assessed by flow cytometry IL-6 and TNF- α in serum were measured by using ELISA. Results : We have registered decrease of *St. aureus* phagocytosis, interferon- α and interferon- γ , and increase of serum interferon in centenarians in comparison with the old patients. IL-6 and TNF- α were detected in serum most of centenarians. Transferrin and C4 component of complement in serum of centenarians was decreased, but level of ceruloplasmin, α 1-antitripsin, IgA and C-reactive protein was increased. Zymosan-induced extracellular ROS production by neutrophils showed a negative correlation with the level of intracellular HSP70 in centenarians, but not in the group of 60-89-years old patients. Conclusion : We suggest that decreased phagocytosis and production of interferon- α in centenarians may be compensated by increased concentration of some acute phase proteins and IgA. Keywords : innate immunity, proinflammatory cytokines, phagocytosis

OP27 220-S

WORK, LABOR AND EMPLOYMENT III

OP27 220-S-1

WHY AND HOW DO RETIREES RETURN TO WORK? LOOKING BEYOND ECONOMIC FACTORS. RESULTS FROM HRS 1998-2008

Ernest GONZALES (George Warren Brown School of Social Work, Washington University in St. Louis, USA)

Introduction : To broaden our understanding of why and how retirees return to work, I examine not just the economic, but also the biopsychosocial factors that predict their return. I hypothesize that human/social capital is positively associated with returning; while retirement satisfaction is negatively associated. An exploratory approach was taken with assets. Post-retirement work characteristics were examined. Method : A sample of fully retired individuals 62+ were drawn from the Health and Retirement Study in 1998 and followed to 2008 (N=8,332). Bivariate analyses and survival analyses were utilized. Results : Average age was 74 (range 62-104). One out of ten retirees returned to work in subsequent waves. Factors predicting returning to work were gender (men more likely), age (younger), health (higher self-report and standardized measures), income, retirement dissatisfaction, and social capital of the household. Wealth,

education, and years of work experience were insignificant. Retirees were more likely to return to professional, retail and business industries within the clerical/administrative support, professional, and sales occupations. Conclusion : While economic factors are important determinants of retirees returning to work, so are biopsychosocial factors. Retirees with work experience in physically demanding industries are less likely to return to work after retirement; re-tooling the human capital of this group to match labor sector needs and physical capabilities may enable them to return to work. Keywords : Older workers, assets, volunteering, caregiving

OP27 220-S-2

ACTIVITY PARTICIPATION, LIFE STYLE, AND HEALTH STATUS OF OLDER ADULTS IN SOUTH KOREA

Jungui LEE¹, Eun-Kyoung Othelia LEE² (1. Division of Policy Research, Gyeonggido Family & Women's Research Institute, Korea; 2. Social Work, University of North Carolina Charlotte, USA)

Introduction : Population aging in South Korea poses a grave challenge to the task of improving the quality of lives of older citizens whose health status has been challenged by various socioeconomic and demographic shifts. Previous studies have shown a strong positive relationship between activity participation and quality of life among older adults. Yet, less attention has been focused on examining determinants of specific activity participation. This study examined factors related to a variety of activity participation in social clubs, self development, and labor force. Method : The nationally representative sample of community dwelling older adults aged 55+ (n=6,688) was drawn from the Wave II of the Korean Longitudinal Study on Aging (KLoSA), and conducted in 2008. Three separate logistic regressions were undertaken to assess the effect of sociodemographics, lifestyle (e.g., smoking, drinking, and exercise), and health status on a variety of activity participations. Results : Determinants of participation in social clubs and labor force were age, income, drinking, exercise, self-rated health, and depression. While marital status, religion, and cognition were significant predictors for social club activity participation, gender and education predicted labor force participation. Major determinants of self-development activity were educational attainment, exercise, and depression. The results revealed that lower depression and regular exercise were predictive of all three types of activities. Conclusion : In order to encourage activity participation among community dwelling older adults, gerontologist should develop community-based interventions to promote physical activity and reduce depression. Other implications for practice, policy, and research were discussed. Keywords : work, learning, activities

OP27 220-S-3

POST-RETIREMENT WORK INTENTION: THE INTERPLAY OF OUTCOME EXPECTATIONS AND WORK DESIGN

Anne Marit WOEHRMANN, Juergen DELLER (SMARD, Leuphana University of Lueneburg, Germany)

Introduction : While the share of individuals in retirement is increasing in many OECD countries, also the share of individuals working past retirement age is rising. Research has revealed influencing factors for post-retirement work on different levels. However, not much is known about the interplay of person factors and environment factors with regard to post-retirement work intention. The purpose of this study is to examine the combined effects of outcome expectations regarding post-retirement work and job demands as well as job resources on post-retirement work intention. Method : Data sets of 1128 employees of a German logistics company were used in this study. Commercial employees filled in web-based questionnaires while industrial

employees filled in paper and pencil questionnaires. Results : Results revealed that outcome expectations and post-retirement work intention are strongly related. This effect is moderated by job demands and resources in a way that it is stronger when physical job demands are low and social support in the workplace is high. Conclusion : The results of this study extend the literature on post-retirement work as well as on job demands and resources. Companies who would like their employees to continue to work after retirement should design interventions to strengthen older workers' outcome expectations regarding post-retirement work. This will be especially important if physical job demands are low and social support in the workplace is high. Keywords : post-retirement work, outcome expectations, work design

OP27 220-S-4

WORKPLACE AGE DISCRIMINATION: ATTRIBUTION-SENSITIVITY THEORY AND THE COMPARATIVE EXPERIENCES OF OLDER WORKERS IN THE LABOUR MARKET

Christopher MCLOUGHLIN (*Faculty of Business and Economics, Monash University, Australia*)

Introduction : The prominent public policy push in many developed nations focusing on increasing the labor force participation of older workers and prolongation of working lives raises questions about barriers to said participation. The recent theoretical advancements proposed by Chou and Choi (2011) to explain the non-linear relationship between reports of perceived workplace discrimination and age represent an important step in understanding how age stereotypes affect the labour market experiences of older workers. Attribution-sensitivity theory contends that individuals with higher socio-economic status, through the tendency towards attribution error and greater sensitivity to perceived non-performance related discrimination, are more likely to perceive discrimination in the workplace. Method : This paper reports on the results of a national survey of approximately 3200 members of the Australian workforce undertaken in 2011. Standard statistical procedures were used to test relationships contended by Attribution-sensitivity theory. Results : Analysis of participants' responses provided further supporting evidence for Attribution-sensitivity theory. These results provide greater generalizability by assessing a wider range of perceived discrimination types, drawing comparisons of experiences of discrimination between workers across the life course and extending theory testing to a new population. Conclusion : The implications of the accumulating evidence uncovered in this study and that of Chou and Choi, among others, warrants reassessment of considerations for organisational and public policy makers wishing to address the well-documented physical and psychological consequences associated with persistent experiences of discrimination. Equally, researchers are challenged to explicate approaches to addressing the dynamic needs of workers across the life course that experience discrimination in the workplace. Keywords : perceived workplace discrimination

OP27 220-S-5

HOW THE EXPERIENCE OF AGE INFLUENCES POST-RETIREMENT EMPLOYMENT

Ulrike FASBENDER, Juergen DELLER (*Institute for Strategic HR Management, Leuphana University Lueneburg, Germany*)

Introduction : We present a statistical analysis of the German Age Survey (DEAS) to investigate employment among older people over a period of 12 years. Next to socioeconomic variables and health factors, psychological predictor variables were quality of life, subjective well-

being, attitudes, norms, values and images of ageing people. The study's aim was to better understand psychological processes on greying labor markets. Method : Original data from three waves of the DEAS (n=542) were collected via paper or computer assisted personal interviews. We applied a hierarchical regression analysis to identify relations between the different predictors and post-retirement employment. Further, structural equation modeling was used to test latent state-trait measurement models. Results : The study results investigated influencing factors of employment of older people. Results indicated whether (and which) psychological variables are able to predict post-retirement employment above socioeconomic variables and health factors. Differentiated conclusions of employment after retirement were drawn. Strategies and barriers for older people were discussed. Conclusion : The relevance of this study is set by challenges on the labor market due to demographic changes of 21st century. The multi-dimensional approach including socioeconomic, health and psychological variables addresses a holistic perspective of post-retirement employment. The sample was drawn from a German population and therefore cannot be generalized above the country's borders. Cross-national research is needed to identify interaction effects between factors on the individual and societal level. Practically, the abolishment of age barriers supported by political regulations is needed. Keywords : retirement, conditions of employment, aging

OP27 220-S-6

GRADUAL RETIREMENT AMONG MIDDLE-AGED AND OLDER WORKERS: A TAIWANESE STUDY

Wan-Chun CHUANG, Ching-Li YANG (*Institute of Gerontology, National Cheng Kung University, Taiwan*)

Introduction : As a result of the aging population across the world, middle-aged and older workers play a key role in the labor market that is likely to face supply shortage in the near future. Gradual retirement gives these workers an alternative other than full-time work or complete retirement. While most related studies are based on the situations of the U.S. and European countries, this study attempts to better understand the case of Taiwan by examining the factors for gradual retirement among Taiwanese middle-aged and older workers. Method : Using data from Taiwan Longitudinal Study on Aging (TLISA), we employed logistic regression models to explore the factors that affect an individual's decision on taking gradual retirement. Two different definitions of gradual retirement including taking bridge jobs and working after receiving retirement benefit are used. Results : The results show that the utilization of bridge jobs was more common among younger respondents, respondents with higher income and respondents are self-employed. We also found that keeping working after receiving retirement benefits was more common among male, self-employed and blue-collared respondents, respondents with poorer self-assessed financial status, respondents with higher income and respondents with better self-assessed health status. Conclusion : There are various factors for middle-aged and older workers' gradual retirement behavior, and the factors may differ with the definitions that are used. The factors proposed in this study may provide some policy recommendations. Keywords : Gradual Retirement, Middle-aged and Older Workers, Taiwan

OP27 221-C

THE WAR AGAINST POLYHARMACY (3) A WORKSHOP: DRUGS TO BE DISCONTINUED IN THE LAST DECADES OF LIFE - WHAT, WHY AND HOW?

OP27 221-C-1

THE EXTENT OF CO-MORBIDITY AND POLYPHARMACY

IN COMMUNITY DWELLING TURKISH ELDERLY FEMALES: ONE EXAMPLE OF A MAJOR GLOBAL PROBLEM

Gulistan BAHAT¹, Fatih TUFAN¹, Asli TUFAN¹, Yucel AYDIN², Timur Selcuk AKPINAR², Sevilay NADIR¹, Nilgun ERTEN², Mehmet Akif KARAN¹ (1. Department of Internal Medicine, Division of Geriatrics, Istanbul Medical School, Istanbul University, Turkey; 2. Department of Internal Medicine, Istanbul Medical School, Istanbul University, Turkey)

Introduction : The elderly usually suffer from many chronic diseases that may result in polypharmacy. Elderly females have been reported to have more comorbidities resulting in higher number of drugs and disability. The types of comorbidities and the drugs of choice are influenced by the genetic background, environmental-social factors and availability of resources. We report the extend of polypharmacy in the context of multi-morbidities in community-dwelling Turkish elderly females. **Method :** Geriatrics outpatients were assessed cross-sectionally. Patients underwent comprehensive geriatric assessment. Co-morbidities and drugs were defined by reviewing patients' self-reports and current medications assessed via the medical files. Depression and cognition were assessed by 30-item geriatric depression scale and mini-mental-state-examination (MMSE), respectively. **Results :** 515 elderly females were included in this study. Mean age was 73.4±6.9 years. The average number-of-chronic-diseases was 2.8. 61.1% had >3 chronic diseases, the most common diagnoses being hypertension (75.3%), depression (45.5%) and dementia (39.4%). Mean number-of-drugs was 4.8. 63.2% were consuming ≥4 drugs and 47.6% were using >5 chronic drugs. **Conclusion :** Polypharmacy seem to be more prevalent in Turkey than in England or the US. Regardless of the specific number of medications in each and every country, the problem is obviously international. This study highlights the differences between individual countries further stressing our global need for "Joint International Venture" for assessing polypharmacy and reducing its related negative health and economical impacts. **Keywords :** polypharmacy, comorbidity, elderly

OP27 221-C-2

THE WAR AGAINST POLYHARMACY (3)-A WORKSHOP: THE TRIPLE WIN-WIN GAME OF REDUCING POLYPHARMACY BY THE GARFINKEL METHOD

Doron GARFINKEL (M.D., Deputy Head, Home Care Hospice-Israel Cancer Association & Maccabi Health Care Services, Israel)

Introduction : Improved medical technology is associated with an alarming increase in the number of patients with incurable chronic comorbidities resulting in disability, and suffering for increasingly prolonged periods before death. The vicious circle of increased number of specialists involved and medications prescribed, leads to Morbid Polypharmacy and inappropriate medication use (IMU). This situation makes models of "one disease - one therapy/guideline" an unrealistic approach to good care. Beers criteria represent an example of inappropriate attempts to increase physician alertness and may avoid just specific drugs; 'drugs-to-avoid' criteria are insufficiently accurate to use as stand-alone measures. Furthermore, the sole use of computer or other programs as alarms are of limited benefit because they lack the Doctor's personal touch, time and clinical judgment, as well as the patient/family preferences. **Method :** The Garfinkel Palliative-Geriatric method represents an ethical, simple and safe clinical approach and was proven effective in improving quality of life in the last years of life. With the patient/family approval, many 'non-life-saving' medications are discontinued simultaneously, thus

significantly minimizing drug load. Apart from improved health, there is a double financial benefit: reducing both drug costs and the cost of unnecessary hospitalizations due to IMU. **Results :** Results and Discussion: Members of the IGRIMUP will discuss different drug group with the audience. Case reports of community dwelling elderly patients who consume many drugs will be presented to the audience for an open discussion. Then, the actual recommendations given to the patient will be presented along with the follow up and outcomes. **Keywords :** Polypharmacy, Triple Win-Win situation, Garfinkel Method

OP27 222-C

REHABILITATION & FRACTURE

OP27 222-C-1

GERIATRIC COMPARED TO USUAL MANAGEMENT OF ELDERLY PATIENTS WITH HIP FRACTURE. PRELIMINARY RESULTS

Jacques BODDAERT¹, Judith COHEN-BITTAN¹, Frederic KHIAMI², Yannick LE MANACH³, Mathieu RAUX³, Jean-Yves BEINIS⁴, Marc VERNY¹, Bruno RIOU⁵ (1. Geriatric Department, Peri-Operative Unit, Pitie-Salpetriere Hospital, APHP. UPMC Paris 6, France; 2. Orthopedic Surgery, Pitie-Salpetriere Hospital, APHP. UPMC Paris 6, France; 3. Anesthesiology Department, Pitie-Salpetriere Hospital, APHP. UPMC Paris 6, France; 4. Rehabilitation Unit, Pitie-Salpetriere and Charles Foix Hospital, APHP. UPMC Paris 6, France; 5. Emergency Department, Pitie-Salpetriere Hospital, APHP. UPMC Paris 6, France)

Introduction : Geriatric management has been proposed in elderly patients with hip fracture but its effect on mortality remains unknown. We tested the hypothesis that this strategy improved mortality. **Method:** Over a 6 years period (2006-11), we compared elderly (> 75 years) patients with hip fracture admitted to orthopedic vs geriatric department in a time series analysis corresponding to the creation of a dedicated geriatric unit (June 2009). Main end point was 6 months mortality. Comorbidities score was calculated using CIRS score. **Results :** 131 patients were included in the Orthopedic cohort and 203 in the Geriatric cohort. Comorbidities were more frequent in the Geriatric cohort (median CIRS 8 vs 4, p<0.001). Patients in the Geriatric cohort experienced less contention, pressure ulcers and ICU referral, but were more frequently transfused, stool impaction or swallowing disorders were more frequently detected. Mortality during acute care was 7.6 % (95% confidence interval 4.2 to 13.5%) in the Orthopedic cohort and 3.0 % (95% confidence interval 1.4 to 6.3 %) in the Geriatric cohort. At 30 days, readmission was significantly reduced in the Geriatric cohort (5 vs 17%, p=0.002). At 6 months, readmission (14 vs 29%, P=0.007) and mortality (15 vs 24%, P=0.04) were significantly decreased in the Geriatric cohort. Considering comorbidities, risk ratio of death at 6 months was reduced (0.43, 95%CI 0.25 to 0.73, P=0.002). **Conclusion :** We observed that early admission to a dedicated geriatric unit improved morbidity and 6-month mortality in elderly patients with hip fracture. Our results should be confirmed in other countries with different health care systems. **Keywords :** hip fracture, orthogeriatrics

OP27 222-C-2

REHABILITATION INDICES AND THEIR INDEPENDENT PREDICTORS: A SYSTEMATIC REVIEW

Gerald Choon-Huat KOH¹, Cynthia Huijun CHEN², Rob PETRELLA³, Amardeep THIND³ (1. Saw Swee Hock School of Public Health, National University of Singapore, Singapore; 2. Saw Swee Hock School of Public Health, National University of Singapore, National

University Health System, Singapore; 3. Department of Family Medicine, Schulich School of Medicine & Dentistry, University of Western Ontario, Canada)

Introduction : To (1) identify all available rehabilitation indices (RI) based on their mathematical formula, (2) assess the evidence for independent predictors of each RI, and (3) propose a nomenclature system to harmonize the names of RI. **Method :** We identified all available RI through preliminary literature review using PubMed and references in primary papers. Then, we used the various names of the same formula as search terms to identify studies which report their independent predictors, limited to papers in English and up to 31 December 2011, including case-control and cohort studies, and controlled interventional trials where RI was outcome variable and matching or multivariate analysis was performed. Details of final papers were extracted by three reviewers separately and independent predictors of RI were identified. **Results :** The five RIs identified were (1) Absolute Functional Gain (AFG)/Absolute Efficacy/Total Gain, (2) Rehabilitation Effectiveness (REs)/Montebello Rehabilitation Factor Score (MRFS)/Relative Functional Gain (RFG), (3) Rehabilitation Efficiency (REy)/Length of Stay?Efficiency (LOS-EFF)/Efficiency, (4) Relative Functional Efficiency (RFE)/MRFS Efficiency and (5) Revised MRFS (MRFS-R). REy/LOS-EFF/Efficiency had the most number of supporting studies, followed by REs and AFG. Although the evidence for different predictors of RIs varied according to the RI and study population, there is good evidence that older age, lower pre-rehabilitation functional status and cognitive impairment are predictive of poorer AFG, REs and REy. **Conclusion :** Five RIs have been developed in the last two decades as composite rehabilitation outcome measures that control for pre-morbid and pre-rehabilitation functional status, and rate of functional improvement, each with varying levels of evidence for its predictors. **Keywords :** Activities of daily living, index, outcomes, rehabilitation

OP27 222-C-3

WIIHOME-AMPS: FEASIBILITY OF THE NINTENDO WIIFIT FOR IMPROVING WALKING IN OLDER ADULTS WITH A LOWER LIMB AMPUTATION

Bitu IMAM¹, William C. MILLER², Linda MCLAREN³, Heather FINLAYSON⁴ (1. Rehabilitation Sciences, University of British Columbia, Canada; 2. Occupational Therapy and Occupational Sciences, University of British Columbia, Canada; 3. Physical Therapy, GF Strong Rehabilitation Centre, Canada; 4. Physical Medicine and Rehabilitation, University of British Columbia, Canada)

Introduction : Prosthetic rehabilitation programs for individuals with lower limb amputation (LLA) are designed to enhance mobility primarily through walking retraining. Continual cuts to health care resources have reduced the number of rehabilitation hours to such a great degree that older adults often do not receive sufficient training to learn to walk using the prosthesis; therefore, innovative rehabilitation programs are needed. The objective of this study was to determine the feasibility of a home-oriented Nintendo WiiFit™ program for improving walking in older adults with unilateral LLA. **Design:** Parallel evaluator-blind randomized controlled trial (RCT). **Subjects:** 50 years or older and ≥1 year post a unilateral transtibial (TT) or transfemoral (TF) amputation (recruitment and data collection ongoing at time of abstract submission). **Procedure:** Subjects were randomly allocated to the intervention or control group. The intervention consisted of 3 x 40-minutes sessions/week of WiiFit training for 4 weeks (initially group training at the clinic, graduating to home training). Controls underwent an identical process using cognitive video games to account for attention, device and activity exposure.

The outcomes of interest were feasibility indicators consisting of recruitment, adherence, attrition and adverse event rates, and post-intervention fatigue and pain levels. **Results :** Thirteen participants were recruited within 4 months. To date, 3 participants (2TT; 1TF) with a median age of 62 years (range=53-66) have completed the WiiFit intervention. Median adherence was 100% (range=58-100). Two participants experienced a fall during the intervention but were not injured. Mean (SD) fatigue and pain levels were 4.2/10 (1.5). **Conclusion :** Our preliminary data suggest that the WiiFit intervention is feasible in older adults with unilateral LLA. **Keywords :** Older adults, Lower limb amputation, Nintendo Wii , Randomized controlled trial, Feasibility

OP27 222-C-4

HIP FRACTURES ARE ASSOCIATED WITH DECREASED GRIP STRENGTH, SLOWER WALKING SPEED AND INABILITY TO STAND FROM CHAIR WITHOUT USING ARMS IN A LARGE EUROPEAN AGEING STUDY

Jesper RYG¹, Mette Lindholm ERIKSEN², Sonja VESTERGAARD², Karen ANDERSEN-RANBERG², Tahir MASUD³ (1. Geriatric Medicine, Odense University Hospital, Denmark; 2. Danish Ageing Research Centre, University of Southern Denmark, Denmark; 3. Geriatric Medicine, Nottingham University Hospitals NHS Trusts, United Kingdom)

Introduction : Hip fractures in older people cause much morbidity, mortality and expenditure. Identifying those at high risk of hip fracture risk should enable earlier preventative measures including interventions to reduce falls and treat osteoporosis. **Method :** The Survey of Health, Ageing and Retirement in Europe (SHARE) is an ongoing longitudinal study of individuals' aged ≥50 years in 14 countries. Using cross-sectional data from SHARE wave 2 we investigated if three commonly used functional tests were associated with hip fractures: ability to perform chair stand test (rising from chair without using arms, performed in those <75 years)[CS], walking speed[WS] (performed in those >75 years), and grip strength[GS]. **Results :** 31,021 participants, 54.0%=women, median age=64.9 (IQR=58.4-73.2) years were studied. Hip fracture history was reported by 2.0% and were positively correlated with age (spearman's rho 0.101, p<0.001). Women had more hip fractures (2.3% vs 1.7%;OR=1.4; 95%CI=1.2-1.7;p<0.001). Those unable to perform the CS (20.7%) had more hip fractures (4.3% vs 0.8%;OR=4.1;95%CI=3.3-5.1;p<0.001). Compared to the highest sex-specific quartile of GS, those with lowest quartile GS had more hip fractures (3.5% vs 0.8%;OR=4.7;95%CI=3.5-6.4;p<0.001). Compared to the highest sex-specific quartile of WS, those with the lowest quartile WS had more hip fractures (5.2% vs 2.2%;OR=2.4;95%CI=1.4-4.1;p=0.001). CS, GS and WS remained independently significantly associated with hip fractures after adjustment for age, gender, and country. **Conclusion :** These cross-sectional data show that hip fractures are significantly associated with CS, GS and WS. Prospective data are now planned from SHARE to determine if these functional tests can predict hip fractures in subsequent waves. **Keywords :** hip fracture, functional tests, multinational study

OP27 222-C-5

EVALUATION OF POST STROKE OUTCOME - A DESCRIPTIVE ANALYSIS

Ravi P. RUBERU, Shaad MANCHANDA, Patrick CONNOLLY, Laura GILLGAN, Deepal LECAMWASAM (Geriatric and Rehabilitation Medicine, Royal Adelaide Hospital, Australia)

Aim: A retrospective analysis of outcome variables in patients admitted following stroke to determine rehabilitation outcome. **Method:** Case notes of stroke patients admitted between July 07 to July 12 were reviewed. Selection criteria were ischemic or hemorrhagic stroke with completed admission notes. Sixty-eight variables were analysed using Partition modelling. **Results :** Of 482 patients, 426 patients met inclusion criteria (mean age 70.67 SD = 13.31, SEM 0.645; male 58%, n=245). Mean length of rehabilitation was 48.36 d. Majority (98%, n=419) of patients were from home and 80% (n=333) returned home. For those who returned home the mean length of rehabilitation was 45.22 d where 66% (n=221) were discharged within 50 d. Student t test for total admission functional independence measure score (FIMS) by discharge destination was significantly different in relation to FIMS for patients who were discharged home compared to those discharged to either high level residential care (HLOC)(p<0.001) or low level residential care (LLOC) (p=0.0497) and a significant difference between those who were discharged to LLOC compared to HLOC (p=0.0044). Total FIMS \geq 77, carer support, and age \leq 77 y were associated with returning home. When considering patients with total FIMS 36-77, age <82 y and carer support were associated with returning home. HLOC was predictable in those who were \geq 82 y, length of stay in acute hospital \geq 14 d, FIMS for upper body dressing of <5. **Conclusion :** Use of total FIMS together with other predictors would improve patient selection for stroke rehabilitation. **Keywords :** Stroke, Rehabilitation outcome, hemorrhagic stroke, ischemic stroke, FIMS

OP27 222-C-6

GAIT SPEED AT USUAL PACE AS A PREDICTOR OF OUTCOMES IN RECIPIENTS OF A POST ACUTE TRANSITION CARE PROGRAM

Sukumar NAVANATHAN, Nancy PEEL, Ruth E. HUBBARD
(Centre for Research in Geriatric Medicine, The University of Queensland, Australia)

Introduction : Gait speed has been advocated as a marker of vulnerability but its discriminatory utility in frail older people has not been extensively investigated. Here we examined changes in gait speed in patients receiving a Transitional Care Program (TCP) and determined whether gait speed at admission correlated with outcomes. **Method :** In a prospective cohort study, 351 older persons admitted to TCP were comprehensively assessed using the inter-RAI Home Care instrument. This included a timed four metre walk at admission and discharge. A telephone interview 6 months after admission determined functional independence, living status and readmissions to hospital. Wilcoxon Signed Ranks Test was used to assess the difference between admission and discharge gait speed and binary logistic regression examined the relationship between admission gait speed and outcomes. **Results :** Mean gait speed improved significantly during the program (from 0.34 to 0.54 m/s, Z = -11.84, p< .001). This represents a clinically meaningful change. At 6 months post TCP admission, 86.9% of patients were living in the community and 4.6% in institutional care; 5.4% died and 3.1% were lost to follow up. 40.5% had at least one readmission to hospital. Gait speed at admission was positively associated with reduced risk of hospital readmissions (OR= 0.19, p= .006), increased likelihood of living in the community (OR= 0.05, p= .015) and being functionally independent (OR= 0.012 p=0.002). **Conclusion :** Gait speed is an inexpensive, feasible and objective measure of physical performance in frail older people. It may be a useful tool in TCP settings to predict outcomes. **Keywords :** Gait speed, Post acute rehabilitation, Frailty

OP27 223-C

THYROID RESPIRATORY DISEASE

OP27 223-C-1

STRESS, COPD AND SUBJECTIVE WELLBEING: SINGAPORE LONGITUDINAL AGEING STUDIES

Yanxia LU¹, Ma Shwe Zin NYUNT¹, Xinyi GWEE¹, Liang FENG¹, Lei FENG¹, Ee Heok KUA¹, Rajeev KUMAR², Tze Pin NG¹
(1. Psychological Medicine, National University of Singapore, Singapore; 2. Academic Unit of Psychological Medicine, Australian National University Medical School, Australia)

Introduction : The relationship between life event stress and chronic obstructive pulmonary disease (COPD) and its impact on the quality of life of individuals with COPD is seldom investigated. This study aimed to investigate whether life event stress was associated with greater psychological distress and poorer quality of life in older individuals with COPD, in comparison to their counterparts without COPD. **Method :** In a cross-sectional study, we measured life event stress, depressive symptoms (GDS), cognitive symptoms and function (CFQ, MMSE), and physical and mental health functional status (SF36-PCS and SF36-MCS) in a population-based sample of individuals aged 65 and above with COPD (post-bronchodilatation FEV1/FVC<0.70, N=136) and without COPD (N=277). **Results :** In two-way analysis of variance controlling for potential confounders, life event stress was associated with significant main effects of worse GDS (p<0.001), SF36-PCS (p=0.008) and SF36-MCS scores (p<0.001), and with significant interaction effects on GDS score (p<0.001), SF36-PCS (p=0.045) and SF36-MCS (p=0.034) in participants with COPD more than in non-COPD participants. Main effect of COPD was found for post-bronchodilator FEV1 (p<0.001) and cognitive symptoms (p=0.02). **Conclusion :** Our findings indicate that life event stress was associated with more depressive symptoms and worse quality of life in individuals with COPD, much more than in those without COPD. Further studies should explore the role of cognitive appraisal of stress, coping resources and psycho-social support in this relationship. **Keywords :** Life event stress; COPD; Quality of life

OP27 223-C-2

THE INQUIRY ABOUT THE AGE-ASSOCIATED CHANGE OF THYROID FUNCTION AND IMMUNITY--- ANALYSIS OF 765 COHORT PERSONS

Yongxing MA¹, Pei-Fang LU², Ri-Ping HAN²
(1. Antiaging and Cognitive Function, Shanghai Institute of Gerontology and Geriatrics, Affiliated Huadong Hospital, Shanghai Medical College, Fudan University, China; 2. Department of Aging, Antiaging and Cognitive Function, Shanghai Institute of Gerontology and Geriatrics, Affiliated Huadong Hospital, Shanghai Medical College, Fudan University, China)

Introduction : To observe the basal value aging changes of thyroid infections(T.F.)and its relationship with nosocomial infections(N.I.), and the inquiry about the age-associated changes of thyroid function and immunity. **Method :** To study the basal values of T3, T4, FT4 and TSH with BM. Of every five years groups in randomized cohort sample with 765 persons(45-90 years.M710,F55) of healthy care objects in HuaDong Hospital in 1995. 2.To select 134 cases with N.I. in 211 N.I. and 114 persons without N.I. in 1840 aged(\geq 60 years old) admitted into hospital with various diseases in 1995-1997 with prospective randomized methods. **Results :** The combined statistical results mean value,(M \pm SD) of M+F in various age groups was significant difference.The mean value (M \pm SD) of T3,FT3, FT4 and TSH in the objects with N.I.(134 cases) were significantly lower

($P < 0.01-0.001$) than that of subjects without N.I.(No N.I.)(114).
Conclusion : The significant decreasing of the mean value of FT3 and FT4 on the whole in this cohort may be reflecting aging decreasing of thyroid function. It is suggested that there is functional decreasing of hypothalamus-pituitary-thyroid axis with aging in the oldest old. No significant difference of mean value of T3,FT3,T4,FT4 and TSH were found between M. and F. The M±SD of T3,FT3,FT4 and TSH were significantly lower in nosocomial infection. The immunity in the aged is correlated with the age-associated changes of thyroid function.
Keywords : Thyroid function, Aging changes, Aging changes of thyroid function and nosocomial infections, Thyroid

OP27 223-C-3

SUBCLINICAL DECREASE OF THYROID FUNCTION AND SUBCLINICAL HYPERTHYROIDISM IN THE 1540 PRESAGED AND ELDERLY

Yongxing MA, Pei-Fang LU (*Antiaging and Cognitive Function, Shanghai Institute of Gerontology and Geriatrics, Affiliated Huadong Hospital, Shanghai Medical Collage, Fudan University, China*)

Introduction : To find the subclinical decrease of thyroid function and subclinical hyperthyroidism in the 1540 Presaged and elderly. Method: To study the basal values of T3, T4, FT3, FT4 and TSH with BM in the elderly and the relationship between TSH and T3, T4, FT3 and FT4. Of every five years groups in randomized cohort sample with 1540 persons (45-90 years. M 1367, F 173) of healthy care objects in HuaDong Hospital. Results : The combined statistical results mean value (M±SD)of M+F in various age groups. There were significantly decreased in T4 and T3 among various age groups in the mean value (M±SD) of combined. There was significantly increased in TSH among various age groups. The mean value of T3 was significantly decreased in Group A with aging ($P < 0.001$). The mean value of T4, FT3, FT4 in group B were significantly lower than that of Group A. ($P < 0.05-0.001$). The mean value of FT4 in Group C was significantly higher than that of Group A. The mean value of T4, FT4 and FT3 were significantly higher than that of Group B ($P < 0.05-0.001$). Conclusion : No significant difference between FT3 and FT4 was observed. The mean value of T3 was significantly decreased in Group A with aging ($P < 0.001$). Level of TSH was significantly increased on the whole with aging but decreased in aged > 90 years. These results showed that 11.30% persons suffered from subclinical hypothyroidism and 13% persons suffered from subclinical hyperthyroidism or high T4 status. Keywords : Subclinical Hyperthyroidism, thyroid function, Presaged and Elderly

OP27 223-C-4

SARCOPENIA IN PHYSICALLY INACTIVE JAPANESE ELDER PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) UNDERGOING INTERDISCIPLINARY COMPREHENSIVE PULMONARY REHABILITATION

Kazuyoshi SENDA¹, Shosuke SATAKE², Izumi KONDO³, Haruhiko TOKUDA⁴, Masataka SHIBASAKI⁵, Mitsunori NISHIKAWA⁵, Hisayuki MIURA¹, Hidetoshi ENDO², Kenji TOBA⁶ (*1. Division of Home Care Promotion, National Center for Geriatrics and Gerontology, Japan; 2. Department of Geriatric Medicine, National Center for Geriatrics and Gerontology, Japan; 3. Department of Rehabilitation Medicine, National Center for Geriatrics and Gerontology, Japan; 4. Department of Clinical Laboratory, National Center for Geriatrics and Gerontology, Japan; 5. Department of Pulmonary Medicine, National Center for Geriatrics and Gerontology, Japan; 6. Director of the Hospital, National Center for Geriatrics and Gerontology, Japan*)

Introduction : Reduced physical activity (PA) of COPD patients accelerates sarcopenia, however evaluation methods for PA remains to be established. This study aimed to investigate association of sarcopenia and PA in COPD patients undergoing pulmonary rehabilitation. Method : Clinically stable 25 outpatients with COPD (age: 75.4 +/- 6.1 years; BODE index: integrated BMI, air-flow obstruction, dyspnea, and exercise capacity; 0-7/10) were underwent a comprehensive geriatric assessment including body composition. PA was measured with the self-administered Modified Baecke Questionnaire (Total activity: TA), and compared with step-count (SC) using an electric accelerometer. Results : While 20 patients were diagnosed with sarcopenia by Baumgartner Criteria, 9 sarcopenic patients were diagnosed by the European Working Group on Sarcopenia in Older People Criteria. Mean TA was 6.7 +/- 2.5 /12. Mean SC was 4853 +/- 2463. TA was positively correlated with SC ($r = 0.52, p = 0.007$) and visual analog scale for health ($r = 0.64, p = 0.001$), and negatively with frailty ($r = -0.48, p = 0.02$), 5m walking speed ($r = -0.49, p = 0.01$), St. George's Respiratory Questionnaire ($r = -0.44, p = 0.04$), and COPD Assessment Test ($r = -0.40, p = 0.05$). SC was negatively correlated with BODE ($r = -0.54, p = 0.005$) and 5m walking speed ($r = -0.44, p = 0.03$). Conclusion : Sarcopenia was prevalent and walking speed, which is one of the determinants of sarcopenia, associated with TA, SC, and QOL. SC was closely associated with TA. Amount of walking accounted for a large part of PA and SC was an effective marker of PA. Regimens to promote PA using accelerometer are awaited. Keywords : Chronic Obstructive Pulmonary Disease, Sarcopenia, Physical Inactivity

OP27 224-C

DELIRIUM

OP27 224-C-1

RELIABILITY AND VALIDITY OF CLINICAL DEMENTIA RATING FOR COMMUNITY LIVING ELDERLY NOT BASED ON INFORMANT INFORMATION (CDR-NI)

Shwe Zin NYUNT¹, Tze Pin NG¹, Mei Siang CHONG² (*1. Psychological Medicine, National University of Singapore, Singapore; 2. Geriatric Medicine, National Health Care Group, Singapore*)

Introduction : The Clinical Dementia Rating scale (CDR) currently relies on a close informant's information to assess the cognitive function and dementia in the elderly. The number of elderly without an informant (such as those living alone) in the community is expected to contribute to an increasing proportion of cases of dementia. There is hence a need to establish whether the CDR can reliably assess dementia without relying on an informant. Method : The Mini Mental State Examination (MMSE) and Montreal Cognitive Assessment (MOCA) were used to select cognitively impaired (MMSE or MOCA < 26) elderly from the Singapore Longitudinal Aging Study Wave II. Among them, consenting participants who could communicate without an informant were interviewed using a modified Clinical Dementia Rating Scale for non-informant (CDR-NI) and clinically assessed using DSM IV criteria for dementia. Results : Out of 90 eligible participants, 36 (41%) were clinically diagnosed with mild cognitive impairment (MCI) and 4 (4.4%) with mild dementia. The internal consistency (Cronbach α) for each rating was 0.83 to 0.84. The Kappa statistics ($p < 0.001$) of inter-rater agreement ranged from 0.77 to 1.00 for six domains, and 0.95 for global score. Test retest reliability ranged from 0.75 to 1.00 for six domains and 0.80 for global score. Kappa for agreement between Global CDR score and Clinical assessment by DSM IV was 0.79. CDR-NI severity grades were significantly related to MMSE, MOCA, IADL and BADL measures of cognitive and

functional impairment. Conclusion : The CDR-NI showed good reliability and validity in assess dementia without an informant report. Keywords : Clinical Dementia rating, elderly, living alone

OP27 224-C-2

PREVENTION OF DELIRIUM IN OLDER PEOPLE IN HOSPITAL - FEASIBILITY AND ACCEPTABILITY OF THE PREVENTION OF DELIRIUM (POD) PROGRAMME

Francine CHEATER¹, Anne FORSTER², Mary GODFREY², John GREEN², Sharon INOUE³, Najma SIDDIQI⁴, Jane SMITH², John YOUNG² (1. School of Nursing Sciences, University of East Anglia, United Kingdom; 2. Academic Unit of Elderly Care and Rehabilitation, University of Leeds, United Kingdom; 3. Department of Medicine, Harvard Medical School, USA; 4. Adult Mental Health Services, Bradford District Care Trust, United Kingdom)

Introduction : Delirium is the most frequent complication for older people following hospitalisation. Evidence suggests it could be prevented in about ½ of patients using multi-component interventions. We have developed a multi-component intervention (the Prevention of Delirium (POD)) Programme designed to be integrated into ward routines without the need for additional resources. POD targets 10 known, modifiable 'clinical factors' for delirium and involves a role for hospital volunteers. We are now in the latter stages of a pilot study to test the feasibility and acceptability of POD implementation, to provide a realistic assessment of the practical, professional and cultural issues involved in changing practice. Method : We are using a case study approach in six wards (four hospital trusts) to explore: implementation process; impact on staff workload and patient and carer satisfaction; acceptability to patients, carers, staff and volunteers. Results : Data collection on the impact of POD on staff workload, patient and carer satisfaction with care, and acceptability to patients, carers, staff and volunteers is ongoing and results will be presented. To date, POD has been fully implemented in three wards and partially implemented in a fourth. A potentially generalisable implementation strategy has emerged, including ALL of the following pre-requisites for 'site readiness': 1. Engagement of senior nurse, ward manager, voluntary services manager; 2. Named person to drive implementation forward; 3. Dedicated time (one day a week) of a senior, experienced nurse to lead implementation; 4. Total staff on duty ≥ 6 . Conclusion : Implementation and delivery of POD is feasible in 'site-ready' wards. Keywords : Delirium, Prevention, System of care, Feasibility, Acceptability

OP27 224-C-3

THE EFFECT OF THE HEARTHQUAKE ON ELDERLY PEOPLE: A MULTIDISCIPLINARY EXPERIENCE OF CARE IN THE EMERGENCY

Fabbo ANDREA, Mary GUERZONI, Simone LUGLI, Lucia BERGAMINI, Mara VESCHI, Maria SCARANO, Marina TURCI (Primary Care, Ausl Modena, Italy)

Introduction : In May 2012 the district of Mirandola was hit by a strong earthquake that forced thousands of elderly people to leave their homes. Nearly all hospitals and nursing home weren't safe. Aim: To assess if during the health emergency a short specialized geriatric observation could be a proper answer for elderly people's needs. Method : Within few days a tent with 8 beds for short geriatric observation was set up. The experience went on for 2 months. 194 patients were hospitalized in the tent. During the hospitalization patients received all the necessary diagnostic and therapeutic intervention thanks to the help of specialists. At the same time it was arranged a secure discharge with a constant communication with

general practitioners and social assistants. Results : 100 were elderly people (average age 81) with different health and social problems who needed complete and complex answers. The most frequent reasons of admission were delirium or dementia with behavioral disorders (55%), dehydration, heart failure (many people in those days lived in tent, garages, cars). The average hospitalization was 1.2 days. 11% went to the hospital, 66% went to nursing homes and 33% went home. 49% needed sedative therapy, 25% analgesic therapy, 46% hydration therapy. Many people received specialist's assistance. Conclusion : The model of short intensive observation was proper because created a network between the available resources in the district, in a short it gave a complete answer for a high number of people with problematic situations and most of them could return home. Keywords : elderly care , delirium, dementia

OP27 224-C-4

DELIRIUM IN GERIATRIC MEDICINE IS RELATED TO ANTICHOLINERGIC BURDEN

Moustafa NAJA¹, Jadwiga ZMUDKA¹, Sanaa HANNAT¹, Sophie LIABEU², Pierre JOUANNY¹ (1. Geriatric Medicine, University Hospital, France; 2. Center for Clinical Research, University Hospital, France)

Introduction : The objective was to evaluate the relationship between anticholinergic drugs use and delirium. Method : Prospective monocentric study in geriatric medicine patients Anticholinergic burden (AB) was assessed by a grid literature synthesis, classifying drugs into 4 levels (none, low, medium and high) every week. A total weighted score was established. Delirium symptoms were measured with CAM at day 1, 3, 5, 8, 15 and 21. Covariates studied are Charlson score, health status, ADL/IADL, albumin, MMS, length of stay. Results : 91 patients (86.3 ± 5.8 years, 53 women and 49 men) were included and followed up for 14.5 ± 9.9 days. 51.2% were taking anticholinergic drugs at home. AB average is 2.13 ± 1.34 . Prevalence (%) of delirium symptoms were respectively: 43.1 at Day 1, 36.9 at Day 3, 34.8 at Day 5, 44.9 at Day 8 and 60 at Day 21. AB was correlated with appearance of delirium symptoms. Delirium was associated with increased mortality (16.1% vs 3.7% ; $p=0.049$) and average length of stay (18.09 ± 11.34 vs 11.75 ± 7.80 days; $p = 0.001$), decreased autonomy on exit (ADL 1.57 ± 1.56 vs 3.41 ± 1.45 on 6; $p<0.0001$) and health status more degraded on exit (5.3 ± 2.7 vs 7.0 ± 1.7 on 10; $p = 0.0008$). Appearance of delirium symptoms is correlated with high AB ($p=0.017$) and also like high mortality ($p = 0.01$). Conclusion : AB is a definite risk factor for delirium, but also mortality. Prevention of delirium must go through its reduction. Keywords : delirium, anticholinergic burden, elderly, hospitalization

OP27 224-C-5

REVISITING THE CONCEPTUALISATION OF DELIRIUM

Eamonn EELES¹, Nancy PEEL², Susan WHITE³, Anthony BAYER³, Sinead OMAHONY³, Ravi BHATT⁴, Ruth HUBBARD³ (1. University of Queensland, The Prince Charles Hospital, Australia; 2. Centre for Research in Geriatric Medicine, University of Queensland, Australia 3. Geriatrics, Cardiff University, United Kingdom; 4. Psychiatry, Rural Health Academic Centre The University of Melbourne, Australia)

Introduction : The multifactorial model of illness, based on the interaction between predisposing and precipitating factors, has been applied to the understanding of delirium. Attempts to replicate the risk tool in other areas, have been inconclusive. We have undertaken to reappraise the relationship between the classical multifactorial model and delirium. We also review an alternative approach to

conceptualization based on global and archetypal vulnerability and insult: frailty and illness severity. Method : Secondary analysis of a prospective cohort study of 273 patients aged ≥ 75 years. Diagnosis of delirium was made using Confusion Assessment Method. Baseline demographics and functional status were collected. Replication of the classical interaction of predisposing and trigger factors was explored. An alternative approach investigating frailty, according to deficit accumulation, in relation to illness severity was undertaken. Frailty status was measured by an index of accumulated deficits (FI), giving a potential score from 0 (no deficits) to 1.0 (all 33 deficits), with 0.25 used as the cut-off between 'fit' and 'frail'. Delirium was defined as absent, community acquired or hospital acquired. Results : Separation into risk categories (low/medium/high) showed that only precipitating factors were associated with hospital acquired delirium (table 1). Frailty and illness severity was strongly associated with all delirium ($\text{Chi}^2 51.8; p < 0.00$) and remained a risk factor for hospital acquired delirium ($\text{Chi}^2 = 56; p = 0.04$). Conclusion : The classical multifactorial model of delirium was not generalized in this study. The interaction between frailty and illness severity offers a way of understanding delirium that may extrapolate to all patients. Keywords : delirium

OP27 224-C-6

TRANSLATING RESEARCH TO PRACTICE: IMPLEMENTING THE PREVENT MODEL IN PRIMARY CARE

Mary Guerriero AUSTRUM¹, Cathy A. ALDER², Christopher M. CALLAHAN³, Malaz A. BOUSTANTI³, Hugh C. HENDRIE⁴ (1. Psychiatry and Indiana Alzheimer Disease Center, Indiana University School of Medicine, USA; 2. Aging Brain Center, Wishard Health Services, USA; 3. Medicine, Division of General Internal Medicine and Geriatrics, IU Center for Aging Research Regenstrief Institute, Inc Indiana University School of Medicine, USA; 4. Psychiatry, IU Center for Aging Research Indiana University School Medicine, USA)

Introduction : Effective management of Alzheimer's disease (AD) requires comprehensive care for both patients and their caregivers. The PREVENT study [Providing Resources Early to Vulnerable Elders Needing Treatment (for Dementia)], a randomized controlled trial in primary care at Wishard Health Services (WHS) in Indianapolis IN, USA, demonstrated the effectiveness of collaborative care to address the needs of AD patients and caregivers. Collaborative care resulted in improved quality of care for AD, improved satisfaction with care, reduction in neuropsychiatric symptoms and caregiver distress. Method : In 2007, an interdisciplinary team distilled the PREVENT intervention to its essential components in order to transform the research model to a clinical program at WHS. Two years later, finding that significant numbers of older adults do not come into geriatric clinics due to transportation problems, complex social situations, fear of losing independence, etc.), the team developed the ABC Medical Home (ABC) to deliver care to patients and caregivers in their homes and/or community settings. The pilot program included a nurse practitioner, social worker and medical director supported by eMR-ABC care coordination software. Approximately 200 patients were enrolled from one primary care center within WHS. Results : Based on the effectiveness of the pilot, we received a CMS Innovation Award to expand services to 2000 Medicare/Medicaid beneficiaries with dementia or late life depression. Conclusion : Implementation of the PREVENT model in HABC and the ABC pilot has resulted in effective patient management and reduced caregiver burden. Support provided by IP-RISP R24MH080827 & 1C1CMS331000-01-00. Dr. Austrom was also supported in part by NIH-P30AG101. Keywords : Alzheimer disease, primary care, caregiver burden

OP27 225-C

ELDER MISTREATMENT & INCONTINENCE

OP27 225-C-1

NEUROLEPTIC, SEDATIVE AND ANALGESIC PRESCRIPTION IN DEMENTIA PATIENTS ADMITTED INTO ACUTE HOSPITAL

Upul FERNANDO, Emma JAY, Daryl LEUNG, Rebecca WINTER (Geriatric Department, Royal Wolverhampton NHS Trust, United Kingdom)

Introduction : Aggressive behavioural symptoms can be very challenging to clinicians and also harmful to patients. Prescription of antipsychotics and sedatives for challenging behaviour are widespread. They are associated with many side effects and clearly increase mortality and morbidity including increasing stroke risk. Method : A Point prevalence survey was carried out for all patients with dementia on 12/10/11. 51 patients were identified using the dementia flag via the computer system at the Hospital and referrals to the Dementia Outreach service. Drug charts were examined to identify if the patients had been prescribed any neuroleptics or sedatives from admission until 12/10/1. A retrospective review of the same 51 notes and drug charts were done looking at whether patients had been prescribed regular or prn analgesia. Results : We found 35% of patients in our survey had been prescribed neuroleptics since admission, mainly by junior doctors. Reassuringly many of these prescriptions were stopped and very few were continued after discharge. It was very clear patients who were on regular or PRN analgesia did not need any neuroleptics or sedatives. Interestingly patients who were on regular or PRN neuroleptics or sedatives were not on analgesia. Conclusion : High numbers of patients had been prescribed neuroleptics or sedatives by the junior medical staff without trying other alternatives. We also learnt if patients with dementia were having disturbed behaviour or agitation, this could be due to pain that they could not express properly. This behaviour can be easily managed with regular or PRN analgesics rather than giving neuroleptics or sedatives. Keywords : Dementia, Neuroleptics, Aggressive behaviour

OP27 225-C-2

ASSOCIATION BETWEEN TREATMENT-LIMITING DECISION, COMORBIDITIES AND DYING IN EMERGENCY DEPARTMENT: CROSS-SECTIONAL ELDERLY POPULATION-BASED STUDY

Laure DE DECKER¹, Aude GOURAUD-TANGUY², Gilles BERRUT¹, Olivier BEAUCHET³ (1. Geriatric, University Nantes, France; 2. Geriatric, Hospital Nantes, France; 3. Geriatric, University Angers, France)

Introduction : Older adults experience a higher risk of death in the emergency departments (EDs), in part, as a result of their comorbidities. A treatment-limiting decision is often reported for older adults who die in the EDs. The Charlson Comorbidity Index (CCI) is a validated method for the scoring of comorbidities. Whether an association between the CCI and treatment-limiting decisions exists remains unknown. Method : To determine whether the CCI was associated with the treatment-limiting decisions made for older patients who die in the EDs. Methods: A total of 2,095 patients ≥ 65 years old who died in the ED in France and Belgium were prospectively included between 2004 and 2005. The recorded data included: 1) the CCI score; 2) patient age; 3) gender; 4) living in senior housing facilities; 5) hospitalizations occurring in the previous year; 6) presence of functional limitations (according to the Knaus classification); 7) chronic diseases; and 8) presence of organ failure(s).

A treatment-limiting decision was defined as a predetermined choice not to implement therapies that would otherwise be required to sustain life. Results : A treatment-limiting decision was identified in 993 (47%) patients. Fully-adjusted logistic regression model showed that a CCI ≥ 5 (OR=25.56 with P=0.037), age ≥ 85 years (OR=20.33 with P<0.001), living in an institution (OR=0.15 with P=0.017), hematologic (OR=6.92 with P=0.020) and respiratory disease (OR=0.17 with P=0.046), and neurologic causes (OR=0.20 with P=0.010) of organ failure were significantly associated with treatment-limiting decisions. Conclusion : An elevated CCI score (≥ 5) was associated with a treatment-limiting decision in elderly patients evaluated in the EDs. Keywords : Older patients, treatment-limiting decision, comorbidities.

OP27 225-C-3

MISTREATED DEPRESSION IN LONG TERM CARE INSTITUTIONS

Hana VANKOVA¹, Iva HOLMEROVA², Martina JEDLINSKA²
(1. Faculty of Humanities and 3rd Medical Faculty, Charles University in Prague, Czech; 2. Faculty of Humanities, Charles University in Prague, Czech)

Introduction : Depression and its mistreatment may be considered one of the most important quality indicators in long term care for older adults. Depression is interrelated with many geriatric syndromes, has important impact on quality of life, morbidity and mortality. Method : Depressivity was assessed using Geriatric Depression Scale (GDS-15). Use of antidepressants of different types was mapped in three LTC institutions in the Czech Republic in the last year.. The same protocol was used in 2007 in 12 LTC institutions, so we are able to observe the trends in use of antidepressants in LTC institutions in the Czech Republic. Results : In 2007 out of 584 residents 17 were prescribed tricyclic antidepressants. This represented 15% of all prescribed antidepressants. While recently, according to our preliminary results, 9% of all prescribed antidepressants were tricyclic antidepressants. On the contrary, prescription of the new generation antidepressants, SSRIs and SNRIs increased. Detailed results will be discussed. Conclusion : Prescription of high risk tricyclic antidepressants for LTC residents was quite frequent in the Czech Republic in the last years, and this bad practice continues even now. Prescription of tricyclics seems to decrease while the use of new generation antidepressants increased. However, the problem of undiagnosed and untreated depression is still present in many LTC residents in the Czech Republic and intervention is needed. Supported by the grants NT11325 and NT13705 of the Ministry of Health of the Czech Republic Keywords : depression, mistreatment

OP27 225-C-4

CORRELATION BETWEEN ESTRADIOL SERUM CONCENTRATION WITH PELVIC FLOOR MUSCLES' STRENGTH AS A PARAMETER OF URINARY INCONTINENCE IN GERIATRIC WOMEN AT Pengeragoan Village, Jembrana, Bali

Agnes RENZA¹, R.A. Tuty KUSWARDHANI² (1. Internal Medicine Dept., Atma Jaya Hospital, Faculty of Medicine-Atma Jaya University, Indonesia; 2. Geriatric Division, Faculty of Medicine, Udayana University / Sanglah Hospital, Indonesia)

Introduction : One of bothersome urinary tract complaints in geriatric women is urinary incontinence with prevalence is 1.3 to 2.0 times greater than geriatric men. This research purpose to determine mean serum estradiol concentration in geriatric women and correlation between serum estradiol concentration with pelvic floor muscles'

strength as a parameter of urinary incontinence in geriatric women. Method : This is a cross sectional study in geriatric women population at Pengeragoan Village, Jembrana, Bali. Samples determined using cluster proportional (systematic) random sampling. In brief, this study included female patients aged ≥ 60 years old who were eligible to do examinations. Patients were excluded if they had history of severe perineal rupture, vaginal and/or pelvic infection/malignancy, immobilization and/or extremity paralysis history of fractures in hip, pelvic or lower extremity, decrease of consciousness, end stage renal disease, stones in urinary tract, severe infection (sepsis), urinary catheter user. Written informed consent was obtained from all study participants. Pelvic floor muscles' strength measured with a Perineometer (PFX2®). Urinary incontinence diagnosed by an anamnesis (using a questionnaire). Results : Total sample of geriatric women were 77 people, with mean of age are 66.9 ± 7.09 year old (p = 0.019), BMI 22.05 ± 3.74 kg/m² (p = 0.735), perineometer score (without contraction) 6.34 ± 2.26 mmHg (p = 0.000) , perineometer score (with contraction) 9.97 ± 2.1 . Conclusion : In this research we found low mean serum estradiol concentration (13.8 ± 9.7 pg/mL) and there is correlation between serum estradiol concentration with pelvic floor muscles' strength in geriatric women at Pengeragoan Village, Jembrana, Bali. Keywords : Estradiol, pelvic floor muscles strength, urinary incontinence

OP27 225-C-5

URINARY INCONTINENCE PROJECT: HOSPITAL & COMMUNITY COLLABORATION MODEL

Mei Yee Bonnie WONG, Cy TONG (Integrated Elderly Care Services, Christian Family Service Centre, Hong Kong)

Introduction : In Hong Kong, 40-45% frail elderly (aged over 65) living in community, suffered from different types of urinary incontinence and related symptoms. It influences the quality of life and may lead to pre-mature institutionalization to old aged homes. However, due to the declined cognitive and physical function, the compliance rate of the treatment was low. This study explored the prevalence of urinary complaints and the attitude of treating the urinary symptoms of the participants and to evaluate the clinical effectiveness of the collaboration model. Method : The study included two phases: The phase I used face to face interviews to collect informations through closed-end questionnaires while the phase II used Paired sample-t-test for "pre" and "post" comparison for the validated measuring tools: i) Urogenital Distress Inventory Short Form(UDI-6) ii) Incontinence Impact Questionnaire Short Form (IIQ-7) iii) General Health Questionnaire (GHQ-12) iv) International Prostate Symptom Score (IPSS) and v) Subjective Program evaluation. Results : For phase I, 1103 clients were interviewed (n=1103). The response rate was 81.2%. 79.1% had at least one kind of urinary symptoms. Nocturia was the most common complaints (55.5%). 55% refused to be referred for further treatment. For phase II, 87 clients joined the clinical program. The overall results were significant in reducing the severity of urinary symptoms; increased the quality of life, confidence and life satisfaction; decreased the severity of nocturia and distress. Conclusion : A new collaboration service model between the nurse-led continence clinic and community care service increased the compliance rate and enhanced the continuity and effectiveness of the treatment. Keywords : pre-mature institutionalization, nurse-led continence clinic, urinary incontinence, UI, nocturia,

OP27 226-C

FRAILITY AND SARCOPENIA

OP27 226-C-1

FRAILTY PREDICTS DEPRESSION IN OLDER ADULTS AGED 55 AND ABOVE IN THE SINGAPORE LONGITUDINAL AGEING STUDY (SLAS-1)

Liang FENG¹, Ma Shwe Zin NYUNT¹, Lei FENG¹, Keng Bee YAP², Tze Pin NG¹ (1. *Psychological Medicine, National University of Singapore, Singapore*; 2. *Department of Geriatric Medicine, Khoo Teck Puat Hospital, Singapore*)

Introduction : The interrelationships between depression and frailty are unclear. Whether depression and frailty are a cause, consequence, or comorbidity of the other, or even congruent conditions has been examined in few studies. This study aimed to examine the cross-sectional and longitudinal relationships between frailty and depressive symptoms at baseline and depressive symptoms at follow up. **Method :** 1827 older Chinese adults aged 55 and above in the Singapore Longitudinal Ageing Study cohort 1 (SLAS-1) provided data on frailty measures (based on Fried criteria) at baseline, and depression (GDS-15) at baseline and follow ups at 1.5 and 4 years. **Results :** The mean age of the population was 65.9 (± 7.26). Among them, 11.4% (n=209) had depressive symptoms (GDS ≥ 5), 2.5% (n=46) were frail and 32.4% (n=591) pre-frail at baseline. In cross-sectional analysis of baseline data, the adjusted odds ratios (OR) and 95% confidence intervals (CI) controlling for demographic, health status and other confounders were 1.69(1.23-2.33) for pre-frailty and 2.36(1.08-5.15) for frailty, (p, linear trend<0.001) In longitudinal data analyses, prospective associations among all participants were: pre-frail: OR=1.86 (1.08-3.20); frail: OR=3.09 (1.12-8.50); p (trend)=0.009). Among participants free of depressive symptoms at baseline, similar prospective associations were found: pre-frail OR=2.26 (1.12-4.57); frail: OR=3.75 (1.07-13.16); p (trend)=0.009). **Conclusion :** These data support a significant role of frailty as a predictor of depression in a relatively younger old adult population aged 55 and above. Further interventional studies should explore whether the reversal of frailty can decrease the risk of depression. **Keywords :** Frailty, depressive symptoms, elderly

OP27 226-C-2

FRAILTY SYNDROME AMONG BRAZILIAN ELDERLY

Yeda DUARTE¹, Maria Lucia LEBRAO¹, Fabiola Bof ANDRADE², Luciana Correia ALVES¹ (1. *Epidemiology, School of Public Health University of Sao Paulo, Brazil*; 2. *Odontology, Federal University of Brasilia, Brazil*)

Objective: to provide a systematic examination of frailty categories - no frail, pre-frail, frail - in a well-defined sample of older Brazilian adults in 2006 and associate variables. **Method :** This was a cross-sectional study with data from the Health, Wellbeing and Aging cohort study (SABE), Brazil. The SABE uses a stratified, multistage sampling design to obtain a representative sample of noninstitutionalized individuals, with 60 years and older, from Sao Paulo City and is designed to collect information on the general health and life conditions. The study started in 2000 as a multicenter survey conducted in seven countries in Latin America and the Caribbean and in 2006 it was continued in Sao Paulo and was transformed into a cohort study. The sample was composed by 1399 people aged 60 years and over and phenotype model proposed by Fried et.al. **Results :** In 2006, frailty prevalence was 41.5 pre frail and 8.5 frail. Frailty and pre-frailty were associated with the same variables, except the variable that represents the difficulties in ADL showed that a statistically significant only with pre-frailty. Increasing age increased the odds of being pre-frail and frail. It was found that individuals with depression, with 2+ disease, difficulties in IADL showed significantly more likely to be frail and pre-frail. Between older people with cognitive decline,

less educated, difficulties in IADL and ADL demonstrated more likely to be considered pre-frail. Frailty was significantly associated with five variables: age, living alone, depression and difficulty in IADL. **Conclusion :** Frailty is an public health problem in Brazil. **Keywords :** Frailty, SABE Study, Brazil

OP27 226-C-3

ASSOCIATIONS OF SARCOPENIC OBESITY AND DYNAPENIC OBESITY WITH CHANGES IN FALLS RISK OVER FIVE YEARS IN COMMUNITY-DWELLING OLDER ADULTS

David SCOTT¹, Alan HAYES², Kerrie SANDERS¹, Peter EBELING¹, Graeme JONES³ (1. *Department of Medicine, NorthWest Academic Centre, University of Melbourne and Western Health, Australia*; 2. *Institute of Sport, Exercise and Active Living, School of Biomedical and Health Sciences, Victoria University, Australia*; 3. *Menzies Research Institute, University of Tasmania, Australia*)

Introduction : Dynapenia (the age-related decline in muscle strength) may be a better predictor of functional outcomes than sarcopenia. Concurrent low muscle mass and high fat mass (sarcopenic obesity; SO) may result in cumulative functional declines, but few data have examined outcomes of dynapenic obesity (DO). **Method :** 674 community-dwelling volunteers (61.4 \pm 7.0 years; 48% female) completed assessments at baseline and 5.1 \pm 0.5 years later. Dual-energy X-ray absorptiometry determined trunk fat (TFAT) and appendicular lean (ALM) mass. Lower-limb strength (LLS) was assessed by dynamometer. Sarcopenia, dynapenia, and obesity were categorised according to the lowest sex-specific tertiles of ALM/height² and LLS, and the highest sex-specific tertile for TFAT. A validated Physiological Profile Assessment assessed falls risk at baseline and follow-up. **Results :** At baseline, N = 36 and N = 79 participants demonstrated SO and DO respectively, and 22 met both definitions. A significant trend was observed for higher falls risk score amongst DO compared to non-DO participants (P < 0.001), but not for SO compared to non-SO participants (P = 0.152) at baseline. Adjusting for age, falls risk score significantly increased over five years for DO men [(0.32 (95% CI 0.07, 0.56)], and for both DO [0.38 (95% CI 0.14, 0.62)] and dynapenic alone [0.22 (95% CI 0.01, 0.43)] women, compared to non-DO participants. No associations were observed for sarcopenia alone or SO (all P > 0.05). **Conclusion :** Dynapenic obesity may have better predictive ability for increasing falls risk over five years in community-dwelling older adults than sarcopenic obesity, and sarcopenia or dynapenia alone. **Keywords :** sarcopenic obesity; falls

OP27 226-C-4

SARCOPENIC OBESITY IS ASSOCIATED WITH A HIGHER LEVEL OF SERUM HIGH-SENSITIVITY C-REACTIVE PROTEIN IN CHINESE OLDER PERSONS - A COMMUNITY-BASED STUDY

Chuan-Wei YANG¹, Chia-Ing LI², Chiu-Shong LIU³, Chih-Hsueh LIN³, Wen-Yuan LIN³, Tsai-Chung LI⁴, Cheng-Chieh LIN⁵ (1. *Ph.D. Program for Aging, College of Medicine, China Medical University, Taiwan*; 2. *Department of Medical Research, China Medical University Hospital, Taiwan*; 3. *Department of Family Medicine, China Medical University Hospital, Taiwan*; 4. *Graduate Institute of Biostatistics, College of Public Health, China Medical University, Taiwan*; 5. *School of Medicine, College of Medicine, China Medical University, Taiwan*)

Introduction : The prevalence of obesity and sarcopenia is high in older persons. These two disorders occurring simultaneously form

sarcopenic obesity. Research suggests that inflammation plays an important role in the pathogenesis of the obesity and sarcopenia. This study explores the association between sarcopenic obesity and inflammatory markers. Method : The study sample consisted of 844 community-dwelling people aged 65 years and older (448 men and 396 women). Sarcopenic obesity was determined by low muscle mass (skeletal muscle index < 6.87 and 5.46 kg/m² for men and women, respectively) and excess body fat (percentage body fat greater than the 60th percentile of the study sample by genders [27.82% in men and 37.61% in women]). The inflammatory markers, including the interleukin-6 (IL-6), high-sensitivity C-reactive protein (hs-CRP) and tumor necrosis factor-alpha (TNF- α) were measured. Results : The prevalence of sarcopenic obesity was 7.37% in men and 7.07% in women. The percentage of subjects in the groups of normal, obesity only, sarcopenia only, and sarcopenic obesity were 48.0, 32.9, 11.8 and 7.2, respectively. There was no difference in the serum levels of IL-6 and TNF- α among 4 groups of different sarcopenia and obesity status. After multivariate adjustment, the serum hs-CRP levels in the groups of sarcopenia only and sarcopenic obesity compared with the normal group were significantly higher by 0.12 mg/dl (P = 0.043) and 0.18 mg/dl (P = 0.017), respectively. Conclusion : Our results provide evidence that sarcopenic obesity was associated with increased level of serum hs-CRP. Keywords : Sarcopenic obesity, hs-CRP, exercise behavior

OP27 226-C-5

MEASURING GAIT SPEED IN NURSING HOME RESIDENTS: A SYSTEMATIC REVIEW

Alexandra SLATER¹, Nancye May PEEL², Suzanne S. KUYS³, Ruth E. HUBBARD² (1. School of Medicine, The University of Queensland, Australia; 2. Centre for Research in Geriatric Medicine, The University of Queensland, Australia; 3. Centre for Musculoskeletal Research, Griffith University, Australia)

Introduction : Gait speed is an established measure of physical performance and a strong predictor of adverse outcomes, including hospitalisations, disability, cognitive decline and death. In community-dwelling older adults, 0.8m/s has been proposed as a cut-off between fitness and frailty. A recent meta-analysis of gait-speed values for older patients in clinical settings estimated mean usual pace of 0.58m/s. Here, we aimed to review gait speed values for ambulatory geriatric nursing home residents. Method : A systematic search of relevant databases provided articles published prior to December 2012. Study inclusion criteria were: original research article, mean participant age >70 years, resident in nursing home, residential aged care facility or similar and measurement of gait speed over a short distance. Results : Final data included 2,654 participants from 32 studies, 65% of which required participants to be ambulatory over the measurement distance. 12 studies reported maximal gait speed, 17 gait speed at usual pace, in 6 studies, pace was unspecified and assumed to be usual. The unadjusted means for maximal and usual gait speed were 0.65m/s (range: 0.48-1.00; 95% Confidence Interval [CI]: 0.60-0.71) and 0.45m/s (range: 0.14-0.82; 95% CI: 0.38-0.51) respectively. Conclusion : Gait speed values in the geriatric nursing home population are lower than those reported for older adults in the community and in clinical settings. However, unadjusted gait speed values suggest that for many nursing home residents, mobility, while impaired, is still functional. Keywords : gait speed; nursing home; systematic review

OP27 226-C-6

PREDICTING QUALITY OF LIFE OF OLDER PEOPLE IN THE NETHERLANDS USING A MULTIDIMENSIONAL

ASSESSMENT OF FRAILITY

Robbert J. GOBBENS¹, Katrien G. LUIJKX², Marcel A. VAN ASSEN³ (1. Institute for Health Care, Rotterdam University of Applied Sciences, Netherlands; 2. Department of Tranzo, Scientific Center for Care and Welfare, Tilburg University, Netherlands; 3. Department of Methodology and Statistics, Tilburg School of Social and Behavioral Sciences, Tilburg University, Netherlands)

Introduction : Although frailty was originally a medical concept, nowadays more and more researchers are convinced of its multidimensional nature, including a psychological and social domain of frailty as well as a physical domain. The objective of this study was to test the hypothesis that the prediction of quality of life by physical frailty components is improved by adding psychological and social frailty components. Method : This cross-sectional study was carried out in a sample of 1,031 people aged 65 years and older. Participants completed a web-based questionnaire containing the Tilburg Frailty Indicator (TFI) for measuring physical, psychological and social frailty, and the WHOQOL-BREF for measuring four quality of life domains (physical health, psychological, social relations, environmental). Results : The findings show that the prediction of all quality of life domains by eight physical components of frailty was improved after adding four psychological and three social frailty components. The psychological frailty component 'feeling down' significantly improved the prediction of all four quality of life domains, after controlling for the effects of background characteristics and all other frailty components. The psychological frailty component 'feeling nervous or anxious' and the social components 'lack of social relations' and 'lack of social support' improved the prediction of three quality of life domains, after controlling for the effects of all other variables. Conclusion : This study emphasizes the importance of a multidimensional assessment of frailty in the prediction of quality of life in older people. Keywords : Quality of life; frailty

OP27 227-C

FRAILITY OUTCOME

OP27 227-C-1

FRAILITY AND FUNCTIONAL DECLINE INDICES AS PREDICTORS OF POOR OUTCOMES IN HOSPITALISED OLDER PEOPLE

Elsa DENT¹, Ian CHAPMAN², Cynthia PIANTADOSI¹, Renuka VISVANATHAN³ (1. Department of Medicine, University of Adelaide, Australia; 2. Department of Medicine, University of Adelaide, The Royal Adelaide Hospital, Australia; 3. Aged and Extended Care Service, The Queen Elizabeth Hospital, Adelaide, University of Adelaide, Australia)

Introduction : Admission to a Geriatric Evaluation and Management Unit (GEMU) can optimise a patient's chance of functional recovery. The aim of this study was to evaluate several common frailty and functional decline indices on their ability to predict poor GEMU outcomes, both at discharge and at six months. Method : This was a prospective observational study of consecutive patients aged 70+ years admitted to the GEMU at the Queen Elizabeth Hospital, Adelaide, Australia. Patients were classified as "frail" or "at high risk of functional decline" using several different frailty and functional decline indices. The predictive ability of indices was evaluated using logistic regression and area under receiver operator characteristic curves (auROC). A poor outcome was considered as mortality or residential care admission. Results : 172 patients (mean age 85.2 years; 72% female) were included. Frailty prevalence varied from 24 - 94 % depending on the index used. Several instruments were predictive of

poor outcome at both discharge and 6 months. Adequate predictive accuracy for discharge outcome was achieved by the FI-CD (auROC = 0.735, $P < 0.001$) and modified Katz score (auROC = 0.704, $P < 0.001$). The FI-CD was the only index to show discriminatory power in predicting poor six month outcome (auROC = 0.702, $P < 0.001$). Conclusion : Frailty and functional decline instruments are a feasible application for identifying GEMU patients at risk of poor discharge and six month outcomes. The FI-CD is best predictor overall, and is recommended for research purposes. Pragmatically, the modified Katz index is the most valuable predictive instrument. Keywords : frailty; prognosis; hospital

OP27 227-C-2

STATIN USE AND CLINICAL OUTCOMES IN OLDER MEN: A PROSPECTIVE POPULATION-BASED STUDY

Danijela GNJIDIC¹, David LE COUTEUR², Fiona BLYTH³, Vasi NAGANATHAN², Robert CUMMING⁴, Sarah HILMER⁵ (1. Faculty of Pharmacy, University of Sydney, Australia; 2. Concord Hospital and CERA, University of Sydney, Australia; 3. Concord Clinical School and CERA, University of Sydney, Australia; 4. Sydney School of Public Health, University of Sydney, Australia; 5. Clinical Pharmacology Department, Royal North Shore Hospital and University of Sydney, Australia)

Introduction : Statin use is highly prevalent in robust and frail older people, but there is limited evidence available about their effects on major clinical outcomes. This study aimed to investigate the relationship of statins with institutionalization and death in older men living in the community, accounting for frailty. Method : Men aged ≥ 70 years ($n=1665$) enrolled in the Concord Health and Ageing in Men Project, Sydney, Australia were studied. Data were obtained from baseline (2005-2007) and follow-up (maximum 6.79 years) assessments. Statin use was captured at baseline. Cox proportional hazards regression analyses were conducted to estimate the risk of institutionalization and death according to statin use (exposure, duration and dose) and frailty status, with adjustment for clinically relevant factors. A secondary analysis used propensity score matching to replicate covariate adjustment in regression models. Results : At baseline, 43% of participants reported taking statins. In the adjusted models, current statin use was not statistically associated with increased risk of institutionalization (hazard ratios [HR] =1.60; 95% confidence intervals [CI]: 0.98-2.63) or death (HR=0.88; 95%CI: 0.66-1.18). There was no significant association of duration of use or dose of statins with either outcome. Propensity scoring yielded similar findings. Compared to non-frail participants not prescribed statins, the adjusted HR for institutionalization for non-frail participants prescribed statins was 1.43 (95%CI: 0.81-2.51), for frail participants not prescribed statins was 2.07 (95%CI: 1.11-3.86) and for frail participants prescribed statins was 4.34 (95%CI: 2.02-9.33). Conclusion : These data imply no independent association between statin use and institutionalization or death in community-dwelling older men. Keywords : statins, frailty, older men, clinical outcomes.

OP27 227-C-3

NON-RESPONSE RESULTS IN THE UNDERESTIMATION OF FRAILITY BUT DOES NOT BIAS THE ASSOCIATION WITH MORTALITY

Leon FLICKER¹, Osvaldo ALMEIDA¹, Graeme HAMKEY², Bu YEAP³, Paul NORMAN⁴, Kieran MCCAUL¹ (1. Western Australian Centre for Health & Ageing, University of Western Australia, Australia; 2. Department of Neurology, Royal Perth Hospital, Australia; 3. School of Medicine and Pharmacology, University of Western Australia, Australia; 4. School of Surgery, University of

Western Australia, Australia)

Introduction : In cohort studies of older people non-response frequently occurs but it is uncertain as to whether this results in bias of the strength of association. We sought to determine the effects of non-response on prevalence of frailty and the association between frailty and mortality. Method : The Health In Men Study arose out of a population-based randomised trial of screening for abdominal aortic aneurysms conducted in Perth. Men aged 65-79 years were identified in 1996 and 12,203 attended. Response fraction for a face-to face survey at approximately 5 years of follow-up was 46%, and similar at 10 years using a postal survey. In addition linkage to hospital, morbidity and mortality datasets was performed using the Western Australian Data Linkage System. We calculated the observed and imputed prevalence of frailty and 5 and 10 years of follow-up using the FRAIL scale and frailty index based on a deficit approach. Imputation utilised all available data from the first wave. We then sought to determine the association of frailty on subsequent mortality. Results : We found that the prevalence of frailty as determined by surveys of men who responded were major underestimates compared with imputed estimates. However the association of frailty and mortality did not appear to be biased as there were no differences in the associations with mortality produced from the observed and imputed frailty data. Conclusion : We conclude that non-response may produce major bias on the prevalence of factors associated with frailty but this may not bias the association between these factors and other outcomes. Keywords : Frailty, mortality, imputation

OP27 227-C-4

FRAILITY STATUS, MUSCLE STRENGTH AND FUNCTIONAL PERFORMANCE IN OUTPATIENT OLDER ADULTS WITH CHRONIC DISEASE

Tsai-Chun CHEN¹, Ching-Yu CHEN², Ssu-Yuan CHEN³, Ming-Hsia HU¹ (1. School and Graduate Institute of Physical Therapy, National Taiwan University, Taiwan; 2. Department of Family Medicine, National Taiwan University College of Medicine, Taiwan; 3. Department of Physical Medicine and Rehabilitation, National Taiwan University College of Medicine, Taiwan)

Introduction : Muscle strength loss is a characteristic of frailty, and lower extremity performance have been shown to be predictive of disability. However, there is insufficient evidence to access the interaction among frailty status, muscle strength and functional performance. The purposes of this study were to examine the difference of frailty status, lower extremity muscle strength and functional performance in outpatient older adults. Secondly, we investigate the relationship of lower extremity muscle strength and functional performance in outpatient older adults. Method : This is a cross-sectional study design. and 148 outpatient older adults were included with their inform consent. Frailty status was determined by Fried's frailty. For testing of the knee strength, Cybex dynamometer was used to evaluate isometric test, and isokinetic tests at 0, 60, and 180 per second. Time-up and go (TUG) test was used to measure the functional performance in outpatient. Results : Over 60% of outpatient older adults with chronic disease were in pre-frail status whether in male or female. The isometric and isokinetic muscle strength of knee extensors and flexors were significant decrease in pre-frail and frail outpatient older adults. Knee extensor isokinetic parameters were significant correlated with TUG performance. Conclusion : Lower extremity muscle strength was significant related to physical performance in outpatient older adults with vary frail status. And, it's also a key characteristic to distinguish outpatient older adults from non-frail to pre-frail or frail. These results may support the idea that

strength training is an intervention that can potentially improve physical health status in many outpatient older adults with varying status. Keywords : frailty, older adults, muscle strength

OP27 227-C-5

THE RELATIONSHIPS BETWEEN FIVE FRAILTY INDICES AND THE ADVERSE HEALTH OUTCOMES

Pay-Shin LIN¹, Tsai-Jou TSENG², Huey-Shinn CHENG³, Alice May-Kuen WONG¹, Min-Chi CHEN⁴, Bing-Hong GI² (1. Dept. of Physical Therapy & Graduate Institute of Rehabilitation Science, College of Medicine, Healthy Aging Research Center, Chang Gung University, Taiwan; 2. Dept. of Physical Therapy & Graduate Institute of Rehabilitation Science, College of Medicine, Chang Gung University, Taiwan; 3. Dept. of Internal Medicine, Chang Gung Memorial Hospital, LinKou Branch, Taiwan; 4. Dept. of Public Health and Biostatistics Consulting Center, College of Medicine, Chang Gung University, Taiwan)

Introduction : Frailty may cause older people highly vulnerable to adverse health outcomes (AHOs). Frail status could be expressed by five phenotypes, or frailty indices, including weight loss, low physical activity, slow gait speed, muscle weakness, and exhaustion. The associations between each frailty index and other AHOs have not yet been reported. The purpose of this study is to determine the associations between individual frailty index and AHOs in all older adults as well as specifically in the pre-frail group. Method : This is a 2-year retrospective longitudinal study of 341 elders. They received baseline evaluation and were followed up for 2 years with annual assessment and finally, medical records check for the occurrences of AHOs, including hospitalization, emergency visit, fall, ADLs/IADLs disability, physical function decline, quality of life (QOL) score decline. Logistic regression analysis was applied to describe the associations of individual frailty index with AHOs. Results : Among five frailty indices, muscle weakness was significantly associated with emergency visit (OR=2.41), slow gait speed and exhaustion with ADL disability (OR=3.26 and 1.98), and exhaustion with QOL decline (OR=2.49). In pre-frail older adults, slow gait speed was the only frailty index which significantly associated with emergency visit (OR=2.40), fall (OR=2.66), and IADL disability (OR=3.39). Conclusion : The study provided evidence to support that muscle weakness, slow gait speed and exhaustion were frailty indices strongly associated with the occurrences of AHOs in older adults, and slow gait speed was the only index significantly associated with the occurrences of AHOs in the pre-frail older adults in 2 years. Keywords : Frailty, Frailty index, Adverse health outcomes

OP27 227-C-6

FRAILTY IMPACT ON SURVIVAL ANALYSIS IN OLDER BRAZILIANS WITH AND WITHOUT COGNITIVE DECLINE: A FOUR YEARS FOLLOW UP SURVEY IN SAO PAULO, BRAZIL

Maria Lucia LEBRAO, Yeda DUARTE, Ligiana Pires CORONA; Luciana Correia ALVES (Epidemiology, School of Public Health University of Sao Paulo, Brazil)

Introduction : The number of Brazilian older adults is expected to grow dramatically over the next decades. Frailty is an important health problem associated with high risk for adverse health outcomes including mortality, institutionalization, falls, decrease of functional capacity and hospitalization. Implications of these public health problem demand increasing attention, particularly because frailty has been documented as avoidable and, if installed, is reversible by active intervention strategies. In this study we will analyze the survival curve

of older Brazilians (≥ 60 years) according frailty categories - not frail or robust, intermediate, frail - in a large, well-defined sample of older Brazilian in four years follow up. Method : Data comes from a longitudinal survey - SABE Study (Health, Well being and Aging). that included population aged 60 and living in Sao Paulo/Brazil (n=1,143 from a multi stage clustered sampling) evaluated in 2006. Survival analysis was done based on data of 2010 (death analyses). Kaplan-Meier Survival Analysis was used to analyze the results considering frailty categories in baseline and and the presence or absence of cognitive decline. Losses occurred during the follow-up where considered with the half time of the period. Results : In survival analysis, the 3 strata (not frail, intermediate and frail) could be observed the strong impact of cognitive decline (OR=1.97, p=0.001). The hazard adjusted model showed a hazard ratio 1.39 for pre-frail and 2.66 for frail (p<0.001). Conclusion : Frailty is associated with mortality in Brazilian elders and cognitive decline has a significant impact in this outcome. Keywords : Frailty, SABE Study, Cognitive decline

OP27 303-S

ELDER ABUSE AND AGEISM

OP27 303-S-1

AGEISM IN EUROPE: NEW FINDINGS FROM THE CULTURAL MAP OF THE WORLD AND THE EUROPEAN SOCIAL SURVEY

Moritz HESS¹, Jeroen DIKKEN² (1. Department of Sociology, University of Mannheim, Germany; 2. Department of Nursing, Hogeschool Utrecht, Netherlands)

Introduction : Stigmata on older people in society remain a big problem in the whole of Europe. Studies have shown that traditional versus rational-secular and survival versus self-expression values are related to sexism, homophobia and racism. Those with rational-secular and self-expression values show less stereotyping. Therefore this study questions whether such a connection exists for ageism as well. Method: Macro country level data was derived from the Cultural Map of the World which is constructed based on data of the World Value Survey. Micro individual level data was derived from the European Social Survey. Both data sets were merged to allow multi-level analysis. The sample consisted of 39017 persons. Multilevel regression analyses were used to examine the influence of the two dimensions of the Cultural Map of the World on ageism. The influence of traditional versus rational-secular and survival versus self-expression values on affective ageism was examined while controlling for gender, age, education and income. Results : A significant influence was found for the traditional versus rational-secular dimension. Which means, people living in secular-rational countries have a more positive feelings towards older people compared to people living in traditional countries. No significant influence was found for the survival versus the self-expression dimension. Conclusion : The results suggest that people living in countries which are less religious and less family oriented show a lower level of ageism. These results are in line with the findings from other studies concerning homophobia, sexism and racism. Keywords : Cultural map of the world, Ageism, Multilevel analysis

OP27 303-S-2

THE PERVASIVE NATURE OF AGEISM: A META-ANALYSIS

Paul NASH¹, Ian STUART-HAMILTON², Peter MAYER² (1. Centre for Innovative Ageing, Swansea University, United Kingdom; 2. Psychology Department, University of Glamorgan, United Kingdom)

Introduction : Pervasive, ingrained implicit ageism is found in the general (Levy & Banaji, 2002) and professional medical (James and Haley, 1995) populations, negatively affecting older peoples health care (Duerson, Thomas, Chang & Stevens, 1992; Filipp & Schmitt, 1995). In its measurement, the Implicit Association Test (IAT) has been shown to be a stable predictor of spontaneous behaviour where explicit measures predict only planned (Steffens, Schulze & Konig, 2006). **Method :** 203 participants over six study populations used The Fraboni Scale of Ageism (Fraboni, Saltstone & Hughes, 1990) and a bespoke IAT (Greenwald, McGhee & Schwartz, 1998), measuring explicit and implicit attitudes respectively. **Results :** Data demonstrated consistently negative implicit attitudes, where explicit attitudes were largely positive. Spanning each population, there were significant differences reported on both implicit ($F(7,162)=8.352$, $p<0.001$) and explicit ($F(7,162)$, $p<0.05$) measures illustrating the measurement of distinct constructs. Additionally, results demonstrated a negative societal ageist bias, increased self-presentational bias in-line with educational level and internalisation of negative attitudes. **Conclusion :** It is estimated that by 2051, 17% (115.4 Million) of the global population will be living with, and requiring some form of support for dementia (US Census, 2010). This is leading to increased contact between older people medical professionals thus dementia care should be prioritised. Negative attitudes and consequential prejudicial behaviour need to be challenged and addressed, ensuring proper treatment and dignity in care. Through well structured training based on psychological principles, attitudes towards older people can be changed (Westmoreland et al., 2009). **Keywords :** Ageism, IAT, Implicit

OP27 303-S-3

THE CANADIAN APPROACH TO ADDRESS ELDER ABUSE

Yongjie YON¹, Gloria GUTMAN² (1. Davis School of Gerontology, University of Southern California, USA; 2. Gerontology Research Centre, Simon Fraser University, Canada)

Introduction : With aging of the Canadian population, the number of abused elderly is projected to increase, with potentially serious health, social and economic consequences for victims, families and Canadian society. To adequately address both causes and consequences, which tend to be complex, a multi-sectorial approach is required. **Method :** This paper critically examines past and present government, NGO and academic/professional initiatives targeted to identifying, mitigating and preventing elder abuse in community and institutional settings. Data sources include government white papers and websites, NGO/professional association publications and websites and interviews with key informants. **Results :** The paper begins with discussion of roles and responsibilities of governments, NGOs, academic and professional communities in addressing elder abuse. A synopsis is then provided of government initiatives at the federal/provincial/territorial level and exemplary provincial initiatives. Attention then turns to major activities of NGO, academic and professional sectors. In the process, a broad overview is provided of legislation, awareness building, major national and regional research projects, provincial/territorial elder abuse strategies as well as services and programs for victims, abusers and those who work with them. **Conclusion :** While Canada can take pride in recent activities directed to preventing and curtailing elder abuse, gaps in knowledge still exist and further actions are needed. For example, the recently initiated national prevalence study will provide updated estimates of community and institutional abuse but is focused on urban settings. As in other countries, evaluation research has been minimal and information on best practices remains largely anecdotal. And, the impact of recently enacted legislation is unknown. **Keywords :** Elder

Abuse and Neglect, Programs and Services, Policy, Government Initiatives and NGO

OP27 303-S-4

COMMUNITIES' AGEISM ATTITUDE TOWARDS ELDERLY

Guler DURU ASIRET, Ebru OZTURK, Tugce TURTEN, Imatullah AKYAR (Nursing, Hacettepe University, Turkey)

Introduction : Worlds population is getting older and the proportion of elderly is also increasing in Turkey. This demographic change effects social life and gathers new problems like ageism. Ageism is a result of society's, family members' and especially young peoples' negative attitudes against elderly individuals and ageing. **Method :** Study was carried out to determine younger people's attitudes towards ageism. This cross-sectional and descriptive study was applied on 90 person between the ages of 18-25, living in Ankara, Turkey. Socio-demographic data sheet and Ageism Attitude Scale (min.23, max.115) were used for data collection. Data were analyzed with frequency, percentage distribution and Kruskal-Wallis and Mann-Whitney U tests. **Results :** Participants had a mean age of 22.4 ± 2.2 ; all were female, and 44.5% of them were still living with elderly. Nearly half of participants living with elderly stated disease and care process as a reason. Participants defined aging as compassion (65.4%), wisdom (34.6%), disease (56.4%), loneliness (47.4%), frailty (42.3%). Mean Ageism Attitude Scale Score of participants was 80.0 (min:63, max:105) and their attitude towards aging and ageism were positive. Scores of unmarried young participants found to be significantly higher than those married ($p<0.05$). And scores of the young people arranging to live with their parents when they get older also found significantly higher than those don't want to live with elderly parents ($p<0.05$). **Conclusion :** The findings of this study demonstrated that young peoples' living in community attitudes towards elderly is positive. **Keywords :** elderly, young people, ageism

OP27 303-S-5

AFRAID OF GETTING OLD? – YOUNG ADULTS' CONCEPT AND IMAGE OF AGING AND ITS CAUSE

Yi-fen WANG (Adult & Continuing Education, National Chung Cheng University, Taiwan)

Introduction : Based on Active Ageing: A Policy Framework, a report issued by WHO, the number of aging population worldwide is increasing clearly faster than the total global population (WHO, 2002). This phenomenon has predicted the fast coming of an aging world. Obviously, people at the present and in the future seem to enjoy a longer life than any generation in the past. However, how do people think of their long-lasting life? Aging is always a phase associated with the decline and loss of physical functions as well as poor health. Moreover, young generations may have a bias against aging, regarding it as a weak, old-fashioned, and non-negotiable symbol. Therefore, this study is aimed at exploring the concept and image of aging from the perspective of young adults. **Method :** This study adopts semi-structured interview of qualitative study as the study method, and interviews with 10 various participants aged between 20 and 40 in the manner of purposive sampling. **Results :** (A) Young generations tend to have a rather negative concept of physical aging. (B) Young generations hold polarized attitudes towards the concept of psychological aging. (C) Young generations seem to hold a rather positive attitude towards the concept of social aging. **Conclusion :** (A) Deepen aging education and cultivate young generations to have correct understanding of aging. (B) Make good use of the media to shape the positive and active images of senior citizens. (C) Get involved in social activities and encourage senior citizens to

participate in to realize the concept of successful aging. (D) Improve social schemes and establish sound social welfare policies. Keywords : aging, aging image

OP27 303-S-6

HEALTH CARE PROVISION FOR OLDER PERSONS: THE INTERPLAY BETWEEN AGEISM AND ELDER NEGLECT

Tova BAND-WINTERSTEIN (Department of Gerontology, University of Haifa, Israel)

Introduction : The aim of this study is to explore the link between neglect and ageism in health care provision for older persons. Method : Semi-structured in-depth interviews with 30 RNs, with at least two years' experience in ten long-term care facilities in Israel were conducted. Interviews were digitally recorded and transcribed verbatim. Data analysis was performed according to the qualitative method. Results : Three main themes emerged: Ageism and neglect as the everyday routine - neglect is built into institution life on the platform of ageism; How the institutional system promotes neglect: Between institutional and personal ageism - the ways institutions promote neglect in the shadow of ageism; From vision to reality: How neglect can be prevented in an ageist reality. Conclusion : The attempt to demonstrate the link between ageism and neglect, and suggesting how to include them as interrelated phenomena in health care provision programs could promote older persons' quality of life. Keywords : Elder abuse, Neglect, Ageism

OP27 304-S

ELDER ABUSE II

OP27 304-S-1

A TYPOLOGY OF OLDER VIOLENT MEN DWELLING IN LIFELONG INTIMATE VIOLENCE RELATIONSHIPS

Tova BAND-WINTERSTEIN (Department of Gerontology, University of Haifa, Israel)

Introduction : Most research on intimate partner violence (IPV) to date has focused on young men. Although interest and research regarding older abused women has increased in recent years, research on the voices and experiences of older abusive men is still scarce. The purpose of this study is to present a typology of older battering men dwelling in lifelong intimate violence relationships. Method : Fifteen older Israeli abusive men, aged 65-84, were interviewed in-depth. Interviews were digitally recorded and transcribed verbatim. Data analysis was performed according to the qualitative method. Results : Four types were identified: the Avenger; the Cover-up-er; the In-between-er and the Normalizer. These types were constructed based on four dimensions: the construction of violence over the years, the perception of the spouse over the years, losses accompanying the violent relationship and the meaning of violence in old age. Conclusion : The four types enable an in-depth look at the experiential world of older abusers, and paint a complex picture of various ways in which abusive men live with violence over time. Keywords : Domestic violence, Intimate partner violence, Qualitative research

OP27 304-S-2

INNOVATIVE STRATEGIES TO COMBAT ELDER ABUSE WITHIN THE ISRAELI MENTAL HEALTH SYSTEM

Barbara LANG¹, Sara ALON², Mara SHECHTER³ (1. National Social Services, Ministry of Health, Israel; 2. Eshel, JDC-Eshel, Israel; 3. Jerusalem Department of Health, Ministry of Health, Israel)

Introduction : The elderly are vulnerable to abuse, neglect and

exploitation while the elderly who suffer from mental illness are at increased risk. Prevalence data about elder abuse and neglect for the general elderly population is limited and it is virtually nonexistent for the elderly population who suffer from mental illness. In 2003 the Ministry of Health in Israel published policy guidelines for addressing elder abuse within the healthcare system which included mental health care frameworks. In order to promote the implementation of these guidelines a unique program for psychiatric hospitals was instituted in 2011 by the Ministry of Health and JDC-Eshel. Method : Program activities included: 1. Raising awareness regarding elder abuse and emphasizing Ministry of Health guidelines. 2. Engaging psychiatric hospital administrations. 3. Establishing multidisciplinary committees to increase awareness, identification and intervention. 4. A seven week training course for committee representatives focused on complexities of elder abuse and mental health while providing organizational tools. 5. Establishing a quarterly forum for committee members to serve as a forum for presenting case studies and providing assistance regarding program development. 6. Implementing a data tracking mechanism. Results : 1. Improved conception of unique characteristics of elder abuse and mental illness. 2. Established government mandated frameworks. 3. Increased identification, reporting and intervention in cases of suspected elder abuse. 4. Staff gained role clarity. Conclusion: Policies and training provide successful strategies to combat elder abuse within mental health frameworks. This innovative approach is essential in protecting one of the most vulnerable populations. Keywords : mental health, elder abuse

OP27 304-S-3

INTIMATE PARTNER VIOLENCE AND ITS PSYCHOLOGICAL IMPACT IN OLDER CHINESE MEN AND WOMEN

Elsie YAN (Social Work and Social Admin, University of Hong Kong, Hong Kong)

Introduction : Contrary to the general perception that intimate partner violence (IPV) diminishes as relationship partners grow old, a sizeable proportion of older persons remain victims of abuse by their partners. This study investigated prevalence and psychological impact of IPV in a representative sample of older Chinese. Method : A sub-sample of participants aged 60 or above and who were married at the time of the interview were extracted from a representative population study conducted in 2012. The following analysis includes a total of 320 older Chinese (195 males and 125 females, mean age = 69.98). Information of interest include participants demographic characteristics, past year and life time experience of domestic violence (Revised Conflict Tactics Scale - CTS2), and depressive symptoms (Center for Epidemiologic Studies Depression Scale - CES-D). Results : IPV is common in this sample. Past year prevalence rates for psychological aggression, physical assault, and injury by partner were 39.4%, 5.9%, and 0.3% respectively. Life time prevalence rates were 53.1% 11.3%, 0.6% respectively. No gender difference was observed ($p > .05$). The various forms of IPV were highly correlated with each other (r ranged from .19 to .95, $p < .001$). Past year physical assault and injury were associated with depressive symptoms ($r = .13$ & $.14$, $p < .05$) and so were life time physical assault and injury ($r = .15$ & $.14$). Psychological aggression, however, was not associated with depression symptoms ($p > .05$). Conclusion : A large proportion of older Chinese men and women experience IPV. Experience of IPV is mildly associated with depressive symptoms. Keywords : Intimate Partner Violence

OP27 304-S-4

PREVENTION OF ELDER ABUSE IN EUROPE. A FRAMEWORK FOR THE MONITORING OF ELDER ABUSE

Uwe Eugen BRUCKER (*Longterm-Care, Medical Advisory Service of Social Health Insurance (MDS), Germany*)

Introduction : The MILCEA-Project (funded by the European Commission) generated a monitoring system that allows the assessment of elder abuse and elder abuse risks in long-term care as a precondition for prevention including appropriate actions to protect older persons. Older people who are in need of care are dependent from the help of others and thus those being cared for are very vulnerable. **Methods:** focus discussions on national experts' level elements of a monitoring system in preventing elder abuse were defined, determination of indicators and risk factors based on an international literature research and expert opinions; analysis of existing monitoring structures for identifying and recording elder abuse followed by the identification of key actors as their deficiencies and lack of structures. Evaluation of the findings by international experts' conference. **Results :** Monitoring elder abuse refers to observation and evaluation of the care giving process in order to detect risks or actual cases of elder abuse. Concrete steps of actions lead to the older person's protection. Basic requirements on a political level; awareness and knowledge of elder abuse as a main prerequisite for monitoring. Elder abuse, its risk factors and indicators will become part of the education of health-care-professionals and social workers. The responsibilities of key actors in the prevention of elder abuse must be defined. Service providers of longterm-care include the topic into their quality-management-system. **Conclusion :** Requirements on monitoring, identification and action, will be presented in Seoul as part of the framework on preventing elder abuse in longterm-care. www.milcea.eu. **Keywords :** Elder Abuse; Longterm-Care; Monitoring; Prevention

OP27 304-S-5

ELDER ABUSE AND NEGLECT IN URBAN AND RURAL SETTINGS IN NAMIBIA

Herman STRYDOM¹, Janet ANANIAS² (*1. Social Work, North-West University, Potchefstroom Campus, South Africa; 2. Social Work, University of Namibia, Namibia*)

Introduction : National programmes on gender based violence against women and children exist in Namibia, but very little data is available on older people as complainants of abuse and neglect. Indeed elder abuse is a global human rights concern that has only been acknowledged recently. The aim of this study was to explore elder abuse and neglect within the urban and rural settings of the Khomas region in Namibia. **Method :** Key informant interviews were conducted with professionals and community leaders, while focus group discussions were held with older people and informal caregivers. **Results :** The findings suggested that older people are also victims of gender based violence. The forms of elder abuse reported in the study were physical abuse, financial abuse, emotional abuse, sexual abuse and neglect. Findings suggested that emotional abuse and neglect of older people are very common. Risk factors within the informal care giving settings that place older people at risk of elder abuse and neglect were substance abuse, poor interpersonal relationships between older people and informal caregivers, caregiver stress and the social isolation of informal caregivers. Protection orders against perpetrators of elder abuse and neglect is not always a suitable response to elder abuse and neglect in family settings. **Conclusion :** Future intervention research that strengthens intergenerational relationships and support within family structures can offer better alternatives in addressing elder abuse and neglect. **Keywords :** elder abuse, neglect, Namibia

OP27 304-S-6

ELDER ABUSE IN RESIDENTIAL AND LONG-TERM CARE FACILITIES IN KOREA

Younghee WON¹, Yeong-Ran PARK², Juhyun KIM³ (*1. Dept. of Social Welfare, Korean Bible University, Korea; 2. Division of Silver Industry, Kangnam University, Korea; 3. Institute of Social Development and Policy Research, Seoul National University, Korea*)

Introduction : In 2004, Korea adopted a legal measure for preventing and protecting the elderly from abuse and an elderly protective service network has been in operation for almost a decade. However, elder abuse still remains a serious social problem and violation of human rights. Many forms of elder abuse exist, and there is a variety of circumstances that lead to elder abuse. In recent years, an increasing number of elder abuse cases from the residential facilities has been reported as more the elderly move to the residential facilities. In this context, this study attempted to find out the situation of elder abuse in the residential facilities in Korea from both residents and care providers' perspectives. **Method :** We carried out a survey of 97 facilities in 10 cities in November-December, 2012. 516 residents and 498 care providers participated in the survey. The questionnaires included items such as socio-demographic characteristics, attitudes toward elder abuse, experiences of elder abuse, causes of elder abuse, education and training experiences and needs, responses to elder abuse, and suggestions for preventive measures. **Results :** In terms of abuse experiences, the survey results showed the highest incidents on 'ignoring from others (6.4%)', 'using inappropriate language or name-calling (4.8%)', and 'treating like a child (3.1%)'. From care providers' perspective, 'using inappropriate language or name-calling (36.7%)', 'threatening and accusation about mistakes (38.8%)', and 'ignoring from others (33.5%)' were the most frequent abuse problems issues. According to further analysis of the data, the abuse problems occurred not only between residents and care providers but also among the elderly residents themselves in the residential facilities. In response to abuse experiences, only 18.6% of the elderly residents requested help from others while most either ignored or responded on a personal level. The care providers also showed relatively low level of request for formal help. Both group of survey participants responded that personality and dependent characteristics of the elderly, as well as the lack of government support for residential facilities, might have contributed to elder abuse. **Conclusion :** The results of this study showed that elder abuse existed in the residential facilities. More active policy and practice measures such as expansion of the elderly protective service network, development of quality service guidelines, education and training programs for prevention of abuse, and continued interest and support from the community are needed in order to prevent elder abuse in the residential facilities. **Keywords :** Elder abuse, Residential Facilities, Human Rights

OP27 306-S

COMMUNITY AND LIVING ARRANGEMENT

OP27 306-S-1

URBAN SOCIAL AND BUILT ENVIRONMENTS AND TRAJECTORIES OF SOCIAL ISOLATION IN VULNERABLE ELDERLY: FINDINGS FROM DETROIT MI CHOICE (HOME AND COMMUNITY-BASED WAIVER PROGRAM) POPULATION

Min Hee KIM¹, Philippa CLARKE² (*1. School of Social Work & Department of Sociology, University of Michigan, USA; 2. Survey Research Center, Institute for Social Research, University of Michigan, USA*)

Introduction : Decreased social interaction, which often accompanies ageing, has been found to have adverse health effects at later life, both

physically and mentally. Because older people tend to interact with their most proximate neighborhoods in later life, understanding the role of the social and built environments for social isolation becomes more significant. Method : This study used administrative data(2000-2008) from a sample of Michigan's home-care clients (Obs=4,875) coupled with neighborhood data collected through a virtual audit instrument (Google-Street-View). The effect of neighborhood social and built environments on 15-month trajectories of social integration was examined using Generalized Hierarchical Linear. Results : Results indicate clients who are not frequently left alone during the day are less likely to decline in their level of participation in social, religious, or other preferred activities (OR=0.72,95%CI=0.50,1.05). People with more limitations on instrumental-activities-of-daily-living(IADL) were likely to decrease their social interaction, (OR=1.98,95% CI=1.24,3.17), adjusting for socio-demographic, health, neighborhood factors. At the neighborhood-level, a higher proportion of residential security signs was strongly associated with a decline in social interaction. The odds of reduced social interaction was much higher for those living in unsafe neighborhoods over time (OR=23.14,95%CI=2.42,108.57). Conclusion : A variety of technical and social supports for older adults with IADL limitations and those frequently alone would help older adults engage in society. Neighborhood safety factors needs to also be publicly addressed in order to reduce older adults' withdrawal from society. The application of innovative methods in the collection of neighborhood data as linked with administrative data also have methodological implications for advancing research in aging. Keywords : Social and built environment, Virtual audit instrument, Social integration trajectories

OP27 306-S-2

STRATIFICATION RESEARCH OF URBAN HOUSING FOR SENIORS IN CHINA

Hongli WANG (*Gerontology Study Institution of Renmin University, Renmin University of China, China*)

Introduction : Housing linked with people's quality of life closely. As China has experienced the transformation from the free physical welfare distribution system to the paid monetary distribution system, the housing conditions of elder are quite different. Method : Using method of stratification, logistic regression according to the data of 'China urban and rural seniors survey in 2006' from China Research Center on Aging. Results : Study found that rich housing seniors accounted for 11% and the poor ones only 2.1%. Most of seniors belong to the general level. Further study found that it has the correlations between housing and the seniors' different social economic characteristics. Things like gender, education level, age, political status, cadres or not, work unit properties, registered permanent residence etc all influence the seniors' housing conditions. the influence factors of the senior's housing include both the personal factors and social factors. Social factors including unit properties, whether or not cadre, political status impact more significantly. Thus social factors are responsible for the senior's housing difference mainly. Conclusion : The Chinese government needs to give them special attention and should make policy to guarantee, should pay special attention to those extremely difficult old man of average living space per person not more than 8 m² and without running water or toilet, should take corresponding social assistance to help them so that they can get rid of poverty housing as soon as possible, narrowing the gap between the poor and the rich, benefiting the development and the stability of society at last. Keywords : Stratification, elderly housing

OP27 306-S-3

NEGATIVE LIFE EVENTS AND HEALTH; GENDER

DIFFERENCES IN MODERATING EFFECTS OF ENVIRONMENTAL MASTERY

Jinkuk HONG¹, Gyounghae HAN², Joohyun KIM³ (*1. Waisman Center, University of Wisconsin-Madison, USA; 2. Dept. of Child Development and Family Studies, Seoul National University, Korea; 3. Institute on Aging, Seoul National University, Korea*)

Introduction : In describing negative consequences of stressors on well-being of individuals, the stress process model emphasizes the salience of social and psychological resources in buffering the detrimental effects of life stressors. In this context, this study aims to investigate how negative life events are associated with mental and physical health of middle-aged Koreans, and the extent to which the sense of environmental mastery moderates the associations, focusing on gender differences. Method : Using data from the Study of Korean Baby Boomers that surveyed 4668 men and women born between 1955 and 1963, this study examined the association between the number of recent negative life events in the family and three domains of health outcome: depression, frequent physical symptoms, and self-rated health. Results : Results show that, for women (n = 2551), negative life event was associated with higher likelihood of depression, a greater number of frequent physical symptoms, and poorer self-rated health, but there was no moderating effects of environmental mastery. For men (n = 2117), in contrast, there were significant interaction effects between environmental mastery and negative effects on depression and frequent physical symptoms. When experiencing negative life events, compared to men with lower levels of environmental mastery, those with higher levels of environmental mastery had lower likelihood of having depression and reported fewer number of frequent physical symptoms. Conclusion : The findings of this study suggest the different pathways through which negative life event is associated with health outcomes for men and women, main effect model for women, and moderating effect model for men. Keywords : Life event, Health, Mastery

OP27 306-S-4

OLD PEOPLES' CONDOM USE AND PERCEPTION: A BIG CHALLENGE TO MITIGATION OF HIV/AIDS IN HIGH RISK URBAN SLUMS IN NIGERIA

King ODOR¹, Ngozi IWUJI², Uchenna EZIEFULA³ (*1. Health promotion, University of Ibadan, Nigeria; 2. Immunization, Olive Hospital and Maternity, Nigeria; 3. Research, Sure Health Organization, Nigeria*)

Introduction : As HIV/AIDS continues to pose a public health challenge in Africa, the pandemic cut-across boarders. It affects all the age groups including old persons, despite engagement in risky sexual activities which increases HIV/AIDS infection. However, limited attention is paid to this sub-group in mitigating the pandemic. This study therefore examined condom-use and perceived HIV/AIDS infection among old people in Nigeria. Method : The study was cross-sectional in design. A multi-stage sampling procedure was used to select 400-geriatrics. Pre-tested questionnaire developed, using information obtained from 10 Focus Group Discussion (FGD), was used to collect information. FGD data were analyzed thematically, while questionnaire data were analyzed using descriptive and statistically. Results : Twenty-five percent of the participants had extra-marital sex since they attained elderly age. However, among this subgroup that had extra-marital sex, few (6.8%) used a condom. More males (5.3%) than females (1.5%) used condom during the last extramarital sex. Low level of condom-use was attributed to condom not worthwhile (34.5%) and opinion (50.0%) condom not made for the elderly. Moreover, FGD participants viewed sex could not lead to

pregnancy and majority (60.3%) posited patronizing traditional healers and few (10.3%) use of herbs/concussion could prevent HIV/AIDS. Similarly, non-condom use was due to confidence in traditional herbs, perceived to protect against STIs including HIV/AIDS. Conclusion : Engagement in risky activities among elderly is a growing HIV/AIDS challenge. Condom-use is misconstrued probably due to knowledge gap. Without urgent measures to enable them protect themselves, development efforts will be in jeopardy. Condom-use is cost-effective in mitigating HIV/AIDS pandemic. Keywords : traditional-herbs, Condom-use and extra-marital-sex

OP27 307-S

CARE-GIVING ACTIVITIES

OP27 307-S-2

RELATIONSHIP BETWEEN FEELING OF SAFETY PERCEIVED BY OLDER PEOPLE AND THE RISK OF CRIMES IN THE LOCAL ENVIRONMENT

Piotr BRZYSKI, Monika BRZYSKA, Beata TOBIASZ-ADAMCZYK
(Chair of Epidemiology and Preventive Medicine, Jagiellonian University Medical College, Poland)

Introduction : Recently the issue of elder abuse was widely discussed, explored and analysed. Community violence, as acts of interpersonal violence between individuals who are unrelated and who may or may not know each other [1] is also an experience of older people. Method: Statistical data concerning different crimes obtained from Municipal Police Office in eighteen districts of Krakow were compared with results of cross-sectional study, carried out in 2009 in a simple random sample of 631 older (i.e., aged 65 years and over) citizens of Krakow. The respondents were asked about personal experiences with different forms of community violence, knowledge on crimes and maltreatment among social network, and the lack of safety at home or in the close neighbourhood. The results were visualised graphically. Results : Significant correlation was found between percentage of respondents who reported being victims of theft themselves or by their close family and friends, and data reported by Police statistics ($\tau\text{-}b=0,57$ and $\tau\text{-}b=0,93$, respectively). Percentage of respondents who reported that members of their social network were victims of assault or battery correlated with number of assaults as reported by the Police ($\tau\text{-}b=0,57$). Feeling of physical threat of respondents correlated with number of thefts committed outside home ($\tau\text{-}b=0,57$) and assaults and robberies at homes ($\tau\text{-}b=0,64$). Conclusion : Feelings of older people concerning various symptoms of community violence are consistent with risk of being a victim of violent crimes, committed at different districts of Krakow, as reported by statistical data of the Police. Keywords : abuse, elder people

OP27 307-S-3

CARER HEALTH AND SUPPORT NEEDS IMPROVE WITH TREATMENT OF FRAILITY

Christina AGGAR¹, Ian D. CAMERON², Sue RONALDSON¹
(1. Nursing, University of Sydney, Australia; 2. Medicine, University of Sydney, Australia)

Introduction : It is important to consider caregiving reactions as an outcome measure in interventions designed to treat frailty because of the significant consequences of caregiving. The aim of this study is to examine reactions to caregiving in a cohort of carers (n=119) nominated by community living people >70 years, participating in a twelve month randomised controlled trial of treatment of frail older people. Method : A study of carers (n=119), embedded in a 12 month randomised controlled trial targeting frailty in older people (≥ 70 yrs).

The Caregiver Reaction Assessment (CRA), measured caregiving experience in five independent subscales (health, finance, self esteem, family support and schedule). Anxiety and depression levels were evaluated utilising the Hospital Anxiety and Depression Scale (HADS). Carer outcomes were measured at six month intervals during the intervention and 3 months post intervention. Results : Carer health scores improved during the treatment of frailty (df 3, 159.112, $F=2,956$, $p=0,034$) while anxiety levels increased for both treatment and control groups (df 3, 198.708, $F=2,819$, $p=0,04$). The treatment group reported overall better health (df 1, 115.632, $F=5,303$, $p=0,023$) and self esteem scores (df 1, 118.671, $F=4,158$, $p=0,044$) than the control group. Conclusion : Whilst increasing anxiety levels may be an intrinsic reaction to caregiving, interventions targeting frailty have the potential to improve carers' health. Frailty intervention protocols that include assessment of the carer will facilitate initiatives and strategies to support carers and identify those at risk. To sustain the involvement and contribution of carers for an ageing community living society, health care professionals need to understand reactions to caregiving. Keywords : family, carers, health, support needs, frailty

OP27 307-S-4

ATTITUDE TOWARDS INSTITUTIONAL CARE FOR ELDER PARENTS IN URBAN CHINA: INTERGENERATION PERSPECTIVE

Shuo WANG (Institute of Social Gerontology, Renmin University of China, China)

Introduction : In China, traditionally adult children should provide physical care of older parents by themselves, according to the norm of filial piety. And some people view parents' living in nursing home as an unfilial behavior. Does the action of turning to institutional care really show the adult children's abandon of their elderly parents? Does it really mean adult children's unfilial? These are our concerns. Method : This research examined the motivation of living in institution, behaviors of adult children and the changing attitudes about filial piety, using data from intensive interviews with 16 elderly residents and 6 family members in Beijing. Results : As the results, family members' unavailability of care-giving, loss of spouse and housing shortages are main factors that make elder people moving into institutions. After the movement, the children of elder residents are still proving financial and emotional support for parents. And children's visiting is also a supervision of the quality of institution care. Most interviewees, express their approval of institution care. However, the positive view relies on the high-quality of the facility and services of institution. The dissatisfaction of the institution will generate negative emotions in elder residents. Conclusion : The findings show that the practice of filial piety has varied, that not only require children's behavior, but more focus on parents' own well-being. For our respondents, as long as parents maintaining well-being, children are filial, even if the elders are placed in institutions. The advantages of institutional care, children's financial assistance for older parents, and children's frequent visiting are explained as filial behaviors. Keywords : institutional care, filial piety, intergeneration relationship

OP27 307-S-5

FAMILY CARE ACROSS DIVERSE CULTURES: BEYOND LOCAL CARING TO TRANSNATIONAL CARING

Cynthia Lee ANDRUSKE¹, Sing Mei CHAN², Deborah L. O'CONNOR³ (1. Facultad Ciencias de la Educacion, Universidad Catolica del Maule, Chile; 2. Social Work and Family Studies, University of British Columbia, Canada; 3. Social Work, University of British Columbia, Canada)

Introduction : With an increasingly globalized world, well reflected in Canada's culturally diverse population - the importance of developing a more culturally complex understanding of family care has been clearly identified. This study explored family care across three different cultural groups living in Vancouver, Canada: Chinese, Latin-American, and South Asia. **Method :** In-depth qualitative interviews were held with 30 family members regarding how they practiced care of their aging, frail, relatives. **Results :** A surprising theme that emerged across all three groups regarded the importance of conceptualizing family care as a transnational or transcontinental or transgeographical phenomenon. This understanding challenged a conventional Canadian understanding of family care which has generally translated as one primary local carer with some support from other family members. Three themes helped to explain this phenomenon: redefining 'family'; geographic mobility (movement) be it regionally-based, national, or international; and, the importance of technology for facilitating continuity and connection. The notion of 'flow' or movement, rather than a fixed arrangement, figured prominently across many of these families. **Conclusion :** This study suggests the need to redefine how services and support are offered. **Keywords :** Family care, culture, support

OP27 308-S
SOCIAL PARTICIPATION III

OP27 308-S-1
INNOVATION IN SERVICES DELIVERED TO OLDER PEOPLE IN THEIR HOMES: USING VOLUNTEERS TO DEVELOP SUSTAINABLE MEALS ON WHEELS SERVICES

Jeni WARBURTON¹, Melanie OPPENHEIMER² (1. *John Richards Initiative, La Trobe University, Australia*; 2. *School of Humanities, University of New England, Australia*)

Introduction : Meals on Wheels (MoWs) is an iconic community organisation with a long history of delivering services to some of the most vulnerable and disadvantaged in the community. It operates across a diversity of international contexts, including Europe, North America and Japan. Its mission is to provide nutritious meals and basic social contact to enable frail older people and those with disabilities to remain in their own homes. As a result of contemporary change, MoWs is facing a range of serious challenges that threaten its capacity to provide these services. Principle among these is its reliance on traditional volunteer models of service delivery, and many services are now struggling to provide sufficient volunteers to meet growing need, challenging this way of operating. **Method :** In response, new and innovative ways of delivering community-based services are emerging. This paper presents findings from a large, Australian study of MoW services in order to identify new models of volunteering which aim to appeal to a more diverse group of volunteers, and ensure that services are viable and sustainable. **Results :** New models are identified that are aimed at recruitment of a more diverse source of volunteers; offer a range of different volunteer roles; or explore new modes of service delivery. **Conclusion :** Findings from the Australian study will be compared and contextualised with reference to an earlier international phase of the research in order to identify new trends and models in the delivery of critical community services like Meals on Wheels in an ageing context. **Keywords :** community services, volunteers, non-profit sector

OP27 308-S-2
DO PRODUCTIVE ACTIVITIES REDUCE INFLAMMATION IN LATER LIFE? MULTIPLE ROLES, FREQUENCY OF ACTIVITIES, AND C-REACTIVE PROTEIN

Seoyoun KIM, Kenneth F FERRARO (*Department of Sociology, Purdue University, USA*)

Introduction : Previous research has demonstrated that productive activities have a salutary effect on health, but the precise mechanism by which this occurs remains a matter of debate. Although many studies have examined the effects of productive activities on indicators of mental health or self-rated physical health, we ask whether productive activities can reduce inflammatory processes in the body, as indicated by C-reactive protein (CRP), a biomeasure of inflammation associated with the risk of cardiovascular diseases. **Method :** The study uses a representative survey of adults aged 57-85 years, from the National Social Life, Health, and Aging Project (NSHAP, N=1790). Linear regression models were used to analyze the effects of multiple roles (volunteering, socializing with friends, and attending meetings) as well as the frequency of activity within each role on CRP concentration (mg/L) drawn from assayed blood samples. **Results :** Number of productive activities was associated with lower levels of CRP net of chronic conditions, lifestyle factors, and socioeconomic resources. When specific types of activity were examined, volunteering manifested the strongest effect on inflammation, particularly in the older age group. There was no evidence that sustained volunteering was associated with higher levels of inflammation. **Conclusion :** Productive activities and frequent volunteering in particular protect individuals from inflammation that is associated with increased risk of hypertension and cardiovascular disease. **Keywords :** Productive activities, Volunteering, Acute-Phase Protein

OP27 308-S-3
PRODUCTIVE ACTIVITIES AND PERCEIVED WELL-BEING IN AN AFRICAN AMERICAN OLDER ADULT URBAN SAMPLE

Heehyul MOON (*Institute on Aging, University of North Carolina-Chapel HILL, USA*)

Introduction : Few studies have examined the relationship between productive activities and well-being among urban lower-income African American older adults. The purpose of this study was to examine (1) the pattern and prevalence of types and specific kinds of productive activities and (2) the association among sociodemographic data, individual capacity, kinds and levels of productive activity, and well-being at the individual level. **Method :** A random sample of 604 lower income individuals was drawn from a group of 15,000 people over 60 years of age who resided in the central geographic area of the City of Detroit, a large urban metropolitan area in Michigan. **Results :** Approximately 12% of 531 respondents participated in employment, whereas 20% participated in volunteer activities. The majority of the respondents (99.4%) joined in leisure activities. More than 75% engaged in religious activities. The respondents also reported that they participated in various kinds of productive activities. Higher levels of involvement in religious and leisure activities were related to a greater perceived well-being. **Conclusion :** This study not only explored participation in civic, social, and leisure activities but also specified the types of activity participation. The study participants engaged in a variety of activities, indicating that service providers need to expand their view of clients' interests, the relationships among individual factors, level of activity participation, and well-being were examined using Sherraden et al.'s (2001) modified model of productivity in later life. The results of the study support Sherraden et al.'s proposed affects of sociodemographics, individual capacity, religious activity, and leisure activity on well-being. **Keywords :** Productive Activities, well-being, lower-income minority

OP27 308-S-4

TOWARDS AGE-FRIENDLY CITY: THE CONSTRAINTS OF ELDERLY'S PARTICIPATION IN COMMUNITY PROGRAMS IN AKITA CITY

Yoshihiko KADOYA (*Institute of Social and Economic Research, Osaka University, Japan*)

Introduction : In the current era of aging global populations, it is important to governments that elderly people stay healthy for as long as possible, so that the costs to take care of them through social security programs are minimized. Policies that help elderly people stay healthy typically encourage them to participate in local community programs, such as sports events, local festivals, and community-building activities. Unfortunately, many elderly people are reluctant to interact with others, which isolates them. This study investigates the constraints on elderly people's participation in community programs. **Method :** It analyzes micro data concerning individuals aged 65 who are capable of ADL. The data used for this research are from the results of the "Questionnaire for Age-Friendly Scheme" in Japan's Akita city, where people aged 65 or above make up 24% of the total population. **Results :** It reveals that developing transportation systems and encouraging elderly people to live with others are the keys to improving the participation of the elderly in local community programs. **Conclusion :** Towards Age-Friendly City, the development of public transportation system and encouraging living may be important policy implications. **Keywords :** Age-friendly city, social participation, community

OP27 309-S

SOCIAL PARTICIPATION IV

OP27 309-S-1

SOCIAL PARTICIPATION OF RETIREES: FORMAL AND INFORMAL PATTERNS

Jeger FRANCOIS (*Ageing Unit Research, National Pension Scheme, France*)

Introduction : Participation in formal or informal social activities enhances healthy ageing. The main social network of retirees is family and friends, but participation in associations - sportive, cultural, charitable - gives also opportunities for sociability. **Method :** Two French surveys are used for analysing the determinants of social participation. National health and disability survey 2008 (n=9.900 retirees). Survey participation in association 2010 (n = 1200 retirees). A logistical regression identifies the main factors of social participation. **Results :** The main factors of social participation are education level and health status. Associative practice culminates between 60 and 70 years and then declines with ageing. In fact, young retirees are more educated and older retirees are often in worse health status. This is the main explanation of decreasing social participation with age. Many retirees have a dense social life outside associations, such as having meals with friends, phone calls, and social networks. This can be called informal social participation. The survey shows that formal and informal sociability are not mutually exclusive. The more people are educated and in good health status, the more they participate both in formal and informal social activities. Often, retired volunteers were already committed before their retirement. **Conclusion:** New retirees are more educated and healthier. So we can expect a higher social participation, but in which type of association? Charity, sports, bridge? Renewal of leaders of associations, mostly retired, is a real challenge for the million of associations. **Keywords :** active ageing, education, health, association, volunteering,

OP27 309-S-2

PARTICIPATION AMONG VERY OLD SINGLE LIVING PERSONS - INDICATIONS OF A PROTECTIVE EFFECT ON MORTALITY

Vibeke HORSTMANN, Maria HAAK, Susanne IWARSSON (*Department of Health Sciences, CC0002, Sweden*)

Introduction : The aim is to investigate if factors related to participation in everyday life in very old age can have a protective effect on mortality. **Method :** The study is based on single living Swedish participants (n=314, aged 81 to 91) from the ENABLE-AGE Survey Study. Demographic information and indicators of health were obtained directly from the database; three variables representing each of togetherness- and performance-oriented participation were constructed afterwards along the lines of a previous study. Cox regression analyses were used to model mortality. First the participation variables were considered separately. Then a model explaining mortality by means of demographic variables and health indicators was obtained, and it was investigated if participation variables contributed any further to the explanation of mortality. **Results :** Higher togetherness- and performance- oriented participation were significantly related to lower mortality. In particular, more social activities outside home and more leisure time activities performed alone indicated a lower mortality beyond what was already explained by gender, age and health aspects. **Conclusion :** Participation, here especially social participation and leisure-time activities performed alone, had a protective effect on mortality in this group of very old people. In health care and social services targeting very old people, it is thus important to enhance their possibilities of participation in everyday life. **Keywords :** participation, social engagement, physical activity,

OP27 309-S-3

CONNECTIVITY AND AGEING: RESULTS AND ISSUES FROM A UK INTERDISCIPLINARY PROJECT

Robin MEANS¹, Vanessa BURHOLT², Catherine HENNESSY³ (*1. Faculty of Health and Life Sciences, University of the West of England, United Kingdom; 2. Centre for Innovative Ageing, Swansea University, United Kingdom; 3. Faculty of Education, Health and Society, Plymouth University, United Kingdom*)

Introduction : The 'Grey and Pleasant Land' An Interdisciplinary Exploration of Older People's Connectivity in Rural Civic Society' was funded through the UK's 'New Dynamics of Ageing' Programme as a collaboration between five different universities. **Method :** The project contained seven work packages which drew upon six different rural areas, three in SW England and three in Wales, chosen because of their varying degrees of remoteness. Work Package One was based on a community survey of the six areas with the remaining packages focussing down in more depth on such areas as mobility in later life, intergenerational relations, social exclusion, landscape, gay and lesbian elders and the use of the internet. From the outset, the challenge of holding such inter disciplinary diversity together was recognised and 'connectivity' was adopted as an 'heuristic' device to help keep all the different elements of the project together. **Results :** Drawing upon the work packages, the explanatory power of the concept of connectivity will be illustrated. It will be argued that connection to place still matters to many rural elders but that overall they are starting to transition from place based to a more geographically dispersed connectivity. This movement is driven by greater mobility (many more of us move from place to place throughout the lifecourse) but the paper will also illustrate the transformational power of the internet. **Conclusion :** The conclusion

focuses down on the desirability of developing a Connectivity Continuum which embraces the full spectrum of connectivity options from 'place' to the 'virtual'. Keywords : connectivity;social capital;civic participation

OP27 309-S-4

OLDER ADULTS VOLUNTEERING IN RUSSIA

Gulnara Afruzovna MINNIGALEEVA (*Centre for Studies of Civil Society and Nonprofit Sector, National Research University Higher School of Economics, Russia*)

Introduction : Despite the economic and political transitions, slowly recovering birth rate and low life expectancy in 2016 older people are predicted to constitute a quarter of total population (24.8%) in Russia. People considered old now and getting old soon are 'children of the Soviets', which means they've inherited lack of personal initiative, little understanding of the concept of volunteering, and paternalistic views that the State must provide all for people. Method : Our report discusses findings from survey (800+ people of pensionable age) and over 40 interviews with employees of governmental and nongovernmental organizations in 8 Russian cities, data from online survey (400+ respondents), as well as the data from all-Russia monitoring of the civic and nonprofit activities (over 1000 respondents from all Russian regions). Results : Younger older people (60-69) reveal the same patterns of very low civic engagement as the rest of the population (4-4.5%), naturally the rate drops further for older ages. However, older people volunteer more frequently than others for particular organizations such as veterans' unions, local communities and condominiums' boards and committees, religious organizations. This role is supported by public expectations that older people're engaged with their families and homes only (63%), 28% believe they are a burden, however 42% think they're a resource. A number of nonprofits do offer a range of volunteer opportunities for older people. Conclusion : Older volunteering (like other ages) in Russia's hindered by public images of older people, lack of volunteering traditions, but there's also a trend for positive changes and acknowledgement of older people's role. Keywords : older volunteering, volunteering in Russia, civic engagement

OP27 309-S-5

SOCIAL PARTICIPATION OF THE PENSIONERS THROUGH THE CIVIC ENGAGEMENT IN GERMANY

Young Sin SONG (*Social Gerontology, University of Dortmund(Germany), Korea*)

Introduction : Since the beginning of the 21st century the topic "Civic engagement (Burgerschaftliches Engagement)" has emerged in Germany. Civic engagement is a top priority with the demographic change in the aging society. It has a great importance particularly for the elderly, who go into retirement. After retirement, elderly should reshape their lifestyle, not only within the private field, but also within the social range. For this context, the civic engagement enables pensioners to connect with the society and to implement their social participation. Method : The number of elder people participating in the civic engagement has increased over the last 10 years in Germany. Between 1999 and 2009, the proportion of participation over the age of 65 rose from 23% to 28%. In 2004, the rate of participants at age of 60 to 69 years reached 37% and it remained unchanged till 2009. Results : Germany calls attention to such strong interest in social participation, because social cohesion can be achieved through the civic engagement. This research is examined through interviews with pensioners who are active in civic involvement. This research determines the role of the civic engagement in individual and social

sphere. Conclusion : This research aims to emphasize the relevance of the civic engagement to individual and society and to find out appropriate measures to promote the civic engagement. Keywords : civic engagement, retirement

OP27 309-S-6

DEVELOPMENT OF A MUSICAL BRAIN FITNESS PROGRAM FOR SOCIAL, PHYSICAL, EMOTIONAL, AND COGNITIVE CAPABILITIES OF SENIORS

Young Geun CHOI¹, Taekho YOU¹, Geon Ha KIM², Ji Yeong AN³, Hojun JEON⁴, Giltae YANG⁴, Duklyul NA², Heecheon YOU¹ (*1. Department of Industrial and Management Engineering, Postech, Korea; 2. Department of Neurology, Sungkyunkwan University School of Medicine, Samsung Medical Center, Korea; 3. Brain Fitness Clinic, Gangnam Center for Dementia, Korea; 4. R&D Research, SEED Technology, Korea*)

Introduction : A steady increase in the number of dementia along with aging requires a counterplan to help the aged effectively manage their cognitive capabilities. Although many brain fitness systems have been developed, seniors have had difficulty in utilizing them due to lack of usability and customization. This study developed a medical entertainment (meditation) program for brain fitness of seniors. Method : The brain fitness meditation program, called Smart Harmony, was developed by a 5-step process: (1) needs survey, (2) benchmarking, (3) idea development, (4) prototyping, and (5) usability testing. First, desirable values and user needs for brain fitness were investigated. Second, existing brain fitness programs were benchmarked. Third, novel design concepts were generated and selected. Fourth, the selected concepts were prototyped. Lastly, iterative usability tests were conducted for refinement. Results : Smart Harmony is a musical game which can enhance the social, physical, emotional, and cognitive (SPEC) activities of users. The features of Smart Harmony includes (1) played by up to seven users, (2) eight musical instruments such as piano and violin and numerous favorite songs for selection, and (3) scores by brain age of the team and individuals for motivation. Conclusion : Smart Harmony is expected to be utilized in welfare centers to improve seniors' SPEC capabilities. A clinical evaluation is needed to examine the validity of Smart Harmony for brain fitness. Keywords : brain fitness, senior, music

OP27 310-S

HOUSING & ENVIRONMENT & TECHNOLOGY III

OP27 310-S-1

RISK EVALUATION IN SENIOR CITIZEN HOUSING PROVIDED BY THE STATE OF CHILE, QUALITY OF LIFE IMPROVEMENT FROM AN ARCHITECTURAL PERSPECTIVE

Marcela PIZZI¹, Maria-Jose TORREJON² (*1. Architecture, Universidad de Chile, Chile; 2. Sociology, University of British Columbia, Canada*)

Introduction : We identify senior citizens risk in the performance of basic activities of daily living, (ADL) in housing typologies offered by the State of Chile, since 1990, in the city of Santiago. Method : Following a theoretical approach from an ergonomic perspective, we develop an evaluation instrument, used to observe the functional operational sequence of ADL associated to risk and its relation with architectural space and objects (Katz and Akpom, 1976), Defining Impacts related to risk of loss of autonomy associated to architectural and object dimensional issues during performance of ADL and follow up of the different operations needed. Results : Dressing, Bathing and

Washing in sink basin presented 100% dysfunctions associated to risk in all their functional operations. Eating and using toilet 66.4% and transferring 60% in ADL performance the units analyzed. From the standpoint of the different functional operations needed to perform each ADL, major dysfunctions relate to transferring specially associated with risk when connecting appliances due to height and location and changing light bulbs for the same reason. Difficulties occurred also entering the tub; opening closets or drawers also related to height. Conclusion : Urbanization and aging set new relevant challenges for our society and public policy makers, especially in Latin American countries which face added economic and social difficulties in implementing inclusiveness, promoting autonomy and active aging intended to provide a better quality of life and meeting the needs of seniors with strategies which will demand new designs and adaptations of the existing built environment for an aging population. Keywords : Risk Housing Ergonomics

OP27 310-S-2
INFORMING FUTURE HOUSING DEVELOPMENT FOR OLDER ADULTS

Lori WEEKS¹, Donald SHINER², Robin STADNYK³, Dany J. MACDONALD¹ (1. *Applied Human Sciences, University of Prince Edward Island, Canada*; 2. *Department of Business Administration, Mount Saint Vincent University, Canada*; 3. *School of Occupational Therapy, Dalhousie University, Canada*)

Introduction : Few researchers have examined expectations that older adults have about their future housing options. In this study, we explored what the future housing preferences of older adults are and how can these results can inform the development of appropriate future housing. Method : A random sample of 1,670 Canadian community-dwelling older adults completed a mailed survey including questions on their current housing situation, whether they would seriously consider a variety of specific housing options in the future, and ideal living arrangements. Results : One-third of participants preferred to remain living in their current home while two-thirds wished to relocate. Over one-half preferred to live in a smaller single-detached home, or already lived in this form of housing. Forms of housing that ensured an independent living unit, such as an apartment, options geared specifically to older adults, and options that provide access to assistance were highly preferred. Conclusion : The results are useful in informing decisions about housing options to support those who prefer to remain living in their homes and to create forms of housing that best meet the needs of our diverse older population who wish to relocate. More forms of housing that blend the provision of shelter and services are needed. Educational efforts are needed to ensure that older adults are aware of options that can support them to continue living in their own homes, or move to housing that better meets their needs. The methods used in this study can be replicated to inform the development of housing in other countries. Keywords : preferences, future, ideal housing, Canada

OP27 310-S-3
EMERGING FAMILY STRUCTURES AND LIVING ARRANGEMENTS IN FRENCH OLDER HOUSEHOLDS

Jim OGG¹, Loic TRABUT², Sylvie RENAUT¹ (1. *Unite des Recherches sur le Vieillissement, Caisse Nationale d'assurance Vieillesse, France*; 2. *Unite 6, Institut national d'etudes Demographiques, France*)

Introduction : Socio-demographic trends are transforming the family and living structures of older households. These include greater longevity and smaller family size, a rise in the number of one person

households, and more recently, the effects of the European economic crisis. New forms of older households are emerging as a result of these trends which will in turn influence social care policies directed towards the elderly population. Method : The research explores, from the perspective of older individuals, how social, demographic and economic trends are currently transforming older families and their living arrangements. The data source is the survey Families and Housing survey, ("Familles et logements") 2011 (INSEE-INED), based on a sub-sample of the 2011 census (n=368,000). The research classifies different older household types according to family structures. These are then examined in relation to the proximity of family members in different households, as well as other socio-demographic characteristics contained within the census such as labour market participation of children. Results : The results show the emerging complexity of older households. These include notably situations of re-cohabitation, whereby adult children return to live with their ageing parent or an ageing parent moves to the home of an adult child. The research also demonstrates different residential strategies of older households in relation to family structures as well as exploring indications of social isolation. Conclusion : The dynamics of older household living arrangements in the French population suggest that new and emerging solidarities within families need to be taken into account when designing current and future social care policies. Keywords : census, households, cohabitation

OP27 310-S-4
ENVIRONMENTAL REQUISITES PERCEIVED FROM THE CURRENT STATUS OF SERVICE-ADDED ELDER PERSONS' HOUSING IN JAPAN

Mari KINUKAWA¹, Tokiko INOUE¹, Minjung CHO² (1. *Research Dept., Institute of Elderly Housing Sciences, Japan*; 2. *Research Dept., The Hyoto Institute of Assistive Technology, Japan*)

Introduction : Amended Act on Securement of Stable Supply of Elderly Persons' Housing in Japan led to a newly-established housing institution, the registration of Service-added Elder Persons' Housing (Oct.,2011). This new housing is interpreted as to be a new form of housing integrating of hardware and software necessary for supporting aging in place. The new institution sets limited requirements and broadens its market to any business operators, which can be considered, at the same time, to possibly produce problems to secure the quality of the housing. Method : The current status of the housing was marshaled based on MLIT Information Supply System on the housing. A questionnaire survey was conducted on approximately 300 housings to explore more detailed status, which illustrated environmental features (building environment, service supply, and management situation). Cross tabulation analysis, correlation analysis and ANOVA were conducted to see environmental differences between housing groups of different occupancy rates. Results : Monthly expence was not the ultimate requisite for this housing. The high occupancy rate group holds 'home environment' common with general multidwelling such as 'having community rooms' and 'being in residential environment' and 'involved with community activities.' 'Individual and indirect monitoring method' was seen in this high rate group. 'Care service' and 'Life support service' were not counted as significant differences. Conclusion : Toward the development of the housing of good quality, this research indicates the environmental requites to meet older adults' needs for the relocation housing. Aging in place requires adequate care and life support services. A further survey is underway on detailed service supply and residents' life situation. Keywords : Stable Supply of Elderly Persons' Housing, Service-added Elder Persons' Housing, Aging in Place

OP27 310-S-5

LIFE-SPACE CONSTRICTION AND RISK OF MORTALITY

Moon CHOI¹, Melissa Lunsman O'CONNOR² (1. College of Social Work, University of Kentucky, USA; 2. Department of Human Development and Family Science, North Dakota State University, USA)

Introduction : Life-space signifies the geographical boundaries where an individual spends his/her daily life and interacts with the environment and other people. Limitation in life-space mobility (ability to travel independently to a certain geographic area) has been reported as a risk factor for cognitive decline and frailty. However, little is known about how life-space constriction is related to the risk of mortality among older adults. This study longitudinally examined the relationship between life-space constriction and mortality in old age. Method : Data were from the five-year longitudinal Advanced Cognitive Training for Independent and Vital Elderly Study in the United States (n=2,793; mean age=73.6; 75.8% women). Life-space was assessed with the self-report Life Space Questionnaire, which addressed whether respondents left their property or town during the past week and their county, state, or region during the past two months. Logistic regression models were used to estimate odds ratios for mortality in relation to the level of life-space constriction. Results : At baseline 18.8% of respondents did not travel beyond their towns, while only 2.8% reported not traveling beyond their properties. Higher proportions of respondents did not travel beyond county, state, or region at baseline: 20.7%, 57.1%, and 80.5%, respectively. After accounting for baseline sociodemographic and health characteristics, life-space constricted to one's property was significantly associated with five-year mortality (OR=2.78, 95% CI=1.49-5.21, p=.001), while other levels of life-space constriction were not. Conclusion : The risk of mortality varied by the level of life-space constriction. A critical geographical boundary associated with five-year mortality was one's own property. Keywords : life-space, mobility, mortality

OP27 311-S

ELDERLY CONSUMER

OP27 311-S-1

E-SERVICES AND SENIORS - TYPOLOGY, USE AND IMPACTS

Satya BRINK (Gerontology, Simon Fraser University, Canada)

Introduction : The literature on e-services and the seniors focuses mostly on specialized services such telemedicine where they would disproportionately benefit. However, there is little that examines how the shifts to e-services in the economy affects them. E- services are those with both tangible and intangible elements that are performed totally or partly by the customer via a technology interface. Method : The research questions are: What are the different types of e-services available to consumers including elderly consumers and what are their characteristics? What are the impacts on the seniors when e-services are used and when they are not? What are the factors that would increase higher usage of beneficial e-services among seniors? To answer the questions in a nuanced way, a typology of e-services is developed to identify issues related to each type based on literature review. The characteristics of elderly consumers are contrasted with those of other customers based on statistical data. Results : Analysis of the typology show that seniors are expected to take the initiative and play multiple roles if they are to benefit from e-services. Though boomers are familiar with technology, there are reasons why they are not e-consumers, including remembering multiple passwords and using the small screens of mobile technology. Ten different factors

differentiated seniors from other consumers. Based on these five age-friendly factors were identified. Conclusion : Results show seniors are a specific market segment with both growth opportunities and vulnerabilities which expose them to risks but also gain them benefits. Keywords : E-services, consumers

OP27 311-S-2

PARTICIPATORY DESIGN IN THE HOST PROJECT

Bertrand BOUDIN¹, Lionel BEN AHMED¹, Juliette SABLIER¹, Filippo FABBR², Mark HEPWORTH³, Wendy OLPHERT⁴, Vincent RIALLE¹ (1. AGIM Laboratory, Joseph Fourier University, France; 2. Fundamental Electronics Institute, University of Paris Orsay, France; 3. People's Information Behaviour, Loughborough University, United Kingdom; 4. Information Science, Loughborough University, United Kingdom)

Introduction : The European AAL funded HOST project consists of a two step technology and service development, first a participatory design process and then a test phase. Participatory design considers the conception of a new technological system a co-creative activity between technologists and end-users, from conceptual development to user trials (Demirbilek & Demirkan, 2004). Method : A total of 70 older users participated in the co-design workshops, 24 in United Kingdom, 32 in Italy and 14 in France (57 to 98 years old). All lived in social housing and were voluntary. Older users and professionals were gathered during group sessions aiming at expressing their needs concerning technology. The mean duration of the sessions was 2 hours, and 3 to 8 sessions were conducted. Facilitation methods were employed, including video demonstrations, sketching, brainstorming, and serious games. Results : In Italy, several devices were considered (e.g., personal computer, smartphone, tablet PC) but none were already chosen and the workshops were focused on the concept development. In UK, the technological device was well defined when workshops started (a TV box, operated by remote control), thus they focused on the ergonomics and aesthetics of the device. In France, the choice occurred during the workshops (an app for tablet PC) and the focus changed accordingly, shifting from conceptual to user trial. Conclusion: Despite the workshops focuses were slightly different in the three countries; they were complementary and both involved the older users living in social housing in the definition of their future living arrangements. Keywords : social housing, participatory design, technology

OP27 311-S-3

OLDER PEOPLE'S USE OF ASSISTIVE TECHNOLOGY: A QUALITATIVE STUDY

Gary PRITCHARD, Katie BRITAIN (Institute of Health and Society, Newcastle University, United Kingdom)

Introduction : Assistive Technology (AT) is equipment that increases or maintains the functional capabilities of people with cognitive, physical or communication difficulties and has been shown to reduce the costs associated with an ageing population as well as allow people to live independently for longer. However, evidence shows that uptake rates are low and when older people do adopt AT, they regularly abandon them. Our sociologically focused research gains an understanding of users' relationship to AT and the principle factors that determine the degree to which they are accepted and integrated into everyday lives and routines. Method : Our data is derived from focus groups (n=15) and semi-structured interviews (n=30) with older people and their informal carers. Visual prompts, videos and technological artifacts were used to facilitate discussions, which were audio-recorded, transcribed and anonymised. Transcripts were then

coded and analysed vigorously. Results : Demographic characteristics, level of disability and medical status are important variables in determining older people's AT use. It was also found that many favour human assistance over technological intervention, feel stigmatized in using these devices and concerned about how they impact upon privacy. Conclusion : Factor associated with older people's AT use are complex and wide-ranging. To a large extent use is dependent on the individual and personal meanings attributed to them. However, there are a lot of things manufacturers can do to increase use. These include creating greater public awareness about AT, improving the design and efficacy of their devices and provide better initial assessment and on-going consultation. Keywords : Assistive technology

OP27 312-C PREVENTION OF FALLS

OP27 312-C-1 A RANDOMIZED CONTROLLED TRIAL TO EVALUATE THE EFFECT OF COMPLIANT FLOORING ON FALL-RELATED INJURIES IN LONG-TERM CARE: THE FLOORING FOR INJURY PREVENTION (FLIP) TRIAL

Chantelle C. LACHANCE¹, Andrew C. LAING², Stephen N. ROBINOVITCH¹, Fabio FELDMAN³, Ming LEUNG³, Dawn C. MACKEY¹ (1. *Biomedical Physiology and Kinesiology, Simon Fraser University, Canada*; 2. *Kinesiology, University of Waterloo, Canada*; 3. *Older Adult Program, Fraser Health Authority, Canada*)

Introduction : Falls are the leading cause of unintentional injury deaths in older adults worldwide. Long-term care (LTC) is a particularly high-risk setting, as approximately 60% of LTC residents fall at least once per year and 30% of these falls cause injury (Rubenstein, AIM, 1994; Stevens, HCP, 2000). Despite these disturbing statistics, little attention has been directed to fall injury prevention in LTC. A promising strategy for reducing fall-related injuries is to decrease the ground surface stiffness, and the subsequent force applied to the body parts at impact. Laboratory studies have demonstrated that compliant flooring can substantially reduce forces applied to the hip and head during simulated falls, without impairing balance (Laing, AAP, 2009; Wright, MEP, 2011). Definitive evidence demonstrating that compliant flooring can prevent fall-related injuries in LTC is lacking. A randomized controlled trial is warranted to fill this evidence gap. Method : The Flooring for Injury Prevention (FLIP) trial is a randomized, triple-blinded, controlled trial. The trial is designed to compare compliant flooring with non-compliant flooring in 150 resident rooms at a LTC facility, to be followed for 4 years. This will provide power of 0.88 for a 40% reduction in the primary outcome. Results : FLIP's primary outcome is serious fall-related injury. Secondary outcomes include all fall-related injuries, falls, cost-effectiveness, and acceptability. Conclusion : Results will provide insight about the potential of compliant flooring to reduce fall-related injuries in LTC and are expected to guide the development of safer facilities for vulnerable older adults. Keywords : compliant flooring, long-term care, fall injuries

OP27 312-C-2 EFFECTS OF ALFACALCIDOL SUPPLEMENTATION ON PHYSICAL PERFORMANCE AND FALLS PREVENTION OF INDONESIAN ELDERLY WOMEN: A RANDOMIZED CLINICAL TRIAL

Siti SETIATI (*Department of Internal Medicine, Faculty of Medicine Universitas Indonesia, Indonesia*)

Introduction : Falls is a serious cause of morbidity and mortality in older adult. Some age-related risk factors including muscle strength and sarcopenia, change in gait and balance have been recognized as the contributors for higher risk of future falls. Recent studies have supported the benefit of vitamin D supplementation in improving muscle strength and function, leading to decreased risk of fall. However, only few evidence exist for analog vitamin D, while it offers several pharmacological advantages compared to native ones. Objective: to study the effect of alfacalcidol supplementation on physical performance and falls prevention in Indonesian elderly women. Method : A-double blind randomized controlled trial was conducted in Geriatric Outpatient Clinic of Cipto Mangunkusumo National Hospital Jakarta Indonesia on April-Agustus 2012. Of 122 elderly women, 95 subjects (mean age \pm standard deviation 70,9 \pm 5,8, range 61-88) were fulfilling criteria and randomized into alfacalcidol group (0.5 mcg/day) or placebo supplementation for 3 months; all received 500 mg supplemental calcium. Upper extremity muscle strength, 4-feet walking test, Timed Up and Go Test were measured and falls occurrence was recorded. Results : Hand grip measurement, 4-feet walking test, timed up and go test were all improving in alfacalcidol group (p value 0,005; 0,026; 0,02 respectively). Subjects in alfacalcidol group show reduction in falls occurrence during treatment (ARR 0,23; NNT 4,34). Conclusion : Alfacalcidol supplementation 0.5 mcg/day for three months effectively improves physical performance and reduces falls in Indonesian elderly women. Keywords : alfacalcidol, physical performance, falls, Indonesia, elderly women

OP27 312-C-3 PRIMARY PREVENTION OF FALLS: STATEWIDE PRAGMATIC CLINICAL TRIAL

Steven ALBERT, Jennifer KING (*Behavioral & Community Health, University of Pittsburgh, USA*)

Introduction : The Pennsylvania (USA) Department of Aging offers Healthy Steps for Older Adults, a population-wide falls prevention effort in senior centers throughout the state. The program consists of physical performance assessment of mobility (timed get up and go, chair stands, one-leg stand) and referrals to physician care and home safety checks for people scoring in the lowest third of performance, along with a 2-hour education program. This simple intervention, designed to heighten awareness of fall risk, could be an effective approach to primary prevention of falls. Method : In 2010-12, we enrolled 1837 older adults from senior centers throughout the state, 815 who completed Healthy Steps and 1022 who did not. Random assignment was not possible, but all completed a common assessment at baseline, allowing planned comparisons. The sample was followed monthly by telephone to ascertain falls using an interactive voice recognition protocol. Incidence rate ratios were calculated to compare falls incidence. Results : The mean age of the sample was 75.0 \pm 8.5; 80% were female; 11% were nonwhite; 16% completed college. 38% reported fair-poor balance. The intervention and comparison groups did not differ in sociodemographics or medical status, and the intervention group did not differ from the universe of seniors completing the program across the state. Fall-months significantly differed between the intervention and comparison groups among those reporting fair-poor balance: 14 fall-months per 100 in the intervention vs. 18 in the comparator (p = .01). Conclusion : Falling is a reasonable target for primary prevention using a low-cost, community-based state intervention. Keywords : falls, intervention, prevention

OP27 312-C-4 CAN ECG ABNORMALITIES PREDICT HIP FRACTURES?

Sof e JANSEN¹, Rudolph W. KOSTER², Frederik J. DE LANGE², Matthias U. SCHAFROTH³, Carel J. GOSLINGS⁴, Sophia E. DEROOIJ¹, Nathalie VAN DER VELDE¹ (1. *Medicine, Section of Geriatric Medicine, Academic Medical Center, Netherlands*; 2. *Cardiology, Academic Medical Center, Netherlands*; 3. *Orthopedic Surgery, Academic Medical Center, Netherlands*; 4. *Traumatology, Academic Medical Center, Netherlands*)

Introduction : Cardiovascular disorders form an important cause of unexplained or recurrent falls in older persons because of the overlap with syncope. However, cardiovascular causes of falls are still underestimated in clinical practice. >90% of hip-fractures are caused by a fall. Aims of this study were to investigate the proportion and association of clinically relevant ECG abnormalities in hip-fractures versus study controls. **Method :** Case-control study. Cases: traumatic hip-fractures. Controls: planned hip surgery (non-traumatic). **Inclusion criteria:** age ≥ 50 years. **Exclusion criteria:** high energetic trauma, pathological and/or previous hip-fracture. ECG's were scored through predefined categories. Multivariate logistic regression analyses were performed to calculate odds ratios (OR) and correct for confounders. **Results :** We included 1861 patients (1297 cases). Cases: mean age 81 years (SD 10), 73% female. Controls: mean age 68 (SD 9), 67% female. After correction for age, gender, previous falls, cardiovascular disease, diabetes mellitus, mobility aid, visual impairment, cognitive impairment, depression and Parkinsonism, we found the following associations between hip fractures and ECG abnormalities: Atrial fibrillation: OR 2.8 (95%CI 1.6 - 5.1) Sinus tachycardia: OR 5.7 (2.9 - 10.9), Abnormal-QTc prolongation OR 4.2 (2.8 - 6.3), LVH OR 1.8 (1.0 - 3.4), low-QRS-voltage OR 3.7 (1.3 - 10.6), pathologic-Q-wave OR 1.9 (1.1 - 3.4), inverted-T-wave OR 2.6 (1.1 - 6.1) and specific-ST-T changes OR 1.5 (1.1 - 2.0). **Conclusion :** Hip-fracture patients show significantly more clinically relevant ECG abnormalities indicative of rhythm- and conduction abnormalities and impaired cardiac function. Detection of these abnormalities may form a valuable basis for additional cardiovascular screening in older fallers. **Keywords :** Falls/Hip fractures, Syncope, ECG abnormalities

OP27 312-C-5

HOW DO HEALTH CARE PROFESSIONALS MANAGE FALLS IN OLDER PEOPLE? A QUALITATIVE INQUIRY
Annaletchumy L¹, Ng CJ¹, Low WY² (1. *Department of Primary Care Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia*; 2. *Dean's Office, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia*)

Introduction : Managing falls in older people is challenging because it is often multi-factorial and, if not managed appropriately, may result in serious consequences. Despite the availability of effective fall interventions, there is a wide variation in the management of falls among healthcare professionals (HCP). **Method :** Semi-structured individual interviews and focus group discussions were conducted with HCP's who were involved in managing falls in older people in the University of Malaya Medical Centre, Malaysia. The participants were primary care doctors (n=7), rehabilitation physician (n=1), occupational and physiotherapists (n=2), ophthalmologist (n=1), geriatricians (n=2), internal medicine physicians (n=4), and policymakers (n=3). A topic guide was used to facilitate the interviews, which were audio recorded, transcribed verbatim and analyzed using thematic approach. **Results :** Four main themes emerged from the analysis: lack of knowledge, underassessment of falls, negative attitudes towards falls and lack of inter-professional communication. Some HCPs were not aware of the value of exercise in preventing falls and that hearing problem is a risk factor for falls. This gap of knowledge was attributed to the lack of training in fall

management. In addition, HCPs tend to underestimate the severity of falls and failed to associate falls with serious consequences. Enquiry about falls was not part of the screening questions. HCP's were also lack in inter-professional communication. **Conclusion :** HCPs in this study lacked competency in managing falls in the elderly and this is most likely due to lack of training. This calls for more structured training programme to educate HCPs in screening, preventing and managing falls in older people. **Keywords :** Managing falls, Health care professionals (HCP), older people

OP27 313-S

FALLS II

OP27 313-S-1

THE EFFECTS OF THE IMPLEMENTATION OF AN EVIDENCE-BASED FEAR OF FALLING PROGRAM IN PRACTICE

G.A. Rixt ZIJLSTRA¹, Monique F.M.T. DU MOULIN², Jolanda C.M. VAN HAASTREGT¹, Martha C. DE JONGE³, Gertrudis I.J.M. KEMPEN¹, Agnes VAN DER POEL³ (1. *Department of Health Services Research / CAPHRI, Maastricht University, Netherlands*; 2. *Faculty of Health, Zuyd University of Applied Sciences, Netherlands*; 3. *Program Mental Health, Trimbos Institute, Netherlands*)

Introduction : Fear of falling and related activity avoidance are common in older people. An RCT showed the effectiveness of a multifaceted cognitive behavioral program on concerns about falling, daily activity, and recurrent falls in community-living older people. In the present study we explored the effects and acceptability of the 8-week group program after its nationwide implementation in homecare organizations in The Netherlands. **Method :** A pretest-posttest study was carried out in 125 community-living older adults. Prior to the program and at 2 and 4 months we collected data on concerns about falls, related avoidance behavior, falls, fall-related medical attention, loneliness, and symptoms of anxiety and depression for the effect evaluation. To explore the program's acceptability the participant's opinion on different program aspects was registered. **Results :** Pretest-posttest analyses showed significant improvement at 4 months on several outcomes, e.g. concerns about falling (1-item: p<.01; scale: p<.05), avoidance behavior (p<.01), and falls (p=.01). No differences were found for daily activity (p=.13) and feelings of loneliness (p=.47). Participants held a positive overall opinion regarding the program. Directly after the program 63.1% of the participants reported substantial program benefits; at 4 months this had slightly decreased to 56.3%. **Conclusion :** The outcomes of the program as implemented in the homecare organizations were highly similar to the outcomes of the RCT, i.e. participants reported reduced concerns about falls, avoidance behavior and falls, and the majority benefited from the program. This indicates that the program is not only effective and acceptable in an experimental setting but also in practice. **Keywords :** fear of falling, accidental falls, activities of daily life, effect evaluation, feasibility, implementation

OP27 313-S-2

ASSOCIATION OF FALL WITH EXERCISE AND FARMING WORK AMONG CHINESE NONAGENARIANS/CENTENARIANS

Qiukui HAO, Ming YANG, Li LUO, Dingwen DONG, Xiang DING, Birong DONG (The Center of Gerontology and Geriatrics, West China School of Medicine, West China Hospital, Sichuan University, China)

Introduction : Fall is very common among old people. Previous studies

shows that exercise can prevent the occurrence of fall. However, less is known about the relationship between falls and exercise and farming work in oldest old people. This study was conducted to observe the different association of fall with habits of exercise and farming work among very old people. Method : In the present cross-sectional study, we observed the association of fall with habits (current and former) of farming work and exercise among very old people using a Chinese cohort aged 90-108 years. Results : The population included 805 unrelated Chinese nonagenarians and centenarians (68.94% women, mean age 93.70 years). In women, subjects with current habit of farming work had significantly higher prevalence fall than those without this habit ($p=0.032$); but subjects with current habit of exercise had significantly lower prevalence fall than those without this habit ($p=0.009$). However, in men, there was no significant difference in prevalence of these habits between subjects with and without fall. After adjust for age, gender, body mass index, educational levels, living styles, vision levels and temperament, we found that current habit of farming work and exercise had a significant odds ratio (OR=1.527 95% CI (1.142, 2.042) and OR=0.631 95% CI (0.429, 0.928), respectively) for fall. Conclusion : In summary, among nonagenarians and centenarians, the habit of farming work might be positively associated with fall, but the habit of exercise might be negatively associated with fall in Chinese longevity people. Keywords: Exercise; Fall; farm

OP27 313-S-3

OLDER WOMEN AND MEN AS CO-CREATORS IN DESIGN OF A MOBILE APPLICATION FOR FALL PREVENTION

Petra POHL¹, Birgitta BERGVALL-KAREBORN², Lillemor LUNDIN-OLSSON¹, Christina AHLGREN¹, Marlene SANDLUND¹, Anita MELANDER-WIKMAN³ (1. Department of Community Medicine and Rehabilitation, Umea University, Sweden; 2. Department of Business Administration, Technology and Social Sciences, Lulea University of Technology, Sweden; 3. Department of Health Sciences, Lulea University of Technology, Sweden)

Introduction : There is a plethora of fall prevention programs for older community-dwelling people. The evidence for exercise-based programs is strong. There is a problem however with implementation and adherence. Motivational factors and barriers have been identified to some extent. Previous studies have shown that what works best is when exercise programs are tailor made, home based, and when people have access to personal feedback on a regular basis. Mobile applications for Smartphones with exercises have these advantages, and have been available for a long time, but these are most commonly directed to young and middle-aged people. There are no applications for fall prevention developed based on senior's own wishes. The aim was to investigate how healthy older community-dwelling women and men reason and what exercises they prefer when participating in development and design of a fall prevention program in shape of a mobile application for Smartphones. Method : Participatory and appreciative action research design with focus group interviews and workshops. Qualitative data analysis. Results : The preliminary results show that when older community-dwelling men and women participate in developing a fall prevention program for Smartphones, they have many ideas, thoughts and experiences that may serve as a motivational factor for following a fall prevention program regularly. Conclusion : The implementation and adherence for evidence based fall preventative exercise programs is insufficient. This study will gain knowledge to design tailor made, home based fall prevention exercise programs among community-dwelling healthy seniors. Keywords : mobile applications, fall prevention, older people

OP27 313-S-4

STAND UP TO FALLING: EVALUATING THE IMPACT OF A FALL PREVENTION PROGRAM ON OLDER ADULTS

Amy F. HOSIER, Anthony SETARI (Family Sciences, University of Kentucky, School of Human Environmental Sciences, USA)

Introduction : Each year 1 out of 3 adults age 65+ experiences a fall which leads to a fear of falling, moderate to severe injury, and even death. In addition to the physical and psychological impact, falls are associated with severe economic consequences for individuals, their families, and society at large. Concerns over rising healthcare costs and discussion of healthcare reform in the United States create an additional incentive to reduce the risk of falls. Falls have become a recognized and mostly preventable public health problem. Extension is a non-formal educational program provided by the United State's land-grant universities. Extension translates and disseminates research-based information to help improve communities and individuals' lives. Method : Stand Up to Falling emphasizes four preventable risk factors identified by the Centers for Disease Control and Prevention (CDC): lack of exercise, unsafe home environments, vision problems, and medication usage. When properly addressed, each of these factors can reduce and even prevent the likelihood of falls. The program also emphasizes the steps that should be taken by older adults should a fall occur. The program was presented to participants (N = 1,324) in Kentucky by trained Extension professionals. Results : Preliminary evaluation analysis suggests that as a result of participation, 98.6% of participants have a better understanding of how to reduce the risk of falling, 82.8% will discuss their medications with healthcare professionals, and 99.3% know how to safely get up following a fall. Conclusion : These preliminary findings suggest that the program was successful in educating participants on how to prevent falls. Keywords: Falls, Prevention, Education

OP27 313-S-5

DEVELOPING A SENSORMAT TO REDUCE FALLS INVOLVING PEOPLE WITH DEMENTIA, FAMILIES AND STAFF

Christine BROWN WILSON¹, Patricia SCULLY², Krikor OZANYAN³, Nurgie NURGIYATNA³, Jose CANTORAL CEBALLOS³, Paul WRIGHT³, John VAUGHAN⁴, Chris TODD⁵ (1. School of Nursing, Midwifery and Social Work, University of Manchester, United Kingdom; 2. Photon Institute, University of Manchester, United Kingdom; 3. School of Electronic and Electrical Engineering, University of Manchester, United Kingdom; 4. School of Chemical and Analytical Science, University of Manchester, United Kingdom; 5. School of Nursing, Midwifery and Social work, University of Manchester, United Kingdom)

Introduction : Falling is a serious and frequent occurrence in people over 65, with high personal and economic costs. Falls and the fear of falling, restricts the lifestyle of older people resulting in disability, loss of confidence and reduction in quality-of-life. This interdisciplinary project developed of technology with the capacity to predict changes in a person's condition that may result in falling. Method : Phase one: Construction of a sensormat from interconnected, flexible, optical fibres with the application of Tomographic imaging principles to record changes in pressure distribution of foot balance, step sequence and position in real time. Data were collected to identify how the system communicates changes in gait pattern leading to a fall. Phase Two: Focus groups involving people with dementia, family caregivers and professionals from the NHS and private care sector evaluated the utility of this system for clinical practice. Acceptability of this technology for people with dementia and carers was assessed. Results :

Embedded optical fibres in a light mat or underlay can be used to non-intrusively collect data over time without infringement on privacy. People with dementia and caregivers identify the importance of technology that can alert them prior to an incident such as a fall occurring. Clinical staff can use a sequence of images that identify changes in walking patterns to identify risk factors that may precipitate a fall. Conclusion : Involving people with dementia, family caregivers and clinical staff in the development of technology at an early stage, ensures it meets the needs of the end users in health care. Keywords : Falls, dementia, technology

OP27 314-S

GENDER & SEXUALITY

OP27 314-S-1

GENDER AND SEXUALITY IN BRAZILIAN CONTEXT

Guita Grin DEBERT (*Anthropology, Universidade Estadual de Campinas, Brazil*)

Introduction : Brazil is a country where the cult of beauty, youth and sexuality is seen as one of its most salient cultural characteristics. This cult contrasts with the premature ageing of the population along axes of gender, class, race and ethnicity. Drawing on the interplay of gender, ageing, and sexuality, the aim of this paper is twofold: (1) to show through content analysis of discourse produced by Brazilian Gerontology, Sexology and self-help literature how gender difference are dissolved in their attempt to demonstrate that the decrease in sexual activity in old age is replaced by a unique and intense sexual pleasure ;(2) to analyze the way in which these discourses on the ageing body and sexuality are differently perceived and evaluated by older men and women participating in “senior citizens clubs” who mobilized mostly women and the “pensioners' associations” that generally congregate men in the city of Sao Paulo. Method : Qualitative Method (ethnography and content discourse analyses). Results : The work shows the way in which sexology establishes a relationship between health and a fulfilling sexuality and struggles against the view of the older person as an asexual being by operating a sort of des-genitalization of their sexuality, or else proposing a reversal of the conventional correlation of feminine x masculine sexuality in old age. Conclusion : The politically correct sexuality in old age requires the establishment of an indissoluble relationship between sexual pleasure and health. Keywords : sexuality, ageing, Brazilian context

OP27 314-S-2

GENDER AND RACIAL DISPARITIES IN LIFE-SPACE CONSTRICTION

Moon CHOI¹, Melissa Lunsman O'CONNOR² (*1. College of Social Work, University of Kentucky, USA; 2. Department of Human Development and Family Science, North Dakota State University, USA*)

Introduction : Life-space is defined as the size of the spatial area through which a person travels within a specified time period. Life-space may be socially and culturally constructed beyond physical functioning; therefore, gender and race might influence the size of one's life-space. This study examined gender and racial disparities in life-space constriction among older Americans. Method : Data were from the five-year longitudinal Advanced Cognitive Training for Independent and Vital Elderly (ACTIVE) Study (n=2,793; mean age=73.6; 75.8% women). Life-space was assessed with the self-report Life Space Questionnaire, which addressed whether respondents left their neighborhood or town during the past week and their county, state, or region during the past two months. Life space constriction

was defined as not traveling beyond one's town. A series of logistic regression models were used to estimate odds ratios for life-space constriction by gender and race. Results : Overall, white participants and men were more likely to travel beyond their towns and counties than their counterparts at baseline. Race had different influences on acquired constriction in life-space by gender. For men, being non-white was associated with the risk for constricted life-space to town (OR=4.08, 95% CI=1.75-9.47, p<.001). For women, conversely, non-whites were less likely to experience constricted life-space to town than whites (OR=0.62, 95% CI=0.41-0.93, p=.021) after adjusting for sociodemographic and health characteristics. Conclusion : Race and gender play an important role in constructing life-space in old age. Racial disparities in constricted life-space may vary by gender. Keywords : life-space, mobility, disparities

OP27 314-S-3

GROWING OLD WITHOUT A CHILD: HEALTH, CHILDLESSNESS AND LGB AGEING

Gerardo ZAMORA¹, Rosanna DE LA ROSA², Mikel OTXOTORENA³, Ines AGUINAGA², Francisco GUILLEN-GRIMA² (*1. Departamento de Ciencias de la Salud, Universidad Publica de Navarra (UPNA); ETORBIZI, Spain; 2. Department of Health Sciences, Universidad Publica de Navarra (UPNA), Spain; 3. ON:GIZ Elkarte, Spain*)

Introduction : Research on ageing is increasingly calling attention on the diversity of the new cohorts of elderly people. Gay, lesbian, bisexual and transgender (LGBT) ageing is a blooming area of investigation because individuals who age as GLBT face particular challenges to their well-being across the life course and reach old age through more diverse paths. At the same time, childlessness is increasing in many societies. Childless or childfree individuals, regardless of their sexual identify or sexual behaviour, face also particular challenges throughout their life course. Both groups, LGBT elders and childless/childfree elders, although different, face similar challenges in health. Method : This paper draws on the analysis of data from wave 1 (2004) of the Survey of Health, Ageing and Retirement in Europe (SHARE), which includes information on more than 31,000 individuals aged 50+ from twelve countries. The paper particularly considers more than 2,500 individuals who were either ageing as childless and follows then on wave 2 (2006). The impact of childlessness on health, perceived health, use of health services and other health-related dimensions is analysed. To include the perspective of LGB elders, 10 in-depth interviews with LGB individuals aged 50+ focusing on the same health variables. Results : Childlessness does seem to impact some health outcomes, especially mental health, self-reported quality of life, and social interaction. LGB individuals' discourses confirm the impact of stigma and health. Conclusion : Being childless or childfree is as pervasive as any other type of identity such as being an LGB person. Keywords : LGB ageing, childlessness - childfree ageing, health

OP27 314-S-4

A STUDY TO EXPLORE HOW THE SEXUAL IDENTITIES AND RELATIONSHIPS OF OLDER LESBIAN, GAY, BISEXUAL (LGB) RESIDENTS ARE PERCEIVED AND SUPPORTED IN RESIDENTIAL CARE ENVIRONMENTS IN WALES

Penny MILES, Paul WILLIS, Michele RAITHBY, Tracey Anne MAEGUSUKU-HEWETT, Paul NASH, Christine BAKER (*Centre for Innovative Ageing, Swansea University, United Kingdom*)

Introduction : Sexuality and sexual health are an integral aspect of

health and wellbeing throughout the lifecourse. However, older people are often assumed to be asexual (Bauer et al, 2009). For older people within residential care environments, the priority of care needs can overshadow their sexual health needs (Windle & Burholt, 2006). Too frequently older people are also presumed to be heterosexual, neglecting social differences in sexual orientation. Consequently, older lesbian, gay and bisexual (LGB) people can experience dual discrimination through the heterosexist assumptions of care providers and through ageist beliefs circulating in LGB communities (Clarke et al, 2010). Method : Our study, focuses on the provision of services to older LGB people in residential care environments. Research participants in our study included care and nursing staff, managers and older LGB people and our mixed method approach included a content analysis of government care home inspection reports, a self complete questionnaire with validated measures designed to elicit attitudes towards ageing, sexuality and lgb sexuality, focus groups and narrative interviews. Results : Our findings point to an absence of specific policy, and a lack of awareness, training or 'comfort' around affirmative practice to meet the needs of older LGB people, and in some instances, sexuality per se. In anticipation of their future life, older LGB people are fearful of discrimination and isolation, with some preferring 'ghettoisation'. Conclusion : Our research makes an important contribution to raising awareness of LGB sexuality and ageing ,and seeks to promote anti-discriminatory and dignified care amongst health and social care professionals in care environments. Keywords : care lgb sexuality

OP27 315-C **MECHANISM OF FALLS II**

OP27 315-C-1 **ASSOCIATIONS BETWEEN FRAILTY AND SERUM 25 HYDROXYVITAMIN D AND 1,25 DIHYDROXYVITAMIN D LEVELS IN AUSTRALIAN COMMUNITY DWELLING MEN AGED ≥70 YEARS: THE CONCORD HEALTH AND AGEING IN MEN PROJECT (CHAMP)**

Vasant HIRANI¹, Vasikaran NAGANATHAN¹, Robert G. CUMMING², Fiona BLYTH¹, Markus J. SEIBEL³ (1. Centre for Education and Research on Ageing, Concord Hospital, University of Sydney, Australia; 2. School of Public Health, University of Sydney, Australia; 3. ANZAC Research Institute, and Dept of Endocrinology & Metabolism, Concord Hospital, University of Sydney, Australia)

Introduction : Low serum 25hydroxyvitamin D(25D) concentrations are known to be associated with frailty, but the relationship between 1,25dihydroxyvitamin D(1,25D) and frailty has not been studied. The aims were to examine the associations between serum 25D and 1,25D levels and frailty and with the components of frailty in older men. Method : Cross-sectional analysis of 1,625 men aged≥70 years, participating in the CHAMP, conducted in Sydney 2005-2007. Outcome measurements were frailty (assessed using the Cardiovascular Health Study criteria) and components of frailty: weight loss, weakness, slow walking speed, exhaustion and low activity level. Covariates included serum 25D and 1,25D, age, country of birth, season of blood collection, sun exposure, vitamin D supplement use, smoking status, income, activities of daily living, health measures, parathyroid hormone and estimated glomerular filtration rate. Results : Low serum levels of 25D and 1,25D were independently associated with frailty (OR: 2.53, 95%CI:1.59-4.03 for 25 D<40nmol/L compared to levels ≥68.9nmol/L and OR: 2.99, 95%CI:1.72-5.17 for 1,25D<62pmol/L compared to levels ≥145.9pmol/L) and with four of the five components of frailty (except weight loss),independent of other covariates. When both vitamin D

measures were considered together, there was an increased risk of frailty among men in the lowest quartiles of both measures, despite a weak correlation between them (r=0.30). Conclusion : 1,25D and 25D levels were independently associated with frailty in older men. This suggests that low vitamin D status may influence frailty through different biological mechanisms and pathways. Keywords : frailty, vitamin D measures,older men, the Concord Health and Ageing in Men Project

OP27 315-C-2 **A CANDIDATE GENE APPROACH TO UNDERSTANDING THE PATHWAYS ASSOCIATED WITH THE FRAILTY PHENOTYPE IN A POPULATION SAMPLE OF OLDER ADULTS FROM ENGLAND (ELSA)**

Krisztina MEKLI¹, Neil PENDLETON², James NAZROO¹ (1. Cathie Marsh Centre for Census and Survey Research, University of Manchester, United Kingdom; 2. Institute of Brain, Behaviour and Mental Health, University of Manchester, United Kingdom)

Introduction : The term frailty refers to a reduced functional reserve and consequent decrease in adaptation (resilience) to any stressors with a multi-system failure. The mechanistic pathophysiological pathways of frailty are not known but the hypothalamic-pituitary-adrenal (HPA) axis and heightened chronic systemic inflammation are thought to be major contributors. Method : Higher cortisol/dehydroepiandrosterone-sulphate (DHEAS) ratio in frail individuals indicates the role of the HPA axis in frailty. In our study we used a candidate gene approach to evaluate the role of selected cortisol pathway-related genes in this phenotype. We used the English Longitudinal Study of Ageing (ELSA) dataset of 4000 individuals over the age of 60 and assessed their frailty status using a widely accepted method of 5 factor criteria for Frailty Phenotype (FP) (Fried et al. J Gerontol 2001). We chose 30 genes involved in cholesterol transport, cortisol and DHEAS metabolism, analysed with logistic regression against FP, using only age and sex as covariates. Results : The strongest signals were observed in two cholesterol transport related protein genes. The stronger was in the amyloid beta precursor protein gene (APP) (uncorrected P value=0.01, OR=1.7), the weaker in the lecithin-cholesterol acyltransferase (LCAT) gene (uncorrected P value=0.04, OR=1.93). None of these associations were supported following correction for multiple testing. Conclusion : In this analysis using an English population sample we found association with cholesterol transport related protein genes and frailty phenotype (FP), which lost significance after correction for multiple testing. Other approaches using more informed analysis tools with more comprehensive coverage of this area of the genome may be warranted. Keywords : frailty, cortisol, genetics

OP27 315-C-4 **VEGETABLES AND FRUITS CONSUMPTION AND SARCOPENIA IN OLDER KOREAN ADULTS**

Jinhee KIM¹, Yunhwan LEE¹, Yoon-Sok CHUNG², Kwang Min KIM³ (1. Dept. of Preventive Medicine and Public Health, Ajou University School of Medicine, Korea; 2. Dept. of Endocrinology and Metabolism, Ajou University School of Medicine, Korea; 3. Dept. of Family Practice and Community Health, Ajou University School of Medicine, Korea)

Introduction : Research on the association of vegetables and fruits that are rich in antioxidants and sarcopenia are rare. We examined the relationship between frequency of vegetables and fruits consumption and sarcopenia in older persons living in the community. Method : Data were from the Fourth Korean National Health and Nutrition

Examination Survey (KNHANES-IV, 2008-2009). Subjects were aged 65 years and older (n = 1907) living in the community. Information on food group consumption was obtained using a food frequency questionnaire (FFQ). Sarcopenia was defined by the residual method, assessed using the dual X-ray absorptiometry. The association between vegetables and fruits consumption and sarcopenia was analyzed with multiple logistic regression analyses, adjusting for sociodemographics, health behaviors, and dietary factors. Results : Among the study population 56.6% were women, with mean age of 72.0 (\pm 5.3) for men and 72.0 (\pm 5.2) for women. Adjusting for covariates, an inverse association of sarcopenia with tertiles (T1: lowest, T3: highest) of vegetables, fruits, and combined vegetables and fruits consumption was observed in men (odds ratio [OR] and 95% confidence interval [CI]: 0.52 [0.30-0.93], 0.53 [0.30-0.93], 0.41 [0.23-0.73] for T3 vs. T1, respectively). In women, fruits and combined vegetables and fruits consumption was significantly associated with sarcopenia (OR = 0.60, 95% CI: 0.36-1.00, OR = 0.58, 95% CI: 0.36-0.95, T3 vs. T1, respectively). Conclusion : Increased vegetables and fruits consumption may be protective against sarcopenia in older persons. Further research is needed to ascertain the effect of food consumption on sarcopenia in older adults. Keywords : vegetables, fruits, sarcopenia

OP27 315-C-5

FRAILTY AS A PREDICTOR OF MORTALITY: THE MODERATING EFFECTS OF BODY MASS INDEX

Yunhwan LEE¹, Jinhee KIM¹, Joung Hwan BACK², Mikyung RYU¹, Eun Sook HAN³, Yunyoung CHO⁴, Haewon BYEON⁵, Song-I CHAE¹ (1. Department of Preventive Medicine and Public Health, Ajou University School of Medicine, Institute on Aging, Ajou University Medical Center, Korea; 2. National Health Insurance service, Health Insurance Policy Research Institute, Korea; 3. Physiologic Diagnostic Lab, Seoul National University Bundang Hospital, Institute on Aging, Ajou University Medical Center, Korea; 4. Department of Dental Hygiene, Suwon Women's College, Institute on Aging, Ajou University Medical Center, Korea; 5. Department of Language Therapy, Daelim University College, Institute on Aging, Ajou University Medical Center, Korea)

Introduction : Frailty is predictive of late life mortality, but little is known about the effects of body weight on the association between frailty and mortality. This study investigated the moderating effects of body mass index (BMI) on the frailty-mortality relationship in older adults. Method : Data were from the Living Profiles of Older People Survey (LPOPS), a national survey of 12,087 Koreans aged 65 years and older in 2008. During the 3-year follow-up 832 subjects died (6.9%). Frailty was categorized as not frail, prefrail, and frail, based on 5 indicators (weight loss, exhaustion, physical activity, walking speed, grip strength). BMI (kg/m²) was classified as underweight (<18.5), normal (18.5-24.9), overweight (25-29.9), and obese (\geq 30.0). Cox proportional regression was used to analyze the relationship between frailty and mortality risk, according to baseline BMI, controlling for sociodemographics and health-related variables. Results : Among the study participants 7.8% were classified as frail, 50.4% as prefrail, and 41.8% as non-frail. Adjusting for all covariates, compared with the normal weight and not frail counterpart, the underweight or normal weight of prefrail or frail status demonstrated significantly increased odds of death. The obese frail respondents also showed a significantly higher mortality risk (hazard ratio=3.77, 95% confidence interval: 1.12-12.67). Among the overweight prefrail/frail group, however, there was no significant association with mortality. Conclusion : Among older people with normal weight or underweight, greater frailty was associated with poorer survival. Whereas overweight tended to be protective of the effect of frailty on mortality, the obese

frail exhibited a significantly elevated risk of mortality. Keywords : frailty, mortality, body mass index

OP27 315-C-6

DIET QUALITY AND PHYSICAL PERFORMANCE ARE ASSOCIATED WITH INFLAMMATORY MARKERS IN COMMUNITY-DWELLING FRAIL OLDER ADULTS

Do Yeon KIM (Department of Medical Nutrition, Graduate School of East-West Medical Science, Kyung Hee University, Korea)

Introduction : There is growing evidence that higher levels of cytokines such as interleukin-6 (IL-6) and tumor necrosis factor alpha (TNF- α) are associated with lower nutritional and functional status in older adults. The aim of this study was to investigate the association among the serum level of inflammatory markers, diet quality, and physical performance in frail older adults living in community. Method : A total 87 frail older adults (usual gait speed <0.6 m/sec and Mini Nutritional Assessment < 24) were participated in this cross sectional study from National Home Healthcare Services in Gangbuk-gu, Seoul, South Korea. Diet quality was assessed by nutrient adequacy ratios (NARs) for various nutrients and the mean adequacy ratio (MAR). MAR was calculated as the sum of NARs divided by the number of nutrients (n=13). Physical Performance was measured by Short Physical Performance Battery (SPPB). Results : Linear regression analysis showed that higher level of IL-6 (log-transformed) was associated with lower MAR score after adjustment for age, sex, education, income, social network, and number of chronic disease (β =-6.16; p=.014). However, there was no significant association between level of TNF- α (log-transformed) and MAR score (β =-3.31; p=.156). Higher level of TNF- α was associated with lower SPPB score after adjustment for multiple covariates (β =-0.58; p=.003). However, no correlation was found between level of IL-6 and SPPB score (ρ =-0.11; p=.347, Spearman's correlation). Conclusion : Higher level of IL-6 was independently associated with lower diet quality, and higher level of TNF- α was associated with lower physical performance in community-dwelling frail older adults in South Korea. Keywords : inflammatory marker, diet quality, physical performance

OP27 316-S

HOUSING & ENVIRONMENT & TECHNOLOGY IV

OP27 316-S-1

SKILL DEVELOPMENT FOR NURSES IN HOME CARE - AN INTERVENTION STUDY

Gro HAANES¹, Marit KIRKEVOLD², Gunnar HORGEN³, Grethe EILERTSEN¹ (1. Faculty of Health Sciences, Buskerud University College, Norway; 2. Institute of Health and Society, Department of Nursing, Oslo University, Norway; 3. Department of Optometry and Visual Sciences, Faculty of Health Sciences, Department of Visual Sciences and Optometry, Norway)

Introduction : A training program for nurses in home care was developed in order to increase knowledge within the eyesight, the hearing, and the indoor lighting in the home of elderly. The overall objective was to develop nurses' competence, and place the nurses in a position to perform simple screening tests for vision and hearing. A light measuring device (Hagner luxmeter) was used, and in addition a form for assessing and surveying indoor lighting, was developed and used. Method : Qualitative and quantitative methods were used. The intervention comprised an intervention group (IG) and a control group (CG), with 10 nurses in each group. Both groups performed a multiple choice knowledge test (MC-test) before and after the training program. The nurses were also interviewed after the intervention. Results :

Nurses in the intervention group on average had a higher score in the 2nd than in the 1st MC-test. Nurses in the IG had better theoretical knowledge about hearing, vision and lighting conditions at home, than knowledge about the practical consequences of living with reduced sight, hearing and/or low lighting levels. Nurses (IG) considered themselves to be far more aware of the vision, hearing and lighting conditions of the elderly after the training program. Nurses (IG) especially valued doing the practical tests of seeing, hearing and measuring the indoor lighting. Conclusion : The study indicates that knowledge and awareness about the practical consequences of reduced eyesight and hearing and low lighting levels in the homes of the elderly, is poor. Keywords : sensory impairment, low indoor lighting levels

**OP27 316-S-3
INSTITUTIONAL CARE OF THE ELDERLY-A STUDY
AMONG THE RESIDENTS OF OLD AGE HOMES IN
KARNATAKA, INDIA**

Vanitha DAPPARABAIL (*Dept of Sociology, A.V.K College for Women, Hassan 573201, Karnataka, India*)

Introduction : Old age homes are homes for senior citizens, unable to stay with their families, wish for a secured living, looking for social interaction and stay away with social pressures. There are more than 1000 old age homes in India. Old age homes are a necessity today due to the work pressure of the younger generations. This paper attempts to know the living conditions and level of satisfaction of elderly people living in old age homes in Hassan, Karnataka. Method : For the present study, 100 respondents were selected by using simple random sampling method and information collected through interview schedule is tabulated and analyzed. Results : Food security, companionship and recreational facilities were available in all the institutions. But proper health care was not provided to the residents. Emotional security and personal attendance is felt. Declining health due to physical degeneration, nutritionally inadequate diets, lack of exercise and limited sources of interaction precipitated health problems of the residents. Almost all respondents (92%) have expressed varying levels of dissatisfaction with the supportive services and care provided by the institutions. However, to a great extent, Institutional care offers a common place for shelter, dining and recreation, sharing feelings, thoughts and companionship. Conclusion : The Institutional living for the aged provided scope for sharing of the bottled up emotional securities which is a tension releasing mechanism for the aged. The Old age homes provide a secure place to overcome loneliness and health care. But more attention is required from the government to monitor the working of old age homes. Keywords : Institutional care, Living conditions, level of satisfaction

**OP27 316-S-4
SENIORS' EXPERIENCES OF LIVING IN SPECIAL
HOUSING ACCOMMODATION (SHA) CHALLENGES FOR
SCANDINAVIAN ELDERLY CARE**

Ulla Helena HELLSTROM MUHLI (*Department of Sociology, Uppsala University, Sweden, Sweden*)

Introduction : This article presents a hermeneutic phenomenological analysis of interview material in which 12 seniors living in Special Housing Accommodation (SHA) facilities reflect on the experience of living in such facilities. Of particular interest in the analysis is living in a SHA as a phenomenon. Method : The data material was collected by face-to-face interviews (each participant had one interview) using an interview guide (Fontana & Frey, 1994), containing the question topics of (i) life situation now, (ii) experiences of dwelling, (iii) being at

home, and (iv) life situation in the future. Results : The finding shows that the phenomenon of lived experience in a SHA seems to be a state of ambiguity regarding one's existence, which is made up of several constituents (elements of meaning). The analysis contributes to the understanding of how the phenomenon of SHA living is coming into existence as a need, due to an individual's failing health; however, the SHA is not considered to be a true home. Conclusion : The seniors learn to cope with living in the SHA by lowering their expectations of life and existence while the SHA provides the prerequisites for their existence. An implication for promoting care is to support the seniors to enable a full existence of life within SHA living. Keywords : Home; Experiences; Special housing accommodation; Scandinavian elderly care

**OP27 318-B
TISSUE AGING**

**OP27 318-B-1
ACCELERATION OF AGE-RELATED GENE EXPRESSION IN
THE BRAIN OF SAMP8: IT'S EFFECT ON MYELIN BASIC
PROTEIN (MBP) GENE EXPRESSION DURING POSTNATAL
DEVELOPMENT**

Ryoya TAKAHASHI, Keiko ODERA (*Department of Biochemistry, Faculty of Pharmaceutical Sciences, Toho University, Japan*)

Introduction : The senescence-accelerated mouse (SAM) was established as an animal model of accelerated aging by T. Takeda et al. SAMP8/Toho mice have much shorter life-span (approx. 50% of control strain, accelerated senescence resistant strain SAMR1/Toho). In an attempt to find molecular biological difference between SAMP8/Toho and SAMR1/Toho mice, we investigated age-related changes in the expression of various genes in different brain regions of both strains. Method : SAMP8 and SAMR1 mice obtained from Dr. T. Takeda were bred and maintained in our animal facility. These mice were designated as SAMP8/Toho and SAMR1/Toho, respectively. The mRNA levels were determined by Northern blot analysis. Results : The patterns of various gene expression (cyclophilin, actin, hsc70, etc.) in the brain were remarkably different each other. However, when the gene expression level of each strain was expressed as a percentile of respective average life span, the timing and intensity of gene expression was found to be nearly the same despite a twofold difference in the life span. On the other hand, the expression of MBP gene declined dramatically after weaning in the cerebellum but not cerebrum and brain stem of SAMP8. Conclusion : The results of this study suggest that post-weaning gene expression in mice of different life span is controlled by mechanisms associated with physiologic rather than chronologic age. The altered expression of MBP gene in the cerebellum of SAMP8 might be due to indirect effects of disorganized gene expression during weaning. Keywords : cerebellum, myelin basic protein, senescence-accelerated mouse

**OP27 318-B-2
VITAMIN D AND BRAIN VENTRICULAR VOLUME IN
OLDER ADULTS**

Cedric ANNWEILER¹, Manuel MONTERO-ODASSO², Vladimir HACHINSKI³, Sudha SESHADRI⁴, Robert BARTHA⁵, Olivier BEAUCHET⁶ (*1. Neuroscience and Geriatrics, Angers University Hospital and Western University, France; 2. Geriatrics, Western University, Canada; 3. Neurology, Western University, Canada; 4. Neurology, Boston University, USA; 5. Roberts Research Institute, Western University, Canada; 6. Neuroscience and Geriatrics, Angers University Hospital, France*)

Introduction : Vitamin D deficiency is associated with an enlargement

of the lateral cerebral ventricles in rodents. The effect of low serum 25-hydroxyvitamin D (25OHD) on lateral cerebral ventricular volume has not been studied yet in humans. The purpose of this cross-sectional study was to determine whether vitamin D deficiency was associated with greater lateral cerebral ventricular volume in older adults. Method: Ninety-two Caucasian community-dwellers with no clinical hydrocephalus (mean, 72.2±6.2years; 46.7%female) were divided into 2 groups according to serum 25OHD concentration (deficiency≤50nmol/L; normal>50nmol/L). Cerebral ventricular volume was quantified using semi-automated software from three-dimensional T1-weighted MRI. Age, gender, body mass index, blood pressure, education level, Mini-Mental State Examination, white matter lesions and serum calcium concentrations were used as covariates. Results : There was an inverse linear association between 25OHD concentration and ventricular volume (P=0.049). Compared to individuals with normal 25OHD, those with 25OHD deficiency (n=33) had 28% larger lateral ventricles (46.9±26.8mL versus 36.6±16.4mL, P=0.026). Vitamin D deficiency was associated with an increase in ventricular volume (adjustedβ=16.55, P=0.023). The ventricular enlargement involved ventricle bodies (P=0.025) but not temporal horns (P=0.112). Conclusion : Serum 25OHD deficiency was associated with larger lateral cerebral ventricles. These findings provide a scientific base for vitamin D replacement trials. Keywords : vitamin D; brain; ventricular volume; MRI; morphometry; neuroendocrinology; older adults

OP27 318-B-3

MECHANICAL PROPERTIES OF SINGLE MUSCLE FIBER REPRESENTING POOR MUSCLE QUALITY OF OLDER ADULTS WITH DIABETES

Eun-Jeong LEE¹, Ji-Wan YOON², Hak Chul JANG³, Jae-Young LIM⁴
(1. Department of Rehabilitation Medicine, Seoul National University Bundang Hospital and Seoul National University Institution on Aging, Korea Institute of Machinery & Materials, Korea; 2. Department of Internal Medicine, Seoul National University Hospital Healthcare System Gangnam Center, Korea; 3. Department of Endocrinology, Seoul National University Bundang Hospital, Korea; 4. Department of Rehabilitation Medicine, Seoul National University Bundang Hospital, Korea)

Introduction : Aging is known to cause muscle weakness while type2 diabetes mellitus (DM) is also considered as a high risk factor to induce a serious skeletal muscle. Berria et al. (2006) found that insulin-resistant skeletal muscle showed the increased collagen content. Here we studied mechanical properties of aged skeletal muscle with type2 DM to investigate whether the aged skeletal muscles with type2 DM induce the higher passive tension due to abundance of extracellular matrix (ECM) inside or outside of muscle fibers. Method : Permeabilized single muscle fibers from gluteus maximus (GM) muscle of older adults during hip surgery (n=6 for each diabetes (DM) and non-diabetes (non-DM) group) were used for the mechanical test. SDS-PAGE was used to quantify the amount of titin of muscle. Results : The average CSA and maximal active tension of single fibers were smaller in DM compared to non-DM. Based on the measured titin- and ECM-based passive tension, we estimate the ratio of titin- and ECM-based passive tension (titin/ECM ratio). DM showed significantly lower titin/ECM ratio than non-DM, which indicates that more ECM but less titin contributes to the total amount passive tension. No significant differences were found between two groups in the amount of T1 (intact titin) relative to the amount of myosin heavy chain (MHC). Conclusion : Based on our findings we conclude that passive stiffness of skeletal muscle fibers was shown to increase in older adults with type2 DM. This observation may result

from the excessive accumulation of ECM in and around the single fibers. Keywords : Diabetes mellitus, Skeletal muscle atrophy, Titin

OP27 318-B-4

GENOME-WIDE PROFILING OF MIRNA IN SKELETAL MUSCLE WITH AGING

Ji Young KIM¹, Seon-Young KIM², Ki-Sun KWON¹ (1. Aging Research Center, Korea Research Institute of Bioscience & BioTechnology, Korea; 2. Medical Genomics Research Center, Korea Research Institute of Bioscience & BioTechnology, Korea)

Introduction : Skeletal muscle degenerates progressively, loses mass (sarcopenia) along in years, and leads to reduced physical ability, often causing secondary diseases such as diabetes and obesity. MicroRNAs (miRNAs) play critical roles in a variety of biological processes and it is also known that regulation of gene expression by miRNAs is a key event in muscle development and disease. Although there are several report to profile miRNA expression in skeletal muscle with age, these studies are typically medium scale profiling using microarray technique. Method : Here, we performed next-generation sequencing which allowed us to assess genome-wide expression profiling of miRNAs during aging in combination with mRNA microarray using mouse gastrocnemius muscle at two different ages (6-mo-old versus 24-mo-old). Results : We found that 28 miRNAs were differentially expressed with age, 12 up-regulated and 16 down-regulated. Further detailed comparison of miRNA expression with its target gene expression from microarray data revealed that miRNAs contribute to muscle aging possibly through the control of glucose metabolism, ion homeostasis, and transcription regulation. Conclusion : Finally, we believe genome-wide miRNA profiling helps to expand our knowledge of miRNA function in the muscle aging process. Keywords : skeletal muscle, aging, miRNA

OP27 318-B-5

ROLES OF AKT AND MTOR IN PROINFLAMMATORY AND HYPERPIGMENTARY MECHANISMS OF SKIN AGING

Yeon Ja CHOI, Dae Hyun KIM, Chan Hum PARK, Min Hi PARK, Ki Wung CHUNG, Eun Ji JANG, Deaui PARK, Hae Young CHUNG (College of Pharmacy, Molecular Inflammation Research Center for Aging Intervention, Pusan National University, Korea)

Introduction : Mechanisms underlying skin aging have features of the process triggered by both intrinsic and extrinsic factors. The activation of nuclear factor- κ B (NF- κ B) by intrinsic and extrinsic mediators is well-known, however, research has not fully explored to define major signaling pathways for NF- κ B activation. Method : In the present study, experimental setups are designed to explore the inductions of Akt and mTOR/autophagy and their roles in proinflammatory and hyperpigmentary mechanisms. This study employed both well-accepted skin aging models; intrinsic skin aging and photoaging models. Results : In the initial experiments, it was ascertained that the activation of NF- κ B and proinflammatory genes caused the accumulation of oxidative stress in both intrinsic and photo skin aging. Akt signaling pathway was significantly activated in both skin aging models leading to the inhibitor of NF- κ B (I κ B) kinase α to be phosphorylated at its Thr23. Further study provided that the NF- κ B was activated by phosphorylations of I κ B α and p65 subunit of NF- κ B during skin aging. The involvement that skin aging induced the expression and activation of mTOR and inhibited autophagy was explored in the second part of the present study. It was found that mTOR complex 2 was responsible for the activation of NF- κ B stimulated by UVB. Conclusion : Taken together, these findings strongly suggest that increased Akt activity induced activations of NF-

α B, and mTOR play a major role in causing proinflammatory process and inhibition of autophagic activity leads to hyperpigmentation in skin aging. Keywords : skin aging, akt, NF- α B

OP27 318-B-6

URSOLIC ACID TREATMENT PREVENTS MUSCLE ATROPHY INDUCED BY DEXAMETHASONE THROUGH MODULATION OF MUSCLE DEGRADATION

Kyung-Kyun NOH, Changshin YOON, Yong Jung KANG, Bokyoung SUNG, Minjung KIM, Hae Young CHUNG, Nam Deuk KIM (Department of Pharmacy, Molecular Inflammation Research Center for Aging Intervention (MRCA), The Longevity Life Science & Technology Institutes, Pusan National University, Korea)

Introduction : Skeletal muscle atrophy results from various conditions, such as a side effect of treatment with synthetic glucocorticoids (e.g., dexamethasone, DEX). Especially two genes specific to muscle atrophy, muscle ring finger 1 (MuRF1) and muscle atrophy F box (MAFbx), are upregulated in several muscle atrophy states. Inhibition of these genes could be an effective strategy for preventing muscle atrophy. FoxO contributes to the expressions of MuRF1. Method : In the present study, we investigated whether the administrations of ursolic acid could blunt DEX-induced muscle atrophy by exporting FoxO1 and thus downregulate the expression of MuRF1. From in vivo experiments, daily intraperitoneal injection of DEX in six-week-old Sprague Dawley (SD) male rats induced muscle atrophy. Results : DEX injection weakened grip strength of SD rats, and this was alleviated by administrations of ursolic acid. The amount of muscle damage from DEX injection was quantified by measuring serum creatine kinase (CK) level. Administrations of ursolic acid alleviated the level of CK. In addition, the Western blot analysis showed DEX injection resulted in increased degradation of myosin heavy chain (MyHC) and expression of MuRF1. All of these effects of DEX were attenuated by administrations of ursolic acid. Nuclear levels of FoxO1 were also consistent with the expression of MuRF1. In contrast to the Western blot analysis, RT-PCR data showed mRNA levels of MyHC were remained same in all groups, while mRNA levels of MuRF1 were coincident with protein levels of that. Conclusion : It is concluded that administrations of ursolic acid could prevent DEX-induced muscle atrophy by attenuating muscle degradation. Keywords: muscle, atrophy, ursolic acid

OP27 319-C

COGNITION AND AGING II

OP27 319-C-1

RELATIVE PERCENTAGE OF FOUR COGNITIVE TYPES IN THE ELDERLY AND CORRELATION BETWEEN AAMI, MCI AND APOE GENOTYPES

Yongxing MA, Zhuowei YU, Yue ZHUO (Shanghai Institute of Gerontology and Geriatrics, Affiliated Huadong Hospital, Fudan University, China)

Introduction : To survey the relative percentage of “NCF”, AAMI, MCI and dementia in two cohort elderly 65 years or older in Shanghai, (especially in the 75-84 and 85-98 years age group), and correlation between AAMI, MCI and ApoE genotypes. Methods: ①A sample of two cohort, 2666 (M 2132, F 534; Age group, 65-74: 925, 34. 70%; 75-84: 1054, 39. 53%; 85-98: 867, 25. 77%) elderly \geq 65 years old were obtained. ②The Normal Cognitive Function (“NCF”) was defined as MQ (WMS-R) \geq 100, MMSE 28-30. The diagnosis of AAMI, MCI and dementia met the generally used criteria (AAMI: Textbook of

Geriatric Neuropsychiatry. 1994, P145-158; MCI: JAGS 2000,48:1601-1606; Dementia: DSM-IV、NINCDS-ADRDA). ③APOE genotypes were determined in AAMI (421 cases; control 398) and MCI (307; control 675). Results : ① The relative percentage of “NCF”、AAMI、MCI and dementia were as following : NCF : 867 subjects, 32. 52%; AAMI: 860 cases, 32. 26%; MCI: 782 cases, 29. 33%; Dementia: 157 cases (AD: 88, 3.3%; VD 39, 1.46%; MD30, 1.13%. VD+MD69, 2.59%), 5.89%. ②Allele frequency of APOE ϵ 4 were significantly higher in MCI than that of controls. But no significant difference between AAMI and control was found. Conclusion : The relative percentage of Normal cognitive function(“NCF”), AAMI and MCI in the elderly as in this report was not found in the other reports . It is very important to study the relative prevalence of various cognitive impairment including AAMI, MCI and dementia, and then to give the intervention in order to decrease the incidence, worsening rate and converting rate (NCF \rightarrow AAMI? \rightarrow MCI \rightarrow dementia) of various cognitive impairment. It is suggested that all this cognitive status should be considered and included in the study of cognitive function, and intervention on the cognitive impairments in the elderly. Keywords : Aged; Old-old; Normal Cognitive Function; AAMI; MCI; Dementia; APOE genotypes

OP27 319-C-2

THE RELATIONSHIP BETWEEN COGNITION, BODY IMAGE AND FUNCTIONALITY IN ELDERLY USERS FROM FAMILY HEALTH PRACTICES IN PORTO ALEGRE (BRAZIL)

Thais De Lima RESENDE¹, Raquel Rousselet FARIAS¹, Graziela Trindade PENA¹, Vera Elizabeth CLOSS², Laura M.B.C.R.M. Da ROCHA², Eduardo Lopes NOGUEIRA², Irenio GOMES² (1. Faculdade de Enfermagem Nutricao e Fisioterapia, Pontificia Universidade Catolica do Rio Grande do Sul, Brazil; 2. Instituto de Geriatria e Gerontologia, Pontificia Universidade Catolica do Rio Grande do Sul, Brazil)

Introduction : In the elderly, the functional capacity (FC) assessment can detect possible risks of dependency. In them, satisfaction with body image (BI) and its relationship with FC has not been investigated. This study, therefore, was designed to: examine cognitive function and BI perception, determine the performance on functional tests and investigate the association between cognition, BI and functionality in the elderly. Method : This cross-sectional, analytical study was conducted on a random sample of 180 subjects from 10 Family Health Practices in Porto Alegre (RS, Brazil). Data were collected on demographic aspects (sex, age, marital status and education), cognition (Mini-Mental State Examination - MMSE), satisfaction with BI (Stunkard scale), lower (Sit/Stand - S/St) and upper limb strength (Hand Grip - HGS, Jamar® dynamometer). Results : The mean age was 68.1 \pm 6.3 years. Most participants were female (62.2%), with low education (4.5 \pm 3.4 years), dissatisfied with their BI (72.3%) and cognitively intact (85.6%). Notwithstanding, the prevalence of dementia was high (14.4%). The average HGS was 28.5 Kgf. The average score for the S/St was 8.9s. Gender, age, marital status proved independent of cognition and BI. Cognition was not associated with functionality or with BI. Seniors happy with their BI had significantly higher S/St and HGS results than the dissatisfied ones. Conclusion : In this sample, the prevalence of dementia was high, the lower limb strength was within the expected, but the upper limb strength was below. Most seniors were dissatisfied with their BI; those satisfied performed better at the functional tests. Cognition was not related to BI or functionality. Keywords : Aging, Cognition,

Dementia

OP27 319-C-3

THE TREATMENT OF AGE- ASSOCIATED MEMORY IMPAIRMENT IN 168 CASES AND DEMENTIA IN 136 CASES WITH THE REINHARDT AND SEA CUCUMBER. PART II

Yongxing MA, Chuanfu WANG, Yue-Di GU (*Department of Aging, Antiaging and Cognitive Function, Shanghai Institute of Gerontology and Geriatrics, Affiliated Huadong Hospital, Shanghai Medical Collage, Fudan University, China*)

Introduction : To study the efficacy of Reinhardt and Sea Cucumber Capsule (R.S.C., Sea animal products) to treat dementia in the aged. Method : Double blind trail were performed in 136 cases of dementia (R.S.C. 68,VD30,AD 38; placebo 68,VD 24,AD 44) in the aged with MMSE \leq 24. The dosage of R.S.C. and placebo were all 6 capsules(0.28g/cap)tid for 3 months. The effect were evaluated with MMSE、HDS and MQ(WMS). Results : ①MMSE increment, R.S.C. 2.397 \pm 1.694,placebo 654 \pm 1.589 (P<0.01);Total effective rate, R.S.C. 54.4%,placebo 29.4%(P<0.01).②HDS increment, R.S.C. 2.015 \pm 1.994,placebo 1.140 \pm 1.785(P<0.01); Total effective rate, R.S.C.48.60%; placebo 27.9%(P<0.05) ③MQ increment, R.S.C. 4.364 \pm 4.617;placebo 1.824 \pm 5.803(P<0.01);Total effective rate, R.S.C. 48.5%;placebo 25.0%(P<0.05). ④Similiar effects were observed in VD and AD with slight better results in VD. No significant side effects were observed.⑤The mechanism of R.S.C. to improve the learning and retrival function of the adult and old rats and adult mouse, and cognitive function in the demented may be related to its effects to enhance neuron growth、to increase acetylcholine and decrease glutamine level in the brain as confirmed in cell and animal experiment, and to improve free radical metabolism and microcirculatory state confirmed clinically. Conclusion : R.S.C. is rather effective and safe to treat mild and moderate dementia (AD、VD) in the aged and presaged. Keywords : Reinhard and Sea Cucumber Capsule (R.S.C.) Dementia in the aged

OP27 319-C-4

EFFECTS OF EXERCISE AND COGNITIVE TRAINING IN OLDER ADULTS ON NOVEL TRANSFER TASKS OF EVERYDAY FUNCTION

Ellen F. BINDER¹, Julie M. BUGG², Jie ZHENG³, Kenneth B. SCHECHTMAN³, Mark A. MCDANIEL² (*1. Internal Medicine/Geriatrics, Washington University in St. Louis, USA; 2. Psychology, Washington University, USA; 3. Biostatistics, Washington University, USA*)

Introduction : Studies in older adults have demonstrated the benefits of exercise and cognitive training on measures of memory, reasoning, and speed of performance, but these effects have not translated into improvements in everyday functioning. The aim of this randomized, controlled pilot study was to evaluate the effects of aerobic exercise training and cognitive training, separately and combined, on novel transfer tasks to reflect performance of daily activities. Method : Ninty-six healthy men and women, age 55-70 years (mean 65 \pm 6 yrs) were randomly assigned to one of four groups: Control (home exercise + health education), Cognitive (home exercise + cognitive training), Exercise (aerobic exercise + health education), Combined (aerobic exercise + cognitive training). The assigned exercise intervention was performed for 6 months, while the cognitive training and education interventions were conducted during the final 2 months of the intervention period. Outcome measures administered using a

computer-based format, at baseline and 6 months were: Cooking Breakfast, Virtual Week, and Memory for Medical Information. Results : Participants assigned to the Exercise and Combined groups had significantly greater increases in aerobic power (V02) than those in the Control or Cognitive groups (p<0.04). In regression models for the Cooking Breakfast task, performance declined over 6 months for Home exercise but not Aerobic exercise (p=0.056). For Virtual Week, analyses showed that Cognitive training significantly improved prospective memory for regular events (p=0.001) and irregular events (p=0.0007). Conclusion : We conclude that aerobic exercise training and cognitive training each have independent but separate effects on two novel measures of everyday function in older adults. Keywords : exercise, cognitive training, cognitive control

OP27 320-S

AGEING & PHYSICAL HEALTH

OP27 320-S-2

FOOT HEALTH OF OLDER PEOPLE IN HOME CARE NEEDS ATTENTION

Minna STOLT¹, Riitta SUHONEN¹, Pauli PUUKKA², Matti VIITANEN³, Paivi VOUTILAINEN⁴, Helena LEINO-KILPI⁵ (*1. Department of Nursing Science, University of Turku, Finland; 2. National Institute for Health and Welfare, National Institute for Health and Welfare, Turku, Finland; 3. Department of Clinical Medicine, University of Turku, Finland; 4. Ministry of Social Affairs and Health, Ministry of Social Affairs and Health, Finland; 5. Department of Nursing Science, University of Turku and Hospital District of Southwest Finland, Finland*)

Introduction : Healthy feet are a prerequisite for functional ability and general well-being in older people. However, the attention paid for foot health or its potential problems is limited. Studies in the field focus mainly on specific disease-related foot problems rather than foot health with preventative perspective. Method : The purpose of this study was to assess the foot health and factors associated with foot health among older people receiving public home care services in Finland. The data were collected by visiting home nurses with Foot Health Assessment Instrument (FHAi, 23 items) consisting of the assessment of skin and nail health, foot structure and pain. Results : Altogether 309 (response rate 47%) older people (mean age 83.4 years) participated the study. Older people in home care have different foot health problems. Main skin problems were oedema (47%, n=143) and dry skin (44%, n=135). In nail health, thickened (41%, n=126), elongated (27%, n=82) and yellow (40%, n=121) nails were prevalent. Hallux valgus (34%, n=102), Taylor's bunion (32%, n=97) and low foot arch (26, n=80) were common problems in foot structure followed with lesser digital deformities (23%, n=69). The foot pain was common in ankle (32%, n=97). Foot problems were associated with higher age, poor self-evaluated foot health, female gender and footwear. Conclusion : Older people have multiple foot health problems which need to be cared and identified. Regular foot health assessments would promote the foot health of older people accompanied with podiatric services meeting the foot health needs of the older people. Keywords : foot health, older people, home care

OP27 320-S-3

VISUAL IMPAIRMENT, DISABILITY AND DIABETES MELLITUS : BASELINE DATA OF THE THREE CITIES STUDY

Marie DANET¹, Karine PERES², Fanny MATHARAN², Cecile DELCOURT², Jean-Francois DARTIGUES², Isabelle BOURDEL-MARCHASSON³ (*1. Geriatric Department, CHU of Bordeaux,*

France; 2. INSERM U897 - ISPED, University of Bordeaux Segalen, France; 3. UMR 5536, CNRS, RMSB - University of Bordeaux Segalen - CHU of Bordeaux, France)

Introduction : Reducing disability and preventing loss of autonomy are major challenge in aging population. Yet the prevalences of diabetes and visual impairment, both known to be associated with disability are increasing, especially among the elderly. **Objectives** Our aim was to determine whether diabetes is associated with visual impairment, decrease in walking speed and disability (mobility, IADL, ADL, confinement) in a non-institutionalized urban population in order to identify a possible rise of action. **Method :** Cross-sectional data from 3C study enrolment visit, a multicenter observational cohort study in urban population over 65 years, conducted between 1999 and 2001. The population was distributed in 4 categories of glycemic status (known diabetes mellitus KD, unknown diabetes UD, impaired fasting glucose IFG, non diabetes ND). **Multivariate analyzes** of factors associated with visual impairment, walking speed decrease, and disability (mobility, IADL, ADL, confinement). **Results :** 8654 patients have been enrolled, 60.4% were women, mean age was 74.1 years + / -5.5 years. KD and IFG were significantly associated with visual impairment (OR = 1.50, [95% CI 1.19 to 1.89] and OR = 1.51, [95% CI 1.09 to 2.11]). KD was significantly associated with a decrease in walking speed (= - 0.023 [95% CI -0.041, -0.004]), the dependence of mobility and IADL (OR 1.38 [95% CI 1.14 - 1.66] and OR 1.53 [95% CI 1.15 -, 202]). There was no association between confinement and disorder of glucose regulation. **Conclusion :** The independent association of diabetes with different types of disabilities and visual impairment is confirmed in the elderly. **Keywords :** diabetes mellitus, visual impairment, disability

OP27 320-S-4

HEAT STROKE AND EXCESS MORTALITY OF ELDERLY RELATED TO VERY HOT SUMMER IN JAPAN

Masao KANAMORI¹, Seiichi NAKAI², Mizue SUZUKI³, Yuko TATARA¹, Yoshifumi NAGAI¹ (1. Department of Sport and Health, Biwako Seikei Sport College, Japan; 2. Department of Food and Nutrition, Kyoto Women's University, Japan; 3. Faculty of Nursing, Hamamatsu University, School of Medicine, Japan)

Introduction : Recently Japanese elderly have experienced very hot summer and the highest temperature due to the climate change. We focus on the heat stroke and excess mortality of elderly. This survey is to show a increased death of heart stroke, and a clear age-dependent relationship with very hot summer and the high temperature to clear excess mortality of elderly. **Method :** Recently age-specific mortality from Vital statistics from 2005 to 2011 in Japan is compared with it which was statistics from twenty century. Incidence of the cases of heat stroke were obtained from the annual reports of the Kyoto region meteorological observatory. **Results :** On a day of the highest temperature more than temperature 35 degrees centigrade , it was 35 days in summer of 2010, Kyoto area. It was the best record of the observation history. The emergency conveyed person was 364 July, 750 August, 215 September by heart stroke and related diseases. The age-specific mortality rate at 74 years old from 65 became more than 6 times in 2007 and 4.6 per a population of 100,000 people from vital statistics. **Conclusion :** On the survey there is the limit called the limit of the classification of the vital statistics and the reports of Kyoto region meteorological observatory. It may be said that we cleared a increased death of heart stroke, and a clear age-dependent relationship with very hot summer and the high temperature to clear excess mortality of elderly. **Keywords :** Heat stroke, Excess mortality, Japan

OP27 320-S-5

EXPERIENCES OF SEEKING TREATMENT FOR URINARY INCONTINENCE IN POSTMENOPAUSAL WOMEN: A QUALITATIVE STUDY

Minoo PAKGOHAR¹, Tengku Aizan HAMID², Rahimah IBRAHIM² (1. Geriatric Nursing, School of Nursing and Midwifery, Tehran University of Medical Sciences, Iran; 2. Institute of Gerontology, Universiti Putra Malaysia, Malaysia)

Introduction : Urinary incontinence is known as a pervasive traumatic condition with high prevalence in postmenopausal women. The aim of this study was to illuminate the experiences of seeking treatment of postmenopausal women living with urinary incontinence. **Method :** Hermeneutic phenomenology underpinned the study's interpretive research approach. Nine community dwelling postmenopausal women with urinary incontinence participated in-depth, semi-structured interviews in two sessions with three or five weeks interval. **Results :** Two themes emerged to illuminate the experiences of seeking treatment for urinary incontinence including: "overcoming the barriers" and "anticipating of the future". **Conclusion :** The results of this study indicated that if the sufferers can overcome the barriers and perceive potential risk of UI, and have high expectations of treatment, then treatment seeking would follow. Thus, health care providers should encourage them to seek treatment for early diagnosing and improving their quality of life as the goal. **Keywords :** seeking treatment, urinary incontinence, postmenopausal women

OP27 320-S-6

THE EFFECT OF FUNCTIONAL FITNESS OF PHYSICAL DISABILITIES OF LONG - TERM CARE INSTITUTIONS

I-Chen YEH¹, Ching-Yun HUANG², Hui-Chuan WEI¹ (1. Department of Adult and Continuing Education, National Chung-Cheng University, Taiwan; 2. Department of Physical Education, National Chiayi University, Taiwan)

Introduction : According to an investigation done by Taiwan Ministry of the Interior in 2011, there was more than 90% of the disability care institutions mainly based on life care. In those institutions, physical disabilities accounted for 35.58%. Previous studies have shown that, individuals can effectively improve lower extremity strength, softness, timed up and go, Berg balance and knee proprioception as well as reduce the risk of falls by regular exercise. The purpose of the study was to investigate influence of the intervention program applying functional fitness to residents in the institution. **Method :** The subjects were disabled persons of a care institution in southern Taiwan, and were randomly divided into exercise and control groups, both having 17 subjects. The age of the subjects was between 56 and 98 years with a mean age of 79.08 ± 10.04 years; the subjects of exercise group implemented 12 weeks of training on flexible degrees, functional leg strength, grip strength, and balance, while the control group subjects did not have any training program. **Results :** The study results revealed that, subjects of the exercise group have significantly improved their functional shoulder rotation flexibility of left and right; anterior hip muscle group flexibility of right; sitting functional balance of left and right; and shift activities function evaluated by the Barthel Index (P <.05). **Conclusion :** The study suggested to develop physical fitness programs and exercise prescriptions for the disabled people of the institutions. **Keywords :** functional fitness, physical disability,

OP27 321-C

IDENTIFICATION OF FRAILTY

OP27 321-C-1

THE PREDICTIVE VALIDITY OF THE KIHON CHECKLIST FOR IDENTIFYING FRAILTY IN A COMMUNITY-DWELLING OLDER POPULATION

Shosuke SATAKE¹, Hiroshi SHIMOKATA², Kazuyoshi SENDA³, Izumi KONDO⁴, Kenji TOBA⁵ (1. *Comprehensive Geriatric Medicine, National Center for Geriatrics and Gerontology, Japan*; 2. *Development of Preventive Medicine, National Center for Geriatrics and Gerontology, Japan*; 3. *Pulmonary Medicine, National Center for Geriatrics and Gerontology, Japan*; 4. *Research and Development to Support Independent Life of Elderly, National Center for Geriatrics and Gerontology, Japan*; 5. *Director of the Hospital, National Center for Geriatrics and Gerontology, Japan*)

Introduction : The Kihon Checklist (KCL) is widely used to identify at-risk elderly for needing care/support in Japan. It is a self-report questionnaire which consists of 25 yes/no questions in multiple domains. We previously reported that the total score of KCL correlated with the sum of frailty phenotypes by Fried's model. However, it is still obscure whether the KCL could predict anew incidence of needing care/support or mortality. The purpose of this study was to validate the predictive ability of the KCL to identify at-risk elderly who would be dependent or die. **Method :** The KCL was performed in the Higashiura-town resident seniors who had not yet been certified as dependent. From the total score of KCL, 0-4 was classified into robust, 5-9 was into prefrail, and 10+ was into frail. We had followed up an incidence of needing care/support or mortality in the resident seniors for 2.5 years. **Results :** We considered 5,543 elderly who completely answered the questionnaire as eligible. The KCL classified 3,529 seniors (63.6%) as robust, 1,456 (26.3%) as prefrail, and 558 (10.1%) as frail. Prefrailty was significantly associated with an incidence of needing care/support with an age- and sex-adjusted hazard ratio (HR) of 2.145 (95% CI 1.633-2.766), but not with mortality. On the other hand, frailty significantly predicted both an incidence of needing care/support and mortality with adjusted HRs of 5.839 (95% CI 4.498-7.581) and 4.802 (95% CI 3.022-7.631), respectively. **Conclusion :** The KCL is a useful tool to predict anew incidence of dependent elderly or mortality in a community-dwelling population. **Keywords :** Kihon Checklist, frailty

OP27 321-C-2

GAIT SPEED AND GRIP STRENGTH AS PREDICTORS OF INCIDENT DIFFICULTY IN INSTRUMENTAL ACTIVITIES OF DAILY LIVING

Mario PEREZ-ZEPEDA, Luis GUTIERREZ-ROBLEDO (*Clinical and Epidemiological Research, Instituto Nacional de Geriatria, Mexico*)

Introduction : Physical performance tests have shown to be predictors of a number of adverse outcomes in the geriatrics population. This could be useful in screening those subjects who are at risk even when they are totally independent. The aim of this study is to test if grip strength and gait speed can predict incident difficulty in instrumental activities of daily living in group of community dwelling elderly. **Method :** Subjects are from the Coyoacan cohort, a study of community dwelling elderly of Mexico city. Baseline grip strength was tested with dynamometry and reported in kilograms and gait speed with the timing of a walk in a 4 meter track. Only subjects independent in instrumental activities of daily living were included. 3-year follow up was done, and incident difficulty was present if the subject reported it in the Lawton scale. **Results :** 102 subjects were assessed, with a mean age of 76.31 (SD 5.86), 58.8% women, mean grip strength of 20.93 (SD 7.89), mean gait speed 0.74 (SD .31). Incident difficulty was present in 56.9% of the subjects; those with incident difficulty had

a significant lower mean of grip strength (18.82 vs 23.7, p=.004) and gait speed (.66 vs .84, p.002); area under the ROC curve was .315 (p=.002) for grip strength and .321 (p=.001) for gait speed. **Conclusion:** Even in those highly independent subjects gait speed and grip strength could aid in assessing elderly, in an easy, ready-available and reproducible fashion. **Keywords :** Gait speed, grip strength, incident difficulty in IADL

OP27 321-C-3

A SELF REPORT INSTRUMENT TO IDENTIFY FRAILTY IN BRAZILIAN ELDERLY

Yeda DUARTE, Daniela Pires NUNES, Maria Lucia LEBRAO (*Epidemiology, School of Public Health University of Sao Paulo, Brazil*)

Introduction : The evaluation of frailty measures requires some measurable criteria. In our environment, it is known that the use of these measures on a large scale is not easily operationalized, due to logistical difficulties. Thus, we study the possibility of identifying the syndrome of frailty through self reported questions. **Objective:** To validate the frailty self reported components for evaluation of frailty syndrome (Fried's Model). **Method :** This study is part of the SABE Study - Health, Well-being and Ageing, held in Sao Paulo, Brazil. This is a cross sectional study of 433 elderly (age ≥ 75 years) in 2009. We adopted the phenotype of frailty proposed by Fried and colleagues as a gold standard (measuring objectively 5 criteria: unintentional weight loss, fatigue reported, reduced grip strength, reduced walking speed and low physical activity). In this model, elderly with one or two components were considered frail, and those with three or more were considered frail. Subjective evaluation was performed using dichotomous questions for each component. We calculated the reliability, sensitivity, specificity and positive and negative predictive values for psychometric analysis of subjective evaluation. **Results :** The subjective evaluation is reliable and valid. For the pre-frail elderly the sensitivity was 89.7% and specificity of 24.3%, while for the frail, the sensitivity was 63.2% and specificity of 71.6%. When analyzing frailty process (pre-frail+frail) almost 90% of the frail elderly were detected in the subjective assessment, 85.2% were predicted positively and 32.7% were predicted negatively. **Conclusion :** The frailty self reported instrument is a good screening tool to identify frailty syndrome. **Keywords :** Frailty, SABE Study, Self reported instrument

OP27 321-C-4

A NEW FRAILTY INDEX VALID IN KOREAN ELDERLY POPULATION

Heewon JUNG¹, Sunwook KIM¹, Kiwoong KIM², Kwangil KIM³, Cheolho KIM³ (1. *Internal Medicine, Seoul National University Hospital, Korea*; 2. *Neuropsychiatry, Seoul National University Bundang Hospital, Korea*; 3. *Internal Medicine, Seoul National University Bundang Hospital, Korea*)

Introduction : Frailty, as a core geriatric syndrome, is related with mortality, morbidity and functional decline. As a most rapidly aging country in the world, the importance of frailty is more emphasized in Korea. However, validity of any individual criteria for frailty has not been evaluated for Korean elderly population. This study adapted various criteria for frailty and evaluated their usefulness and relationship with clinical outcomes. **Method :** Between 2005 through 2007, 693 participants of The Korean Longitudinal Study on Health and Aging (KLoSHA) study underwent evaluation for frailty. Frailty criteria from Cardiovascular Health Study(CHS), Study of Osteoporotic Fracture(SOF) were adapted and used with suggested frailty index (KLoSHA FI) by authors for this study. Follow up for

mortality, morbidity, quality of life, functional decline was done. Results : Criteria from SOF, CHS and KLoSHA FI correlated with each other, measuring Pearson's coefficient from 0.458 to 0.654. (All $p < 0.01$) During follow up (4.56 ± 0.89 years) period, 94 (13.6%) died. Frail status by CHS criteria (HR = 3.748, 95% CI: 1.773-7.925) and KLoSHA FI (HR = 2.885, 95% CI: 1.443-5.768) were related with mortality. Vulnerability (KLoSHA FI = 0.20-0.35) was related to following functional decline ($p = 0.040$), but prefrailty identified by SOF and CHS criteria was not ($p = 0.431$ and 0.218 , respectively). Increasing KLoSHA FI and frailty status by CHS criteria predicted hospitalization ($p = 0.005$ and <0.001 , respectively) but not frailty by SOF. ($p = 0.376$). Conclusion : KLoSHA FI is useful and valid index to evaluate frailty status in Korean elderly. Keywords : Aging, Frailty, Mortality

OP27 323-C

MANAGEMENT OF FRAILTY

OP27 323-C-1

PREDICTING THE EFFICACY OF PROTEIN-ENERGY SUPPLEMENTATION IN FRAIL OLDER ADULTS LIVING IN COMMUNITY

Chang-O KIM (Department of District Health Care Service, Gangbuk-gu Community Health Center, Korea)

Introduction : The aim of the study is to investigate predicting factors that maximizes the effect of protein-energy supplementation and test the hypothesis whether severity of frailty is associated with the efficacy among frail older adults living in community. Method : A total 123 frail older adults (usual gait speed (UGS) <0.6 m/sec and Mini Nutritional Assessment (MNA) <24) were participated from National Home Healthcare Services in Gangbuk-gu, Seoul, South Korea. Each participant was provided with two 200mL per day of commercial liquid formula (additional 400kcal of energy, 25g of protein) for 12 weeks. Relative change in the Physical Functioning (PF) and Short Physical Performance Battery (SPPB) score between the baseline and follow-up assessments at 12 weeks were measured. Results : Multilevel mixed-effect linear regression analysis showed that a lower level of baseline UGS was associated with a greater improvement in PF and SPPB score after adjustment for age, gender, education, living status, beneficiary of social security insurance, number of chronic disease, compliance, and type of dataset ($P < .001$). A lower level of baseline MNA score was associated with greater change in PF and SPPB score after adjusted for multiple covariates ($P < .045$). Participants with severe frailty (UGS <0.3 m/sec + MNA <17) showed 52.4% and 44.6% better efficacy in PF and SPPB score, respectively, than those with mild frailty (UGS 0.3-0.6 m/sec + MNA 17-24) ($P < .001$). Conclusion : Lower level of UGS and MNA score were independently associated with the greater efficacy of protein-energy supplementation on functional status. Keywords : Frailty, nutritional supplementation, usual gait speed, Mini Nutritional Assessment

OP27 323-C-2

FRAILTY AMONG OLDER INDIANS: DEVELOPMENT OF A NEW CLINICAL TOOL

A.B DEY¹, M. NAVINATH² (1. Department of Geriatric Medicine, All India Institute of Medical Sciences, India; 2. Department of Medicine, All India Institute of Medical Sciences, India)

Introduction : 33% of hospitalized older patient were detected to be frail by using criteria developed by Fried et al in our earlier study. A similar trend was noted among ambulatory older patients in a study

under publication. As there is no gold standard, diagnosis of frailty is often difficult. Current definition of frailty by Fried's criteria does not Indian population. Several practical difficulties in using this tool was encountered. These include determining extent of weight loss in those who may not have any previous record, measurement of grip strength may not be a true reflection of muscle strength due to lack of training, and the calorie calculation from physical activities for Indians is not available. To obviate these difficulties a new clinical tool is proposed. Method : The new clinical tool includes seven points such as gait speed, lifting an object, rise from sitting on a chair, two behavioral questions, weight loss and memory loss appreciated primary care giver. Two cut offs are proposed: 5/7 and 4/7. Results : 85 older patients who were attending the Geriatrics OPD of our hospital were subjected to evaluation for presence of frailty by the new criteria. They were also subjected to evaluation by Fried's criteria for comparison. Among the patients 22 (25%) were frail by 5/7 criteria and while 26 (30%) by 4/7 cut off. By using Fried's criteria 28 (32%) were labeled as frail. Conclusion : The new clinical tool can pick up frailty among Indians as the Fried's criteria. Keywords : Frailty, diagnosis

OP27 323-C-3

IMPACT OF POST-ACUTE TRANSITION CARE FOR FRAIL OLDER PEOPLE: A PROSPECTIVE STUDY

Nancye May PEEL, Ruth E. HUBBARD, Leonard Charles GRAY (Centre for Research in Geriatric Medicine, The University of Queensland, Australia)

Introduction : Older people hospitalised with acute illness are at increased risk of acquired disability and cognitive decline. Post-acute care programs aim to maximise functional recovery, enabling older people to return home rather than remain in hospital for extended lengths of stay or prematurely enter long-term residential aged care (RAC). This study explored whether those with complex care needs could benefit from a community-based transition care program. Method : In a prospective cohort study, 351 patients admitted to transition care programs in Australia were recruited. A comprehensive geriatric assessment was conducted at admission and discharge. Primary outcomes included changes in functional ability during transition care, living status at discharge and six months follow-up, as well as hospital re-admissions over the follow-up period. Based on risk profile for admission to RAC, the cohort was divided into two groups (high or low care needs) for comparison of outcomes. The 'high needs' group (50.1% of the cohort) was characterised as having two or more geriatric syndromes including moderate to severe cognitive impairment, high dependency in personal or instrumental activities of daily living, daily incontinence or mobility impairment. Results : There were no significant differences between groups on outcomes, with over 85% of the cohort living in the community at follow-up. Over 80% of the cohort showed functional improvement or maintenance of independence during the program, with no significant differences between the groups. Conclusion : Community-based transition care has the potential to improve functional ability and maintain independent living in the community, even for a group with high care needs. Keywords : post-acute care; frail aged; community-based rehabilitation

OP27 323-C-4

INNOVATIVE COMMUNITY CARE FOR THE HIGH-RISK FRAIL ELDERLY: THE VIRTUAL WARD PROGRAM

C.P.I. CHAN¹, S.C.J. NG², Pui Chi CHIU³, S.H. LEUNG³, K.C. YEUNG³, P.T. LAM¹, K.S. CHAN², M.F.E. LEUNG¹ (1. Department of Medicine and Geriatrics, United Christian Hospital, Hong Kong; 2. Department of Medicine, Haven of Hope Hospital,

Hong Kong; 3. Community Nursing Service, Kowloon East Cluster, Hong Kong Hospital Authority, Hong Kong)

Introduction : Frailty was associated with adverse outcome in community-dwell elderly discharged from the hospitals. Virtual Ward Program was a transitional intensive medical community care service adopted “Hospital at Home”, “RETREAT” care pathway, digital equipment and information technology, aimed at “Age in Community” in Hong Kong. **Method :** This was retrospective review study. Patients, under Virtual Ward Program (KEC, HAHO) between 1st October, 2011 and 30th June, 2012 were recruited. Descriptive data of patients’ demographics, frailty, disease burden, HARRPE score (elderly readmission risk prediction model developed in Hong Kong), emergency department attendance, unplanned 28-day readmission and number of hospital days were analysed. **Results :** Eighty-six cases were recruited. Mean age was 84 years old (SD +/- 7). Male to female ratio was 1:2. Majority were suffering from multi-organ impairment, advanced organ failure and frailty. The mean CSHA Clinical Frailty Scale and Charlson’s Comorbidity Index were 8 (SD +/- 1) and 6 (SD +/- 3) respectively. More than 1000 physician and nursing interventions, including medication reconciliation, crisis intervention, portable ultrasound and echocardiogram, parenteral medication and fluid administration, advanced care planning and End-of-life care were delivered. The overall 28-day unplanned readmission risk was reduced by 50% and reduced by 60% in very high risk frail elderly. After the implementation of the Virtual Ward program, the total hospital-bed-day of the cohort was reduced by nearly 50%. **Conclusion :** Our study suggested that Virtual Ward Program was effective in prevention of adverse outcomes in post-discharged high risk frail community-dwell elderly. **Keywords :** Frailty, Virtual Ward, Hospital at home, Age in community

OP27 323-C-5

A MULTIFACTORIAL INTERDISCIPLINARY INTERVENTION REDUCES FRAILITY AND IMPROVES FUNCTIONING IN COMMUNITY-DWELLING FRAIL OLDER PEOPLE: RANDOMISED CONTROLLED TRIAL

Nicola FAIRHALL¹, Catherine SHERRINGTON², Susan E. KURRELE³, Stephen R. LORD⁴, Keri LOCKWOOD³, Noeline MONAGHAN¹, Christina AGGAR⁵, Ian D. CAMERON¹ (1. Rehabilitation Studies Unit, The University of Sydney, Australia; 2. The George Institute for Global Health, The University of Sydney, Australia; 3. Division of Rehabilitation and Aged Care, Hornsby Kuring-gai Health Service, Australia; 4. Falls and Balance Research Group, Neuroscience Research Australia, Australia; 5. Faculty of Nursing, The University of Sydney, Australia)

Introduction : Frailty has serious consequences in older people, yet there is no evidence of treatment to reduce frailty. We aimed to evaluate whether a multifactorial intervention could reduce frailty and improve functioning in frail older people. **Method :** A randomised controlled trial with 241 frail community-dwelling older adults in Sydney, Australia. Participants met the Cardiovascular Health Study criteria of frailty and had no severe cognitive impairment. The experimental group received a 12-month multifactorial, interdisciplinary intervention targeting identified characteristics of frailty, functional limitations, and management of health conditions. The control group received usual healthcare. Blinded assessors measured outcomes at three and 12 months after study entry. Primary outcomes were frailty and mobility (using the Short Physical Performance Battery (SPPB)). Secondary outcomes included measures of functioning. **Results :** The mean age of participants was 83.3 years (SD: 5.9 years); 68% were women. 216 participants (90%) were followed-up at 12 months. In the intention-to-treat analysis at 12

months, the between group difference in frailty was 14.7% (95% CI 2.4 to 27.0%, p=0.02), and the intervention group scored significantly better on the SPPB (mean difference between groups 1.44 (95% CI 0.80 to 2.07, p<0.001)). The intervention group walked 0.05 m/s faster over 4 meters (95% CI 0.0004 to 0.1, p=0.048) than the control group, and had significantly better scores on the Goal Attainment Scale (odds ratio 2.1; 95% CI 1.3 to 3.3, p=0.004) at 12 months. Exercise-associated musculoskeletal symptoms constituted adverse events in two participants. **Conclusion :** A multifactorial intervention reduced frailty and increased functioning in frail older adults. **Keywords :** frailty; randomised trial

OP27 323-C-6

ORAL HEALTH AND QUALITY OF LIFE AS PREDICTORS OF FRAILITY IN MEXICAN ELDERS

Roberto Carlos CASTREJON-PEREZ¹, S. Aida BORGES-YANEZ², Luis Miguel GUTIERREZ-ROBLEDO³ (1. Geriatrics Epidemiology, Instituto Nacional de Geriatria, Mexico, Mexico; 2. Dental Public Health, National Autonomous University of Mexico, Mexico; 3. General Director, National Institute of Geriatrics, Mexico)

Introduction : Association between frailty and oral health has not been explored. **Objective:** To identify if oral health and oral health related quality of life (OHRQoL) are predictors of frailty in home-dwelling mexican elders controlling by sex, age, schooling, marital and socioeconomic status; myocardial infarction, stroke, hypertension, diabetes, osteoporosis, arthritis, number of medications, urinary incontinence, smoking, falling, hospitalization, fractures and self-rate of general health. **Method :** Household survey in a representative sample of elders ≥70 years living in one district of Mexico City. Sample size was 1294, 1124 were interviewed, 838 were clinically evaluated, 594 non-frail were followed for 3 years, 228 completed the follow up. **Dependent variable:** Frailty (having ≥3 of five components [weakness, slowness, fatigue, low physical activity and weight loss]). **Independent variables:** utilization of dental services, self-rate of oral health, habits with removable dental prostheses (RDP) (hygiene, daily utilization and utilization during night); xerostomia, OHRQoL, number of teeth, wearing and functionality of RDP, and severe periodontitis (≥2 teeth with ≥5mm attachment loss). Univariate analysis and a logistic regression model (LRM) were carried out. **Results :** Incidence of frailty=14.7%, those who developed frailty were older (80.4±6), and have less years of schooling (5.4±4). The LRM showed that each additional year of age, each medication used and having osteoporosis increases 15% (OR=1.15; 95%CI1.1-1.3), 38% (OR=1.38; 95%CI1.1-1.8) and 3 times (OR=3.02; 95%CI1.0-9.1) the risk for developing frailty respectively, while each additional tooth reduces 7% (OR=0.93; 95%CI0.87-0.99) the risk for developing. **Conclusion :** There is a reduced risk for developing frailty among those persons who have more teeth. **Keywords :** Frailty incidence, oral health, loose teeth, cohort

OP27 324-C

MECHANISM OF FALLS I

OP27 324-C-1

BLOOD PRESSURE RESPONSES TO ORTHOSTASIS AND THEIR ASSOCIATION WITH FALLS IN OLDER ADULTS IN LONG-TERM CARE

Brett H. SHAW¹, Thomas M. LOUGHIN², Stephen N. ROBINOVITCH¹, Victoria E. CLAYDON¹ (1. Biomedical Physiology and Kinesiology, Simon Fraser University, Canada; 2. Statistics and Actuarial Sciences, Simon Fraser University, Canada)

Introduction : Cardiovascular impairments are a risk factor for falls in older adults. However, we need an improved understanding of the

precise relationships between abnormal blood pressure control and fall susceptibility. The primary aim of this study was to compare the hemodynamic and cerebrovascular responses to orthostatic stress with falling risk in a cohort (n=47) of long-term care residents. Method : We used portable equipment to assess residents' beat-to-beat blood pressure responses to orthostatic stress while simultaneously monitoring cerebral blood flow velocity. These data were compared to their retrospective and prospective falling risk as recorded through incident report forms. Results : 57% of subjects were previous fallers (1 or more previous falls). Fallers tended to have decreased mobility, poorer function during activities of daily living, and a higher prevalence of coronary artery disease. Data (mean ± SD) indicates that fallers had greater delayed systolic blood pressure drops in response to orthostatic stress (-20.6 ± 19.8 mmHg) compared to non-fallers (-9.4 ± 14.3 mmHg). Additionally, previous fallers had a greater decline in maximum cerebral blood flow velocity (-10.4 ± 15.0 cm/sec), compared to non-fallers (2.02 ± 10.8 cm/sec). Conclusion : These data illustrate that differences in blood pressure and cerebral hemodynamics exist between previous fallers and non-fallers. This work has important implications for developing feasible, noninvasive orthostatic stress testing procedures for identifying older adults at risk of falls related to impaired blood pressure control. This work was supported by team grants from the Canadian Institutes of Health Research (grant numbers AMG- 100487 and TIR-103945). Keywords: Falls, Orthostatic hypotension, Long-term care

OP27 324-C-2

REGIONAL WHITE MATTER LESIONS PREDICT BALANCE/GAIT DISTURBANCE AND FALLS IN PATIENTS WITH AMCI AND ALZHEIMER DISEASE

Takashi SAKURAI (Center for Comprehensive Care and Research on Memo, National Center for Geriatrics and Gerontology, Japan)

Introduction : The purpose of this study is to elucidate association between white matter lesions (WMLs), and balance/gait functions and falls in the elderly with amnesic mild cognitive impairment (aMCI) or Alzheimer disease (AD). Method : The subjects were classified into a group experienced falls (63 subjects), and a group not experienced falls (100 subjects) in the previous 1 year. We tested center of gravity sway, gait function (Timed Up-and-Go test: TUG, tandem gait, one-leg stand) and investigated their relationship to WMLs. Periventricular hyperintensity (PVH) in frontal caps, bands and occipital caps, and deep white matter hyperintensity (DWMH) in frontal, parietal, temporal, and occipital lobes, basal ganglia, thalamus and brain stem were semi-quantitatively measured on MRI. Results : The fallers group was older and many patients were on polypharmacy, but their cognitive status was similar to that of non-fallers. Fallers had severer center of gravity sway and lower gait function, as well as higher values of PVH and DWMH. DWMH in frontal and parietal lobes and PVH total score associated with center of gravity sway. DWMH in frontal and temporal lobes, and PVH in frontal caps associated with impaired gait function. Polypharmacy, PVH in frontal caps and DWMH in occipital lobe were independent risk factors of falls. Conclusion : In patients with aMCI and AD, regional distribution of WMLs associated with balance/gait disturbance. Lesions of PVH in frontal cap and DWMH in occipital lobe, but not cognitive impairment, strongly predicted fall. Preventive strategy of falls in aMCI and AD should be conducted based on the severity of WMLs. Keywords : white matter lesion falls

OP27 324-C-3

GAIT CONTROL: A SPECIFIC SUBDOMAIN OF EXECUTIVE FUNCTION?

Olivier BEAUCHET¹, Manuel MONTERO-ODASSO², Bruno FANTINO¹, Francois R. HERRMANN³, Gilles ALLALI⁴,

Cedric ANNWEILER¹ (1. Neuroscience and Geriatrics, Angers University Hospital, France; 2. Geriatrics, Western University, Canada; 3. Geriatrics, Geneva University Hospitals, Switzerland; 4. Neurology, Geneva University Hospitals, Switzerland)

Introduction : Few studies looked at the association between gait variability and executive subdomains (ESD). The aim of this study was to examine the association between information updating and monitoring which is an ESD and stride time variability among healthy older adults. Method : Seventy-eight healthy older adults (mean age 69.9±0.9 years) were divided into 3 groups according to stride time variability tertiles while steady state walking. Scores on cognitive tests evaluating information updating (Digit Span), shifting (Trail Making Test) and cognitive inhibition (Stroop test) were used as measures of ESD. Results : The full adjusted and the stepwise backward logistic regression models showed that the highest tertile (i.e., the worst performance) of stride time variability was only associated with lower Digit Span performance (Odds ratio=0.78 with P=0.020 and Odds ratio=0.81 with P=0.019). Conclusion : Walking should be considered as a complex motor task specifically associated with the ability to update and monitor information which is an ESD. Keywords : gait; gait control; executive functions; information updating; older adults

OP27 324-C-4

MOTOR CORTEX AND GAIT IN MILD COGNITIVE IMPAIRMENT: A MAGNETIC RESONANCE SPECTROSCOPY STUDY

Cedric ANNWEILER¹, Olivier BEAUCHET², Robert BARTHA³, Jennie L. WELLS⁴, Michael J. BORRIE⁴, Vladimir HACHINSKI⁵, Manuel MONTERO-ODASSO¹ (1. Gait & Brain Lab, Western University, Canada; 2. Neuroscience and Geriatrics, Angers University Hospital, France; 3. Roberts Research Institute, Western University, Canada; 4. Geriatrics, Western University, Canada; 5. Neurology, Western University, Canada)

Introduction : Gait disorders are common in the course of dementia, even at the stage of MCI, due to probable changes in higher-levels of motor control. Our purpose was to determine whether proton magnetic resonance spectroscopy measures in the primary motor cortex (PMC) were associated with gait performance in MCI while single and dual-tasking. Method : Twenty community-dwellers with MCI, aged 76[11]years (median[interquartile range]) (30%female) were included. Gait velocity (GV) and stride time variability (STV) were measured while single (i.e., walking alone) and dual-tasking (i.e., walking while counting backwards by seven) with a GAITRite system. Ratios of N-acetyl-aspartate to creatine (NAA/Cr) and choline to creatine (Cho/Cr) were calculated in PMC. Participants were categorized according to median NAA/Cr and Cho/Cr ratios. Age, gender, cognition and subcortical vascular burden were used as potential confounders. Results : Participants with low NAA/Cr (n=10) had higher STV while dual-tasking than those with high NAA/Cr (P=0.007). Those with high Cho/Cr had slower GV while single (P=0.015) and dual-tasking (P=0.002). Low NAA/Cr was associated with increased STV while single (adjustedβ=0.63, P=0.046) and dual-tasking (adjustedβ=4.87, P=0.012). High Cho/Cr was associated with slower GV while single (adjustedβ=-22.01, P=0.025) and dual-tasking (adjustedβ=-41.86, P=0.011). Finally, the probability of exhibiting abnormal metabolite ratios in PMC was 63%[95%CI:0.27;0.98] higher among participants with major gait disturbances in dual-task. Conclusion : PMC metabolite levels were associated with gait performance while single and dual-tasking. STV was sensitive to PMC neuronal integrity (NAA/Cr), while GV was more affected by inflammatory changes (Cho/Cr). Keywords : gait; motor cortex; proton magnetic resonance spectroscopy; MCI; older adults

CTAD 2013

Clinical Trials on Alzheimer's Disease

Montpellier '08 | Las Vegas '09 | Toulouse '10 | San Diego '11 | Monte Carlo '12

Clinical Trials on Alzheimer's Disease

Clinical Trials



CTAD
San Diego
2013

November 14-16, 2013
San Diego

www.ctad-alzheimer.com



European Alzheimer's Disease Consortium
Montpellier and Toulouse EADC Centers



UC San Diego
SCHOOL OF MEDICINE

SPECIAL SESSIONS

Monday June 24th

SP24 202

KOREA-CHINA FORUM ON GLOBAL AGEING AND EAST ASIA: SOCIAL SECURITY SYSTEM

SP24 202-1

NEW ACHIEVEMENTS, CHALLENGES AND PROSPECTS OF OLD-AGE INSURANCE SYSTEM IN CHINA

Juanjuan SUN (*Institute of Gerontology, Renmin University Of China, China*)

This paper summarizes and reviews the achievements of China's old-age insurance system in recent years, and introduces main ideas and characteristics of the newly implemented policies related to different types of population group. Main challenges for the insurance in the background of China's population and society transition are also discussed in the paper. Based on some survey data, the paper analyses the influences of the changes of population ageing and old-age support ratio, family structure and living arrangement on the future development of old-age insurance in China. Agriculture-registered population and migrated population are the focus groups to be discussed. The recommendations includes ensuring the basic level and sustainability, narrowing the great gaps between the same generation groups, developing medical and care insurances, as well as maintaining family support for older people.

SP24 202-2

HOW TO IMPROVE LONG-TERM CARE SERVICE THROUGH CHINA'S HEALTH REFORM

Yan LIN (*PKU China Center for Health Economic Research, China*)

Both medical care and long-term care are of great importance for elderly people, and they are closely related in many aspects. However, medical care is administered by the National Health and Family Planning Commission, while long-term care services are under the administration of the Ministry of Civil Affairs in China. Their coordination and integration are crucial for the long-term care service provision. This presentation will review the five major tasks in china's health reform and discuss their potential impacts on the long-term care system in China.

SP24 202-3

ELDERLY WELFARE SERVICES IN KOREA

Hyeji CHOI (*Department of Social Welfare, Seoul Women's University, Korea*)

Elderly welfare services in Korea can be broadly divided into leisure, employment promotion, nursing and other services. First of all, elderly leisure service is designed for healthy senior citizens without any physical or mental disabilities with the goal of helping them achieve self-realization and enjoy fruitful later lives. Elderly leisure service is provided through elderly leisure establishments such as elderly welfare centers, community centers for senior citizens, elderly classes and

elderly rest centers. As of the end of December 2012, Korea has 259 senior welfare centers, 60,737 community centers for senior citizens, 1,464 elderly classes, and nine elderly rest centers. Offered for free or at reasonable prices, elderly leisure service is comprised of a wide array of programs including: specialized counseling on psychological, medical and legal issues; social education programs such as liberal arts courses and hobby classes; and recreation programs. Aimed at promoting the social participation of senior citizens and enhancing their economic stability, elderly employment promotion service consists of job placement service and job creation projects. The former includes job placement and counseling for senior job seekers, management of elderly workers, identification of potential demands for senior resources, vocational training for the elderly, and operation of group workplaces. The service is offered by 249 elderly employment promotion centers run by the Korea Senior Citizens Association (KSCA). Job creation projects for senior citizens are intended to: (a) facilitate the social participation of the elderly; (b) improve social awareness of the utilization of elderly workers and encourage the participation of the private sector in this regard; and (c) provide better vocational training and education for senior resources. Supervised by the Korea Labor Force Development Institute for the Aged (KLFDA), these projects are undertaken by local governments, elderly welfare centers, senior clubs and KSCA employment promotion centers depending on the types of project (e.g. public good, education, welfare, market-oriented and resource placement). Wages for the participants vary by project type, but the average wage stands at 200,000 Korean won for 20 hours worked per month. The job creation projects added 220,346 elderly workers to the payroll in 2011. As for nursing service for the elderly, its prime examples include long-term care service, comprehensive care service and basic care service. Operated on the basis of social insurance, long-term care service supports the daily activities of senior citizens with an aim of improving their quality of life and alleviating the care-giving burdens for their family members. The service is available for everyone aged 65 or above with severe functional limitations or those under 64 with senile disorders who have not been unable to perform their daily activities independently for six months or longer. Long-term care service for the elderly is divided into home-based care service and nursing home-based care service. Caregivers and nurses employed by long-term care institutions are responsible for providing the services. Home-based care service is comprised of in-home care (with housekeeping support, physical activity support and emotional support included), in-home bathing, daytime/nighttime protection and short-term protection. As of the end of January 2013, a total of 645,470 senior citizens have been found eligible for long-term care service. Comprehensive care service is offered in the form of vouchers primarily to low-income senior citizens with moderate functional limitations. It features housekeeping support, physical activity support, emotional support, daytime protection and other in-home care services provided by caregivers. Basic care service is designed for single-person elderly households to check and ensure their safety. Other services include: (a) in-home welfare service where local governments provide low-income senior citizens with housekeeping support and meal delivery services; (b) elderly protection service aimed to prevent

abuses of the elderly and protect abused senior citizens; and (c) dementia patient/family support service for early diagnosis and management of dementia and support for the family members of aged patients with dementia.

**SP24 202-4
INCOME MAINTENANCE PROGRAMS FOR THE ELDERLY
IN KOREA**

Baeguui HONG (*Department of Social Welfare, Seoul National University, Korea*)

I. Purpose: Like all other advanced countries, Korea is also confronting at the aged society due to the rapid growth of the elderly people. Furthermore, the increasing rate of the elderly in Korea is faster than any other countries in the world. Under this circumstance, the income maintenance programs, such as National Pension and Basic and Basic Old-Age Pension, have very crucial roles for sustaining adequate living standard of the elderly. However, it is also true that a large proportion of the elderly are living without fulfilling the minimum living standard, because of the immature of National Pension system as well as a low benefit level of the Basic Old-Age Pension. Thus, this paper aims to introduce main features of the current National Pension system and Basic Old-Age Pension, to discuss several problems of these programs, and finally to provide several policy alternatives. This would be helpful to remedy some problems inherent in the current policies and to provide adequate income for the elderly. II. Contents: This study will consist of the following sessions. First, this study will explain key features of the programs, such as history, coverage, finance and types of benefits. Next, this study will examine primary policy issues surrounding the current reform debates about the programs and compare their advantages and disadvantages. In final, this study will introduce the ways of reform on Basic Old-Age Pension proposed by the presidential committee and discuss its limitations.

**SP24 203
KOREA-CHINA FORUM ON GLOBAL AGEING AND EAST
ASIA: TRADITIONAL MEDICINE AND HEALTH FOR THE
ELDERLY**

**SP24 203-1
THE STUDY AND FOUND OF “CHINESE TRADITIONAL
JIAN-SHEN EXERCISES”**

Xiaohong GU (*Beijing Taiyangshukang Chinese Medicine Factory, China*)

“Chinese Traditional Jian-shen Exercises” oriented from Chinese ancient healthy exercises. We have found that exercises has obviously effect on body and mental. Objective: To observe the curative effect of “Chinese Traditional Jian-shen Exercises”. Method: ①185 volunteers had been chosen in accord with chosen criteria, and then divided randomly into the test group (n=88), control group (n=97). The test group practice “Chinese Traditional Jian-shen Exercises”, and the control group practiced with “the 8th guang-bo exercise” three times every weeks. The treatment and observation were carried out for 4 weeks and the curative effect was compared and summed up by ETS. ② 60 Diebites of the olders had been chosen in accord with chosen criteria as the test group, and to practice “Chinese Traditional Jian-shen Exercises” five times every weeks. The treatment and observation were carried out for 4 weeks and the curative effect was compared and summed up by bio-chemical check method . Result: ①Both the test group and control group can improve the weight, length, energy and nerve function, while control group can do good to weight and weight

exponent. The combined curative effect of test group was much better than the control group. ② Not only the weight, length of chest, length of wrist decreased, but also the high blood pressure decreased than one month before obviously, while the low blood pressure increased obviously. And the number of blood sugar, ganyousanzhi decreased obviously. Conclusion: ① “Chinese Traditional Jian-shen Exercises” has obvious curative effect on the youth. ② “Chinese Traditional Jian-shen Exercises” has obvious curative effect and match the use of the diabetes mass, it is worth to study further. Keywords : Chinese Traditional Jian-shen Exercises; meridian detection of ETS; Diabetes; effect of good health

**SP24 203-2
RESEARCH ON THE ORIGIN AND DEVELOPMENT
OF SHILIAOZUANYAO AND IN AGED CARE
REHABILITATION IN THE APPLIED RESEARCH**

Yin LIN (*Beijing University of Chinese Medicine, China*)

This paper is composed of 2 chapters and their contents are summarized as below. Chapter 1. Progress of Korean Dietary Treatment. The first chapter of the paper is about the origin of diet therapy in Korea and its changes which have been correlated with Chinese medicine and its culture. As a brief introduction of the ShiLiaoZuanYao , this part is also telling you about its author, versions, and primary contents based on historical research. Chapter 2. Discussion of the Statistic Outcome. The Kinds of Illnesses and Their Percentage. When examining overall dietetic mixing technique, there are 109 kinds of illnesses mentioned in the book. The 7 Primary Ailments. Among other symptoms of illnesses from the book, there are 7 frequently addressed ailments chosen from the aspect of food therapy ? a stroke, a disease diagnosed by thirst, a serious cough, an ache resulting from numbness, a disease relating to stomach, blurry vision and weak hearing, and a drinking related disease. This part is to discuss these illnesses and how to cure them with food based on its characteristics and rules of application. Keywords : ShiLiaoZuanYao, the aged, food therapy

**SP24 203-3
PREVENTIVE GERIATRICS: AN OVERVIEW FROM
TRADITIONAL MEDICINE**

Mi-Yeon SONG (*Department of Korean Rehabilitation Medicine, Kyung Hee University, Korea*)

1. Geriatrics in Traditional Medicine (老人養生) Preventive geriatrics is the art and science of preventing disease in the geriatric population and promoting their health and efficiency. The aim of geriatrics is maintenance of health in old age by high levels of engagement and avoidance of disease, early detection and appropriate treatment of disease, and maintenance of maximum independence consistent with irreversible disease and disability. Hippocrates noted conditions common in later life and Aristotle offered theory of ageing based on loss of heat in conventional medicine. In traditional medicine, Huang Ti Nei Jing (The Yellow Emperor’s Classic of Internal Medicine), the landmark medical text which appeared about 400 B.C., devoted its first two chapters to a detailed description of those aspects of personal hygiene essential to longevity. Since then scores of influential monographs on aging and longevity or geriatrics have been published. 2. Philosophical Considerations The philosophical consideration of traditional geriatrics contains a strong preventive element closely tied to the concept of a balanced man-nature relationship (天人相應), body-mind relationship (調和心身), and Yin and Yang relationship (協調陰陽). It has been emphasized that the laws of Nature must be

observed in the care of the body and in pursuit of longevity. A sound mind in a sound body is essential to longevity. Moderation in physical and emotional activities is encouraged. In the concept of traditional medicine, the balance of Yin and Yang is also emphasized. 3. Physiology of Geriatric People (老化) Geriatric people have several physical problems such as senility, decline in sexual prowess, diminution in endocrine activity, loss of elasticity of blood vessels, and impairment of special senses. They are also prone for infections, injuries, and psychological problems like senile dementia. 4. Approaches to Longevity (長壽) There have been a number of approaches to longevity or rejuvenation in the armamentarium of traditional medicine such as physical activity (運動養生, e.g. Kung Fu, Tai Chi Chuan 太極拳), breathing exercise with relaxation and meditation (呼吸養生, e.g. Chi Kung 氣功), acupuncture and Moxibustion (鍼灸), and herbal Medicine (韓藥, e.g. Ginseng 人蔘, Ho-shou-wu 何首烏, Kou-chi-tsi 枸杞子).

SP24 203-4

INTEGRATIVE MEDICINE AS THE NEW PARADIGM OF MEDICINE IN AGED SOCIETY

Sung Jae LEE (*Center for Integrative Medicine, Korea University Medical Center, Korea*)

Due to our aged society, expeditious growth of diseases resulting from daily habits, frequent occurrences of sicknesses, and the variation in the awareness of health by patients, the worldwide need for the complementary and alternative medicine (CAM) to run parallel with our current medical science and treatment is rapidly becoming conspicuous. According to a report from the Korean Sanitation Researchers in 2002, as much as 20 billion dollars were spent on complementary and alternative medicine, suggesting that the demand is much higher in Korea, compared to other countries. CAM treatment is being put into clinical application worldwide. Also, clinical research as well as the education of medical schools (35 of 41 medical schools) and graduate schools on CAM are being performed more and more. In U.S.A. The centers (departments) for integrative medicine, which use CAM therapies in combination with conventional medicine, in U.S.A. as well as in Korea clinical research as well as the education of medical schools (35 of 41 medical schools) and graduate schools on CAM are being performed more and more. The most available CAM in the treatment of diseases in the U.S.A. and Europe are phytomedicine, homeopathy, acupuncture, nutrition therapy, mind body therapies, and so on. One of the most widely used classification structures, developed by National Center for Complementary and Alternative medicine (NCCAM) (2000), divides CAM modalities into five categories: 1. Alternative medical systems 2. Mind-body interventions. 3. Biologically based treatments 4. Manipulative and body-based methods. 5. Energy medicine. As the name implies, alternative medical systems is a category that extends beyond a single modality, and refers to an entire system of theory and practice that developed separately from conventional medicine. Ex-amples of these systems include traditional Chinese medicine, ayurvedic medicine, homeopathy, and naturopathy. The second category in the NCCAM classification scheme is mind-body interventions, which include practices that are based on the human mind, but that have an effect on the human body and physical health, such as meditation, prayer, and mental healing. The third category, biologically based therapies, includes specialized diets, herbal products, and other natural products such as minerals, hormones, and biologicals. Specialized diets include those proposed by Drs. Atkins and Ornish, as well as the broader field of functional foods that may reduce the risk of disease or promote health. A few of the well-known herbals for which there is evidence of

effectiveness include St. John's wort for the treatment of mild to moderate depression and Ginkgo biloba for the treatment of mild cognitive impairment. An example of a nonherbal natural product is fish oil for the treatment of cardiovascular conditions. The fourth category, manipulative and body-based methods, includes therapies that involve movement or manipulation of the body. Chiropractic is the best known in this category, and chiropractors are licensed to practice in every U.S. state. A defining feature of chiropractic treatment is spinal manipulation, also known as spinal adjustment, correct spinal joint abnormalities (Meeker and Haldeman, 2002). Massage therapy is another example of a body-based therapy. The final category described by NCCAM is energy therapies which include the manipulation and application of energy fields to the body. In addition to electromagnetic fields outside of the body, it is hypothesized that energy fields exist within the body. The existence of these biofields has not been experimentally proven; however, a number of therapies include them, such as qi gong, Reiki, and therapeutic touch. Even as CAM and conventional medicine each maintain their identities, traditions, and practitioners, integration of CAM and conventional medicine is occurring in many settings. Hospitals are offering CAM therapies, a growing number of physicians are using them in their private practices. The center, in which CAM therapies are used in combination with conventional medicine, is called in U.S.A. and in Europe as center for integrative medicine. The well known hospitals (Harvard, Memorial Sloan-Kettering Cancer Center, Duke, Maryland etc.) in U.S.A. in Europe are offering integrative medicine. With the time the centers for integrative medicine in Korea are being established more and more. It is critical for us as physicians to be aware of the fact that the role of CAM is to support conventional medicine, not to alternate it. The important roll of university hospital is to integrate care delivery by proven CAM therapies into conventional medicine (integrative medicine), and to develop the standard curriculum for integrative medicine at the undergraduate and graduate levels.

SP24 301

ROUNDTABLE ON POPULATION AGEING AND THE ECONOMIC GROWTH

SP24 301-1

POPULATION AGING AND ECONOMIC GROWTH

John M. KIM (*Korea Institute of Public Finance, Korea*)

The notion that population and economic growth are closely, perhaps even causally interlinked with each other is not a new one. The idea is readily apparent to the casual observer, and has also been explored in more formal contexts — from Malthus' justly famous Essay to the controversial McKeown thesis to more recent work by some economic historians, where nutrition, which can be taken as a proxy for economic status, has often featured prominently. Without delving into too much detail, I remind the audience that an inquiry into the linkage between population and economic growth can bring together such diverse strands of discourse as the agrarian, commercial, and industrial revolutions; interwoven with the epidemiological and demographic transitions; interspersed with discussions on how advances in medicine and technology have influenced human and economic development. Lest one is still unimpressed with the breadth of intellectual disciplines involved, one need only recall that we have at this point only set the stage to begin talking about social policy, pensions, healthcare financing, youth unemployment, and the like. Yet the branch of economics that deals with growth — growth theory and modeling — unfortunately offers relatively little to inform our understanding of the interaction between economic growth and population dynamics.

Growth economists generally have been content to leave population as “exogenous,” choosing to focus on technology or, as a later variant, human capital (knowledge) accumulation. As an economist would put it, this represents a nice dichotomy between quantity (population) and quality (average productivity of a person), and it is the latter element that accounts for the secular rise in living standards (per capita income). However, we are already witnessing a transition into the next stage of the demographic transition, which would seem to ask growth economists to rethink their focus and approach. Together with drastic changes in the population age structure, population growth has slowed down and has even begun to reverse in some countries. As the elderly claim significantly larger proportions out of populations, should we not allow for an additional index of population quality other than knowledge? Will it be sufficient to simply add population age structure to a growth model, or will economies behave differently as aging progresses to the stage that populations begin to decline? After all, the eminent mathematician Euler already proved almost three centuries ago that a stable population (constant age structure) is not necessarily a stationary population and can still grow or decline. Finally, I would like to remind everyone that fertility rates can change quicker and by greater magnitudes than mortality rates, with a correspondingly larger potential to impact the population age structure. Although we are gathered here at a congress of gerontology and geriatrics, ironically it may prove more productive for us to look at the younger end of the life cycle.

SP24 301-2

POPULATION AGEING AND THE ECONOMIC GROWTH: THE CASE OF EUROPE

Axel BOERSCH-SUPAN (*Munich Center for the Economics of Ageing, Max Planck Institute for Social Law and Social Policy, Germany*)

The extent of the demographic changes in Europe is dramatic and will deeply affect future labor, financial and goods markets. The expected strain on public budgets and especially social security has already received prominent attention, but aging poses many other economic challenges that threaten growth and living standards if they remain unaddressed. This paper therefore sheds light on the potential benefits of pension and labor market reform for growth and living standards, taking into account behavioral reactions to specific reforms. Which behavioral reactions will strengthen, which will weaken reform policies? Can Old Europe maintain its standard of living even if behavioral reactions offset some of the current reform efforts?

SP24 301-3

IMPACT OF POPULATION AGING ON ASIA'S FUTURE GROWTH*

Donghyun PARK (*Economics and Research Department, Asian Development Bank, Philippines*) and Kwanho SHIN (*Korea University, Korea*)

The demographic dividend which contributed substantially to developing Asia's economic growth in the past is coming to an end. Population aging affects growth through a number of channels: savings, capital accumulation, labor force participation, and total factor productivity. In this paper, we empirically examine the impact of aging on labor force participation, savings, capital accumulation, and total factor productivity in 12 countries in developing Asia. Based on those estimates, we make forward-looking projections about the effect of demographic change on the GDP growth of the 12 countries in 2011-2020 and 2021-2030. Our results indicate that aging will have a sizable adverse impact on countries where population aging is more

advanced. * We thank Ji-soo Kim for her excellent research assistance. We also thank for the ADB for financial support.

SP24 301-4

POPULATION AGEING AND THE ECONOMIC GROWTH

Arie HOEKMAN (*Representative to China and as Country Director for the Democratic People's Republic of Korea for the United Nations Population Fund, Netherlands*)

Aging is a global issue and it is important to put aging fair and square on the global development agenda. While two UN conferences have been held on aging thus far (Vienna 1982, Madrid 2002), aging has yet to be seen as central to most countries' development aspirations. It is now that we need and can push aging on to that global development agenda through the ongoing 20-year review processes of the Programme of Action of the International Conference on Population and Development (Cairo 1994) and the Plan of Action of the International Women's Conference (Beijing, 1995), as well as the discussions on the construction of the interlinked global sustainable development goals that would need to follow up on the Millennium Development Goals in 2015. Aging can be a challenge and a possible burden, as well as an opportunity and a blessing to society. Whether burden or blessing, whether challenge or opportunity will largely depend on the action to be taken by each society and the international society at large. Aging will have a deeply transformative effect on all societies and will impact on the labor market, on capital markets, public sector spending and governance systems. Maintaining sound information systems, taking stock, sharing knowledge and focusing on evidence based solutions for consensus building and policy making will be key for society to successfully meet the challenge and grasping the hidden opportunities that ageing will bring to society.

SP24 302

KOREA-CHINA FORUM ON GLOBAL AGEING AND EAST ASIA: POPULATION AGEING AND LONGEVITY

SP24 302-1

EFFECTS OF ENVIRONMENTAL FACTORS ON THE LONGEVITY PEOPLE IN CHINA

Wuyi WANG¹, Yonghua LI², Hairong LI², Jiangping YU², Bixiong YE² (*1. Longevity Study Committee, Chinese Gerontological Society, China; 2. Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, China*)

Healthy longevity is associated with environmental conditions. In China, different age group of elderly could be influenced by different factors. The distribution of elderly aged 65 and above is more influenced by the economical factor. However, by using longevity index (LI%) and centenarity index (CI%) to evaluate the longevity level in different location, it has been found that people aged 90 and above could be more influenced by physical environmental factors. The more centenarians live in south China related to certain climatic preferences including near to the coasts, suitable mean year temperature, plenty of rainfall, higher relative humidity and low mean wind speed, which might contribute to relatively high longevity level. Nevertheless, enrichment of essential nutrients and less pollution in the environment would be benefit for health and longevity. Keywords: Centenarian; longevity index (LI%); Centenarity index (CI%); climate; nutrient

SP24 302-2

REGIONAL LONGEVITY STUDY OF CHINA

Ye YUAN (*Support and Nursing Committee for the Elderly, Chinese*

The proportion of older person aged 60 and over to total population reached 10% in 1999, Chinese population became aged type. Chinese aged population was 177.6 million and about 13.31% of total population; there were 20.99 million old persona aged 80 years and over, it was 11.81% of old population in 2010. Now the oldest old population is increasing rapidly with 7% annual increasing rate, it is faster than the increasing rate of general old population which is 3.6%; it shows that the old population is also aging in China. The Chinese centenarians were 6681 persons, 17877 persons and 35934 persons in 1990, 2000 and 2010; the annual increasing rate was more than 10%, and it's becoming the longevity society. Although the number of centenarians is increasing rapidly, but it still rare to see, we often treat the centenarian as the symbol of longevity. As the death rate is between 20% and 40% to the centenarians or the top nonagenarians, it is very hard to remain in the cohort team of centenarians, so the very important issue is the accurate of the age of the centenarians; the age validation is the base of the longevity study. The longevity level as the ratio of the centenarians to the total population, it shows the significant high in the regions in China according to the Census Data. The longevity regions were more concentrate in the southern of Huai River; the highest regions were found in Donglan, Bama, Fengsha and Dahua counties where is Hongshui River Valley in Guangxi province, and Chengmai, Lingao counties where is Nandu River in Hainan Province. The number of longevity regions(counties) were more in Guangdong and Guangxi province, and the regions of Huang-Huai River Valley; there were more than 7 counties whose longevity level was over 100 (as 100 centenarians to 100000 total population) in Guangxi province; there were more than 10 counties concentrating in the region of Nantong-Taizhou city in Jiangsu province. Keywords : Longevity Symbol, Age Validation, Longevity Level, Regional Longevity

SP24 302-3
KOREA'S POPULATION AGEING AND LENGTHENING LONGEVITY

Jeah JUNG (Department of General Education, Dongguk University, Korea)

Korea's average life expectancy as of 2010 is 77 years for men, and 84 years for women which places Korea in the 17th place among 194 WHO member countries. Life expectancy for both sexes has been on continuous growth from 61.9 in 1970s to 72 in 1992 which has grown 20 years on average in the last 40 years. Average year of life expectancy as of 2010 is a year older than that of OECD member countries' of 79.8 years. This is due to Korea's success in decreasing infant mortality rate that has become noticeably lower than developing countries and other Asian countries and simultaneously increasing life expectancy at a rapid pace. Also we can see that ratios of population who is 65 and over, and over 80 years of age are 2.9 % and 0.2% respectively in 1960s whereas they reached 11 % and 2% in 2010, which is estimated to soar up to 38.2% and 14.5% in 2050. Korea seems to have some time spare to catch up many European countries and Japan's ratio of elderly yet its rapidity of population aging seems unprecedentedly fast. It is at a pace of reaching aging society in the beginning of 2000 and predicted to arrive at a aged society in 2016 to have 65 and over elderly to surpass under 15 population. This is the typicality of Korea's population aging. It is undergoing rapid and compressed intensity of time of less than 20 years which other developed countries went in a decade. That may not be of sufficient time for Korea to comprehensively prepare for population transition especially in terms of increasing old age dependency ratio that have

become a task to overcome to achieve economic development.

SP24 302-4
LIFE AND HEALTH LIFE EXPECTANCIES FOR THE QUALITY OF LIFE IN KOREA

Yousung PARK (Department of Statistics, Korea University, Korea)

Lee and Carter's methods (LC) are assessed their performances for forecasting mortality in Korea. It appears that the model of Li and Lee (2005) is not appropriate for forecasting mortality in Korea, which is shown by examining validity of their model assumptions using the difference between sex-specific mortality, cointegration test, mortality forecasts of oldest old, and life expectancy at age 0. We propose a new LC model called VECM-LC to accommodate longitudinal and cross-sectional correlations and cointegration relationship in the time effects of mortality rates. Over the last 30 years there has been the fastest increase in the life expectancy in Korea. To answer the question for the quality of life - are the additional years of life spent in good health or in worth health? are the increased years of life at older ages because we are keeping sick and disabled people alive longer?, we present the health life expectancies using the National Health Insurance Data Base provided in Korea, which is a big data containing the medical information of all korean people for 9 years from 2002 to 2010.

SP24 303
KOREA-CHINA FORUM ON GLOBAL AGEING AND EAST ASIA: CARDIOVASCULAR SYSTEM AND CEREBROVASCULAR DISEASE

SP24 303-1
THE PRESENT SITUATION AND THE DEVELOPMENT OF CHINESE NEUROSURGERY IN ISCHEMIC STROKE PREVENTION

Feng LING (Xuanwu Hospital, Capital Medical University, China)

China's stroke burden is heavy, according to statistics, in 2020, the Chinese stroke new cases will reach 3.7 million/year, under this background, the ministry of health of the People's Republic of China to create a 'stroke screening and prevention and control project', the purpose is the early detection of high-risk groups , and active prevention of stroke. So as to reduce the incidence and the harm of stroke. We statistics status of the vascular reconstruction of China ischaemic stroke, and predict the future prospects. Carotid endarterectomy and carotid artery stent is for carotid artery stenosis treatment of positive method, review of Chinese literatures, nearly 5000 cases of CEA have been completed in China during recent 30yrs. With tens of thousands of cases of CAS have been completed in recent 15 years. There is the imbalance of the development of the two kinds of technology, and at the same time, there are regional difference and the difference of technology standardization, which requires us to these two kinds of technology standardization training, Therefore, we represent the ministry of health began to the multiple training in expected 5 years. and strive to cultivate hundreds of doctors can be competent this work, and began the qualification admittance system. Intracranial artery stenosis is our Asian people, especially east asians common disease, although SAMMPRIS studies suggest that stenting is in safety weak than drug therapy, but we have more than ten years experience for this technology, which shows good prospects. According to us statistics, China's literature reported more thousands of the intracranial artery stenting cases in recent ten years, with good curative effect. Now, we have begun to the nation's CASSISS subject research, is aimed to intracranial artery stent and drug treatment again strict prospective randomized study, only 11 experienced institution

are participated. Within the next three years, we will complete more than 600 cases of the control study; The intracranial artery bypass is for cerebral artery occlusion therapy, although the lack of effective clinical evidence, but China's experience is still let we have enough confidence to carry out another multicenter, randomized study - CMOSS research, to contrast bypass surgery and drug treatment effectiveness and safety of differences. We believe that with our key technology research and promotion, Chinese neurosurgeon should make more contributions for stroke prevention.

SP24 303-2

PREVENTION OF CARDIOVASCULAR DISEASE IN ELDERLY-A GREAT CHALLENGE FOR CHINESE PHYSICIAN

Meilin LIU (*Peking University First Hospital, China*)

China has already stepped into an elderly society. People aged over 60 years amounted to 178 million representing 13.26 % of the 1.3397 billion Chinese according to China's 6th national census 2011. There were 119 million Chinese people aged 65 and over, accounting for 8.87%. China's aging population has been growing at a rate of 3.28% annually since 2001 and is expected to reach 437 million by 2050 (25% of the population). Cardiovascular Diseases are leading cause of death in China according to "Report on Cardiovascular Diseases in China 2011". Cardiovascular death in Chinese population were 3.5 million/year, accounts for 40% of all deaths in China. There are more than 80% of people who die from coronary heart diseases or strokes are 65 or older. More than 38 billion RMB was used to purchase drugs to treat CVD in hospital. As a whole, the succession sector from acute, to chronic recovery, until long term rehabilitation, may be the optimal care for older people. Comprehensive geriatric services on the Chinese pattern are necessary. Departments of geriatrics have developed throughout China within the past 2 decades, because leaders of the hospitals or universities became aware of the needs of an aging population specialist services. There are a few of geriatrics hospitals. Community-Based care is an alternative to institutional care for older adults. It works as the rehabilitative and long term care of older people. We believe it is the best practice of chronic illness rehabilitation in the future. Home care is an important part of elderly health care service models in China. Some older people have one-to-one care from a family care worker. Some of the challenges facing China in the care of its aging population are how to promote geriatrics education, quality care, and aging research throughout China. Geriatrics development in China should take these unique characteristics into account and be tailored to the Chinese culture and society. Geriatricians are expected to play a central role in health care for the elderly. However, there are no formal geriatric fellowships or national board certifications in geriatrics health care in China. Although rising number for the elderly with CVD, there are limited focus on primary health care and more concentration on secondary intervention in elderly management. Prevention of cardiovascular disease in elderly is a great challenge for Chinese physician.

SP24 303-3

HOW TO EVALUATE VASCULAR AGEING (ARTERIAL STIFFNESS) NON-INVASIVELY?

Kye Hun KIM (*Chonnam National University Hospital, Korea*)

The incidence and prevalence of cardiovascular diseases(CVD) increase steeply with the advance of age, and these increase of CVD are known to be associated with vascular ageing. Among these age-related vascular changes, arterial stiffening, so called arteriosclerosis, is an emerging risk factor of cardiovascular diseases or events. Arterial

stiffness can be measured by invasive hemodynamic study using cardiac catheterization. With the technical advance, nowadays, arterial stiffness can be measured by several non-invasive techniques. Pulse wave velocity (PWV) is a simple, reproducible, and non-invasive measurement of arterial stiffness and defined as the speed of travel of the pressure pulse between any given 2 sites within arterial systems. PWV has been studied widely and proved to be an independent predictor of cardiovascular risk in large healthy and diseased population based studies. Augmentation pressure and index also reflect the stiffness of the systemic arterial tree and can be non-invasively evaluated by pulse wave analysis (PWA) using applanation tonometry. Echocardiography, which is one of the most important imaging modality in the evaluation of cardiovascular diseases, is also a useful tool for the non-invasive evaluation of arterial stiffness. Several echocardiographic parameters have been proposed and used to evaluate arterial stiffness, and the prerequisite for these echocardiographic evaluation of arterial stiffness is to obtain the diameter change of the artery and blood pressures (systolic and diastolic blood pressure); diameter change = systolic diameter (SD) - diastolic diameter (DD). Distensibility, stiffness index β , elastic modulus, and strain of the artery can be calculated from these measurements. With the technical advance in echocardiography, recently, arterial strain measured by tissue Doppler method or 2D speckle tracking method has been proposed as an more accurate method of arterial stiffness. To be clinically useful, however, these techniques require large population based clinical outcome study. Because arterial stiffness and its change after medical therapy has important prognostic significance, the risk of CVD or future CV events in the elderly should be assessed by using these non-invasive methods of arterial stiffness.

SP24 303-4

THE ROLE OF RENIN-ANGIOTENSIN SYSTEM IN VASCULAR AGING

Hae-Young LEE (*Seoul National University Hospital, Korea*)

Cellular senescence-associated changes in blood vessels have been implicated in aging and age-related cardiovascular disorders. Cellular senescence is characterized by the permanent and irreversible growth arrest of cells cultured in vitro. Senescent cells display characteristic phenotypic changes in gene expression, function and morphology. Replicative senescence is characterized by shortened telomere length and eventually induces incomplete chromosomal replication. However, another phenotype, stress-induced premature senescence is triggered by a variety of stresses including chemical or oxidative stresses and oncogene activation. Reactive oxygen species (ROS) break DNA strands and modify DNA bases to elicit both replicative senescence and stress-induced premature senescence. Age-associated arterial stiffness is the foundation for the initiation and progression of cardiovascular diseases in elderly. Females display higher stiffness than males during the prepubertal years and a dramatic increase after menopause. Females might have intrinsically stiffer large arteries than males, but that such effects are mitigated by sex steroids during the reproductive years. The accelerated stiffening of the large vessels in females postmenopause likely contributes to the elevated prevalence of systolic HT, postinfarct mortality and CHF in elderly women. In hypertension, small artery remodeling is the most prevalent (earliest?) form of vascular change. Recent evidence strongly suggests that angiotensin II promotes the onset and progression of vascular senescence, which is associated with vascular functional and structural changes, contributing to age-related vascular diseases. The majority of the cardiovascular actions of angiotensin II, including vascular senescence, are mediated by the angiotensin II type-1 receptor. In

young and aged rats, the mRNA expression of AT1 receptor was increased associating aging process. It is somewhat interesting because in hypertension guidelines, diuretics are the first recommended therapy for aging population, whereas renin-angiotensin system inhibitors are less recommended. The background of the guidelines comes from the high prevalence of low-renin, salt sensitive hypertension among aged population. Indeed, an increase in arterial pressure during aging may lead to a baro-mediated reduction in renin release from the kidney, contributing to the decline in the circulating RAS. And aging association reduction in functioning nephron numbers also contributes the salt-sensitive hypertension phenotype. In contrast, the regulation of tubular renin may be opposite to or at least different from that of the circulation. In the urinary excretion of angiotensin II, which reflects tissue renin-angiotensin activation was increased in elderly mice kidneys. The accumulated data indicate that aging is associated with activation of the tissue RAS, making vascular calcification, which can be one mechanism for aortic stiffness. Antihypertensive therapy may have direct effects on the vascular wall. RAS inhibitors have corrected all small artery structure, endothelial function, and calcification in patients with essential hypertension. In summary, hypertension and hyperlipidemia are major risk factors not only in atherosclerosis but also in vascular senescent change including calcification. Previous studies to modulate vascular calcification with statins or calcium antagonist failed to reverse or retard the senescence progression. Although, the precise mechanism controlling cellular senescence is currently poorly understood, some data suggests the relation of renin-angiotensin II-aldosterone system using angiotensin receptor might be effective in controlling vascular calcification.

SP24 402

KOREA-CHINA FORUM ON GLOBAL AGEING AND EAST ASIA: CHANGE OF FAMILY STRUCTURE AND LONG-TERM CARE SERVICE

SP24 402-1

THE CHANGE OF SHANGHAI FAMILY SIZE AND STRUCTURE AND THEIR CHALLENGE TO ELDERLY SERVICE

Suyun HU (*Shanghai Academy of Social Sciences, Institute of Urban and Demographic Studies, China*) and Haiwang ZHOU (*Shanghai Academy of Social Sciences, China*)

This paper analyze the feature and trend of Shanghai family size and its structure. Family Size in Shanghai are reducing continuously, however number of household families is increasing at the same time. Most of Shanghai inhabitants family size is 2 person or 3 person. One Generation and two generation family is the main part of Shanghai inhabitant family. The increasing of the elderly and change of family size caused the Challenge to LTC. 1) The increasing of the very elderly is fast and demand for LTC is increasing obviously. 2) Families with the elderly is increasing fatly. 3) The elderly in empty nest and Living alone is increasing. 4) The number of average children is decreasing for the elderly and the lack of family care resources. Aging population with fewer children is obviously not only in macro level, but also in family level. Except for the setting up LTC system and multiple service organization, we need to design public policy to advance social participation in elderly service. This paper focused on the suggestion about human resources: Firstly, Improving housing taxing to encourage children to live nearby their parents. Secondly, Developing domestic service human resources to meet the demand. Thirdly, Encourage younger elderly, students and rural migrants to join in service for the elderly. Fourthly Improving family care and support holiday in order to make more convenient for

internal mutual among family members.

SP24 402-2

FRAMEWORK FOR OPERATION AND THINKING OF DEVELOPMENT OF SHANGHAI COMMUNITY HOME CARE SERVICES FOR AGED PEOPLE ("HCSAP")

Xu JUN (*Bureau of Civil Affairs, Shanghai, China*)

Shanghai is a pioneer entering into the aging city. Jing'an District, located in the centre of Shanghai with small area but high population density, has stood in the forefront of having high degree of aged population (above 60 years old) and senile population (above 80 years old) for many years. Therefore, Jing'an District is making great efforts to explore and practice the Socializing Service System for the aged with the basis of HCSAP, the support of community service and the supplement of nursing homes for the aged. Furthermore, it is focusing on making the HCSAP stronger by combining its own characteristics of geography, culture and economy so that it can help aged people to live in their own homes under the support of HCSAP as long as possible. A. Under the support and guidance in the field of financial motives, resources and technologies and etc of the Government, the HCSAP develops. B. Progressively make the HCSAP professional and personalized through developing NGOs, nurturing the network of HCSAP and introducing professional organizations to meet the demand of services for the aged. C. Improve the situation of fragmented and scattered resources through cross-border cooperation and then form a joint force to make the HCSAP being practical and stronger. D. Establish an evaluation system, such as unifying the evaluation criteria for HCSAP institutions and introducing third-party evaluation mechanisms, to promote the development of the HCSAP. Therefore, we can achieve the aim of socialized services for the aged which is guaranteeing the basic services to aged people with difficulties and helping other aged people to have personalized services for the aged progressively.

SP24 402-3

LONG-TERM CARE POLICY AND WELFARE SERVICES FOR ELDERS IN KOREA: CURRENT ISSUES AND DIRECTIONS FOR THE FUTURE

Chan-Woo KIM (*Catholic University, Korea*)

This paper addresses the introduction of welfare policies for elders and public long-term care insurance (LTCI) in Korea discussing their challenges and directions for future. Since 2008 implementing National LTC Insurance for elders has tremendously changed the system of Korean elderly welfare by enlarging the coverage from low-income elders to all elder regardless their income and assets. With the rapid increasing elderly population, the healthcare expenditures for elders have also expanded problematically. Within this context, this paper will introduce and discuss backgrounds of Korean elderly care services, overview of elderly welfare services, particularly focusing on the Korean LTC system.

SP24 402-4

SERVICE QUALITY CONTROL FOR NURSING HOMES IN SOUTH KOREA: REGULATION VS. EVALUATION?

Jae-Sung CHOI (*Yonsei University, Korea*)

Since the launching of the long-term care insurance scheme of 2008, service quality control for nursing homes has been a constant and serious issue for South Korea. Over supply, excessive competition, and consumer complaints are also related to service quality issue. Within a

relatively short period, a rapid expansion of nursing homes has provoked such issues. In reality, the number of nursing homes was 815 at 2006. However, its number increased with 2,489 at 2011. The purpose of this study is to diagnose the present service quality mechanism, to investigate its limits, and to suggest future direction of service quality control for nursing homes. The long-term care insurance scheme has been run as an additional mandatory service of National Health Insurance Service (NHIS). Thus, its overall operation has given to NHIS. NHIS has also the responsibility for evaluation over nursing homes every two years. Meanwhile, the role for gatekeeper of nursing homes (i.e., opening and closing procedure) has given to each local government. This study is a part of the research project, "A study for evaluation system of nursing homes at South Korea", which has been funded by Korea Federation for Senior Welfare at 2012, and performed by the Center for Social Welfare Research of Yonsei University. For the purpose of this research, our research team has investigated cases of Japan, US, Australia, and the UK. Furthermore, a nationwide mailed sampling survey of nursing homes has been performed and produced valuable information regarding service quality of nursing homes. Out of 2,489 nursing homes, 1,000 have been selected for the sample. Finally, 239 facilities have been analyzed. Findings are as follows: First, the role for gatekeeper of local governments has been weak and ineffective due to the lack of profession; Second, NHIS has too much monopolistic power over long-term care system. However, their professional capacity for evaluation of nursing homes is low. Furthermore, NHIS has already suffered from more serious and complex pressure of national health insurance service issues; Third, cases of US, Australia, Japan, and UK, indicate that service quality control mechanism can be accomplished by cooperation among central government, local governments, and non-profit private organizations. For example, strong regulation may better fit with weak evaluation system. For this case of strong regulation, professional capacity such as staff and tools will be a prerequisite. Keywords : long-term care insurance, nursing homes, service quality

SP24 403

KOREA-CHINA FORUM ON GLOBAL AGEING AND EAST ASIA: ALZHEIMER'S DISEASE AND SPIRITUAL CARE

SP24 403-1

INFLUENCE OF PSYCHOLOGICAL CARE OF THE ELDERLY ON INCIDENCE AND PROGRESSION OF ALZHEIMER'S DISEASE

Dehua CHUI (*Neuroscience Research Institute, Third Hospital, Health Science Center, Peking University, China*)

Influence of Psychological care of the elderly on incidence and progression of Alzheimer's disease Problems caused by Alzheimer disease (AD) have become increasingly severe in the aging society. Brain senescence and incidence of AD in the elderly are significantly increased with aging. Senescence of the brain is commonly classified into two categories: physiological senescence and pathological senescence, the latter of which is associated with neurodegenerative diseases such as AD. Risk factors for brain senescence also promote the development of AD and other neurodegenerative diseases. We have revealed the relationship between AD and music as well as rhythmic exercises, verifying that entertainment and regular exercises improve learning and memory through enhancement of α -secretase activity and reduced production of toxic A β in the brain. These results indicate that AD research aiming at psychological care for the elderly and promoting them to participate actively in entertainment and regular exercises is of great significance to prevent AD or halt the

progression of AD. Psychic factors are closely related to brain senescence in the elderly and can induce promote and aggravate AD. Environmental and psychological factors have great impact on psychology of the elderly. The feeling of loneliness and the influence of the disease itself frequently lead to hallucination in AD patients who may not recognize their family and curse caregivers. However, once at home with good care of family members, they may recover their normal thinking miraculously. This indicates that environmental and psychological factors have special effects on AD prevention and amelioration. In summary, the government, experts, medical workers, community and the whole society need to work together as early as possible to set up the system that enables the elderly to lead a healthy life with self-esteem, self-support and harmonious family in order to prevent or delay the development of AD. It is especially important to avoid discrimination on AD patients like prisoners, knowing that they are different from healthy people because of cognitive impairment. We must take care of AD patients as if they are infants, and help them spend spiritually happy late life.

SP24 403-2

ENTERTAINMENT ENDOWMENT AND MENTAL CARE AND PREVENTION FOR ELDERLY ALZHEIMER'S DISEASE Weixin ZHANG (*The Gerontological Society of Jiangsu, China*)

1. Using innovating service concept as a guide. "Happy Old Age" is the base and also the aim of Jiangsu psychological care service. Establishing the service concept of caring the elderly and providing psychological care services for them in accordance with their needs. Considering psychological care as the foundation of civilization and harmony. Trying to be the workers and volunteers to make the elderly feel happy. 2. Considering innovating service mode as a support. The first thing is to socialize psychological care services. The second is to carry out psychological care marketization. The last is to do the psychological care research scientifically. 3. Adopting innovating service methods. In accordance with old people's mental and psychological needs, we have implemented Caring the Elderly's Mental Health Project, designed a special service list for psychological comfort, carried out some projects such as Concerning Life and planed a series of different activities. 4. Taking innovating service policy as a guarantee. Jiangsu has first released Jiangsu Guidance for Elderly's Mental Care Service. II. Modeling psychological care services Emphasizing the connotation of psychological care and showing the spirit of caring the elderly. Stressing the virtue of psychological care and demonstrating a harmonious society. Accentuating the openness and inclusiveness of psychological care and highlighting the advantages of beatific ageing. Also, we propose three aspects to adhere and another five must-dos. III. Practice and enlightenment of Jiangsu elderly's psychological care services 1. Psychological care is the soul of aged care services. 2. Psychological care is the foundation of physical and psychological health. 3. Psychological care is the lifeline of a happy old age.

SP24 403-3

COGNITIVE INTERVENTION FOR MILD COGNITIVE IMPAIRMENT

Seonghye CHOI (*Inha University School of Medicine, Korea*)

The transitional state between the cognitive changes of normal aging and mild dementia is referred to as mild cognitive impairment (MCI). It is a heterogeneous clinical condition with several subtypes and multiple etiologies. The amnesic sub \neg type of MCI (aMCI) is defined as a significant impairment in memory with no impairment in the activities of daily living. An interventional study of patients meeting

the Petersen criteria for aMCI found that 16% progress to dementia each year, 99% of whom are ultimately diagnosed with Alzheimer's disease (AD). aMCI is often a degenerative condition that may represent prodromal AD. Therefore, it is crucial to develop and evaluate treatment strategies for this population. However, no pharmacological treatments are currently available to improve the symptoms or slow down the disease progression in patients with aMCI. Clinicians have been interested in other potential treatment alternatives for patients with aMCI, such as cognitive interventions. Patients with aMCI differ from patients with dementia in terms of their relatively preserved insight and metamemory. Therefore, cognitive intervention may be a more effective treatment for aMCI than for AD. However, previous studies have failed to show consistently that cognitive intervention is efficacious in aMCI. And the poor methodological quality of many studies such as a small sample size implies that the ability to draw conclusions is limited. There is a need of randomized controlled trial of a large sample size with standardized intervention and direct and indirect measures of efficacy. A home-based cognitive intervention program has a benefit to be able to be applied to many patients, and a patient to be unable to come to the intervention center also could be treated. However, to our knowledge there have been no reports of the effect of home-based cognitive intervention in patients with aMCI. We developed a group cognitive intervention program and a home-based cognitive intervention program for aMCI, and evaluated the efficacy of the programs in 297 aMCI from 18 medical hospitals. Using randomized control design, ninety-nine participants with aMCI were randomly allocated to the group cognitive intervention, 98 with aMCI were allocated to the home-based cognitive intervention group, and 100 with aMCI were allocated to a wait-list control group. The group cognitive intervention was administered via 24 sessions with twice a week for 12 weeks, at hospital-based memory clinics. Each session lasted approximately 90 minutes. The participants in home-based cognitive intervention group did their homework for 30 minutes on every weekday for 12 weeks. In this presentation, I would like to summarize the group and home-based cognitive intervention program and the result of the efficacy of the programs.

SP24 403-4
SUGGESTION OF NEW PARADIGM OF TREATMENT OF ALZHEIMER'S DISEASE

Sangyun KIM (*Department of Neurology, Seoul National University College of Medicine, Korea*)

Alzheimer's disease (AD) is the most common cause of dementia which mainly affects elderly individuals, and, because of the rapid increasing of old populations worldwide, this disorder became a most important medical issue with a large human, social, and economic burden. Current AD drugs target cholinergic and glutamatergic neurotransmission, thus improving symptoms, although their neuroprotective activity is still debate. Immunotherapies of AD has been studied with the partial success and partial disappointment, but the another projects of immunotherapies to prevent of progression of preclinical AD to dementia have begun. Even we had studies a lot of candidate drugs for AD, but they didn't show us the meaningful effect of cognitive improvement or disease modification. These failures have evoked debates about the potential misunderstanding of the pathogenesis of AD and potential weakness in diagnosis, therapeutic targeting, development of treatment candidates, and design of clinical trials. Many clinical and basic studies in the field of AD are ongoing, but we would like to know that the approach to drug development for this disorder should be reconsidered. Basic research of AD is

providing us with new information on the pathomechanism of the complex puzzle between beta amyloid and Alzheimer dementia. Several randomized controlled trials of new drugs or immunotherapies are ongoing, and the increased collaboration between pharmaceutical companies, basic researchers, and clinical researchers has the potential to bring us closer to developing an optimum pharmaceutical approach for the treatment of AD. But effective treatment is directed towards identifying disease-modifying therapies, with several compounds in different phases of development. In this presentation, I want to summarize the current treatment of AD from cholinesterase inhibitors and immunotherapies according to the new concept of staging of AD treatment. And also I'll suggest new therapeutic concept 'AD control' with our new results of blood based oligomeric beta amyloid measurement method ?

SP24 404
SOCIAL ENTERPRISE SYMPOSIUM: PROMOTING SOCIAL ENTERPRISE ECO-SYSTEM IN AGING SOCIETY

SP24 404-1
SOCIAL PROBLEMS IN AGING SOCIETY AND THE NECESSITY OF SOCIAL ENTERPRISES

Moo Sung CHUNG (*Department of Social Welfare, Soongsil University, Korea*)

South Korea, one of the world's most quickly aging countries, faces various challenges related to the graying of society in the areas of health, income, social relationships, crime and neglect. Due to poor social security systems for the aged, the elderly poverty rate in Korea is the highest in the world amounting to 45.1% Korea's elderly suicide rate in ages of 65-74 was the highest among the member nations of the Organization for Economic Cooperation and Development (OECD). According to the data compiled by the OECD, 81.8 per 100,000 South Korean elderly citizens under 74 years of age committed suicide. The causes of such a high elderly suicide rate are based on low income and loneliness of the aged. In this sense, it is expected that social enterprises provide decent work after retirement and improve the standard of life of the aged.

SP24 404-2
PROMOTING SOCIAL ENTERPRISE ECO-SYSTEM FOR SUSTAINABLE SOCIAL PROBLEM-SOLVING

June-Young RHA (*Department of Business Administration, The Catholic University of Korea, Korea*)

A social enterprise is an organization that utilizes market-based business principles in solving social challenges in an innovative way. Market principles, as design tool and solution algorithm that created economic eco-system, are also principles of evolution of variation, selection, and amplification. The principles of evolution should be applied to Social Enterprise Eco-System. But social problem solution has problem that gives rise to the market failure. Accordingly, it needs to be a wise policy that can be applied to these principles in Social Enterprise Eco-System to complement the structural element of market failure.

SP24 404-3
THE ROLE OF GOVERNMENT/LARGE COMPANY FOR PROMOTING SOCIAL ENTERPRISE ECO-SYSTEM

Young Bohk CHO (*Department of Management, Pusan National University, Korea*)

Prof. Cho will present comparative analysis on the development, characteristics and accomplishment of Korean Social Enterprises from a global perspective. The presenter will cover the implementation and emerging trends of Korean social enterprises after the government enacted the Social Enterprise Promotion Act (2007), and suggest direction for big corporations' social contribution activities to support social enterprises in building the robust eco system for social enterprises.

SP24 404-4
THE YOUNG SOCIAL ENTERPRISE PROVIDING ELDERLY WELFARE SERVICES

Chad LUBELSKY (*Executive Director, Santropol Rolant, Canada*)

Santropol Roulant is the organization uses food as a vehicle to break isolation and build bridges between individuals and generations. Unlike most of meals on wheels organizations, Santropol Roulant consists of younger staffs and volunteers. Their experience of working at the traditional meals on wheels organizations led them to recognize the value in intergenerational exchange. They decided to start their own services, with young volunteers serving seniors and others living with a loss of autonomy. Most of the meals are delivered on foot or by bicycle to homes of seniors and peoples living with a loss of autonomy.

SP24 404-5
THE SOCIAL ENTERPRISE ENCOURAGING THE SILVER GENERATION TO MAKE GOOD USE THEIR LEISURE TIME

Eun-Joo KIM (*SK Silver Theater, Korea*)

The SK Silver Theater to promote the leisure culture among the Silver Generation From historical times, Korea is perceived as being a 'country of courteous people in the East' and Korean society has always treated elders with great respect. Koreans are generally courteous to the extent of being ceremonious when they interact with social superiors. It is expected that these traditions and values would be good cultural assets and resources in aging society. The SK Silver Theater to promote the leisure culture among the Silver Generation. This theater allows people aged over 55 to watch movies and other events for a nominal admission fee, thereby sharing their memories and contributing to more meaningful leisure activities for the Silver Generation.

SP24 404-6
THE SOCIAL ENTERPRISE WITH APPROPRIATE TECHNOLOGY FOR SILVER MARKET

Jung Hyun KIM (*Delight, Korea*)

Korea faces various challenges and social problems in a rapidly aging society and one of severe problems would be the deafness of the elderly. It is a crucial problem because older adults' deafness creates not only a communication barrier but also continuous stress over the inability to react and respond appropriately. But the government has a limited budget to deal with this issue and the monopoly of the Multinational Enterprises has worsened the effectiveness and business approach to resolve these problems. To solve the problems posed by a rapidly aging society, Delight sells low-price hearing aids to poor people suffering from hearing disabilities. For the elimination of unnecessary costs, Delight has conducted both research and development focused on reducing production costs. With this, a customer is provided the device with a reasonable price while unnecessary production costs including maintenance and stocking fees are minimized. It is expected that the government expenditure would

be reduced by saving costs of the deafness. In this regard, the company has played a significant role as a Social Safety Net by offering benefits to people with deafness.

SP24 404-7
THE SOCIAL ENTERPRISE HELPING AGE-FRIENDLY SOCIAL ENTERPRISES

Leslye LOUIE (*The Encore Fellowships Network, USA*)

Encore.org is endeavoring to make it easier for millions of people to pursue second acts for the greater good. We call them 'encore careers' ? jobs that combine personal meaning, continued income and social impact ? in the second half of life. While Encore.org is not a job placement service, it provides free, comprehensive information that helps people transition to jobs in the nonprofit world and the public sector. Through an inventive program portfolio, original research, strategic alliances and the power of people's life stories, Encore.org demonstrates the value of experience in solving society's greatest problems ? from education to the environment, health care to homelessness. Largely through foundation support, Encore.org has worked to redefine later life, shifting from the idea of retirement as the freedom from work to a new life stage that offers the freedom to work in new ways and to new ends.

SP24 502
KOREA-CHINA FORUM ON GLOBAL AGEING AND EAST ASIA: HEALTHY & ACTIVE AGEING

SP24 502-1
CULTURAL TRADITION: AN INTANGIBLE FACTOR OF THE SENIOR PEOPLE'S HEALTH

Fang WU (*Ruijin Hospital, Shanghai Jiaotong University, China*)

With the acceleration of China's urbanization process and the implementation of the one-child policy, more and more old people immigrate from the rural areas to the cities. Lao Piao Zu, whose mental health attaches great attention, are challenging the change of life pattern. This change seems to be the contradiction of life habits between urban and rural. Virtually it is the conflict and confusion between local cultural traditions. From the comprehensive perspectives of cultural anthropology, gerontics and folklore, the paper analyzes the impact of cultural tradition on the health of the aged. The respect for the senior, festival customs, dietary habits and the way of entertainments in a certain cultural tradition affect the senior's physiological and psychological health. Based on the analysis of the aged in different local cultures, cultural tradition is meaningful to the health of the aged and the harmonious development of the aging society as well. The paper advocates that Healthy Aging should be realized in the premise of respect for the cultural tradion. Keywords : urbanization; cultural tradition; the senior people's health; intangible factor

SP24 502-2
CHANGES IN DEPRESSION AND COGNITIVE FUNCTIONING IN THE ELDERLY: A LONGITUDINAL PERSPECTIVE STUDY

Sun FEI¹, Tang ZHE², Diao LI-JUN² (*1. Xuan-wu Hospital of Capital Medical University, China; 2. Beijing geriatric healthcare center, Xuan-wu Hospital of Capital Medical University, China*)

Background: The impact of chronicity and changes in depression on cognitive functioning over time in elderly has not been elucidated. Methods: This prospective cohort study of 2121 community-dwelling

persons aged 55-85 years uses four measurement occasions of depression (CES-D scale) over 10 years to distinguish persons with chronic, remitted, or emerging depression and persons who were never depressed. Cognitive function is assessed by the Portuguese version of the mini-mental state examination (MMSE). Results: After adjustment for baseline cognitive function, health status and socio-demographic factors, chronic depression was associated with significantly greater decline in cognitive function over 10 years when compared to never depressed persons (odds ratio (OR) 38.23, 95% confidence interval (CI) 42.30-14.30). In the oldest old, but not in the youngest old, chronic depression was also significantly predictive of greater decline in cognitive function over 10 years (OR 32.45, 95% CI 41.50-13.84). Comparable effects were found for older persons with emerging depression. Persons with remitted depression did not have greater decline in cognitive function than persons who were never depressed. Conclusions: Our findings among community-dwelling older persons show that chronicity of depression has a large impact on cognitive function over time. Since persons with remitted depression did not have greater cognitive function decline than never depressed persons, these findings suggest that early recognition and treatment of depression in older persons could be protective for subsequent cognitive function decline. Keywords : Depression; cognitive function decline; elderly

SP24 502-3

ANALYSIS OF THE INFLUENTIAL DETERMINANTS ON THE CHANGE OF PHYSICAL FUNCTION IN RURAL OLDER PERSONS

Duk SUNWOO (*Center for Ageing Policy Research, Korea Institute for Health and Social Affairs, Korea*)

The aim of this paper suggested the effective health promotion policies in order to accomplish healthy ageing through the maintenance of physical function, finding influential determinants on the change of physical function in rural older persons aged 60-84. Basic ADLs and IADLs were used to get such findings. Analytic method was to find differences between groups about variables considerable as influential factors and analytic groups were divided into normal maintenance and functional limitation group in the aspect of physical function in 2012 on the base of older persons without functional limitation of ADLs and IADLs in 2011. Results were as follows: (1) the proportion of belonging to a group with functional maintenance was higher in the case of male, high education level, and elderly in couple household, (2) with good oral health, without depression and fall fear, and good sleeping. In conclusion, it could be suggested to develop health promotion programs for strengthen physical strength and to improve mental, oral health and good nutrition so on.

SP24 502-4

ACTIVE AGING IN ASIA PACIFIC

Dong Hee HAN (*Research Center for Anti-Aging, Research Institute of Science for the Better Living of the Elderly, Korea*)

The increase of the population of older persons calls for our communities to rethink the subject of aging. Last year marked ten years since the UN Madrid Declaration where there were appeals to think of new concept of Aging. This study shows active aging concept and the history of Active Aging Consortium in Asia Pacific (ACAP) in the past eight years in which ACAP has shared the distinctive models of Active Aging in Asia Pacific. Regionally, Korea has emerged as the core of active aging mission in Asia Pacific. This study explores the distinct concept of active aging and why there is need to implement it in an ageing society. In this context, both China and Korea should put

much more effort in understanding active aging in late life.

SP24 503

SENILE OSTEOPOROSIS

SP24 503-1

OSTEOPOROSIS TREATMENT NOWADAYS IN CHINA

Huiqiong ZHOU¹, Zhonghou LIU² (*1. China-Japan Friendship Hospital, Beijing, China; 2. China-Japan Friendship Hospital, China*)

Osteoporosis is a worldwide health problem. It is a disease that has characteristics of decreasing bone mineral contents and destroying bone structures. Bone loss causes bone fragility and hence increases the risk of fracture. China is the world's most populous country. Based on the nationwide census conducted in 2010, a total population for mainland China is 1.34 billion. The growth rate of the aging population on China's mainland had increased with people aged 60 or above accounting for 13.26 percent. Along with the growing elderly population, osteoporosis is becoming the fourth chronic disease, causing more attention from society and also from the area of medicine. Luckily, we have almost all the medicine that used nowadays in the treatment of osteoporosis. Including bisphosphonates, raloxifene (SERM), calcitonin, HRT, vitamin D, parathyroid hormone, strontium ranelate and vitamin k2. Using Chinese herb in the treatment of Osteoporosis is also very popular in china. In this short presentation, we also introduce a cross-sectional survey that we performed to identify patient characteristics associated with osteoporosis diagnosis and treatment, found the proportion of osteoporosis patients who received optimal therapy still very low. Keywords : Osteoporosis Treatment China

SP24 503-2

THE STATUS OF OSTEOPOROTIC DIAGNOSIS STANDARDS IN CHINA MAINLAND

Zhihai ZHANG (*Spinal surgery Department of Aviation General Hosp, Beijing Aviation General Hospital, China*)

Background: According to the Sixth national census in 2010, Chinese people' average expectation of life has been 74.83 years old, which older than 3.43 years since 2000. For the male, the age was 72.38 yrs and for the female was 77.37 yrs. There was 13.26 percent people above 60 yrs which means 179 million persons. Recently, China National Committee on Aging declared that 200 million persons will older than 60 yrs since 2013. Followed the trend of aging in China, more and more people suffered from osteoporosis and some diseases about it. So it becomes very important to diagnose osteoporosis for health. Status in China: In general, because the difference of economy and medicine levels in China mainland, the diagnosis and treatment of osteoporosis are different greatly. There are some standards of osteoporosis in clinics. Today, many doctors accords to the lower BMD values and low-energy fractures history to diagnose osteoporosis. Some laboratory examinations are useful for antidiastole. The diagnosis standards of osteoporosis are the basis of clinic and research. In China mainland, most hospital accepted the WHO osteoporosis standards which was set up in 2004. Osteoporosis is defined by bone mineral density (BMD) at the hip or spine that is less than or equal to 2.5 standard deviations below the young normal mean reference population. The value should be measured by dual energy X-ray absorptiometry (Dexa) machines. Severe osteoporosis describes osteoporosis in the presence of one or more fragility fracture. Because of the different peak bone mass among different area, nations, genders and measuring locations, some researchers found that values are 15-20 percent of yellow race lower than that of Caucasian. So some doctors

in China used -2 standard deviations or 25% bone mass lost as the diagnosis of osteoporosis. There were a lot kinds of BMD measuring machines in China mainland. For example, SXA, DEXA, pDEXA, QCT, pQCT, RA and QUS. Most clinics use these machine for old patients and use the WHO reference, though some doctors were aware of the deficiency of those methods. There are so many complications accompanying with osteoporotic patients, we always found them suffered fractures though the BMD values were still higher than -2.5SD. What is the problem? That is why Dr. J.A.Kanis suggested to use Fracture risk assessment tool(FRAX) for osteoporosis diagnosis and treatment. Some people in China mainland had finished primary research about it and some clinics had use it instead of BMD value lonely. This tool could provide diagnostic criteria and prognostic information on the probability of future fractures. It will be a baseline on which to monitor the natural history of the treated or untreated patient. Development It should be set up a China national diagnosis of osteoporosis according more and more research data based on the WHO standards. We should pay more attention to the assessment of high risk of fractures and medical treatment. The standardization of so many tapes of BMD machines and quality control of bone metabolism markers detection should be enhanced by country. At last, the government standard of osteoporosis will be determined in future recently. Keywords : Osteoporotic Diagnosis Standards China

SP24 503-3 SARCOPENIA, OBESITY AND OSTEOPOROSIS IN ELDERLY KOREANS

Jung Hee KIM (*Seoul National University Hospital, Korea*)

Aging is associated with increased fat mass and reduced muscle mass or strength, which is called sarcopenic obesity. Osteoporosis has also become increasingly important public health problems throughout the world, and Korea is no exception. According to the Fourth Korean National Health and Nutritional Examination Surveys, the prevalence of sarcopenia in the Korean elderly population (below 2SD of the gender-specific mean for healthy young adults) was 12.4% for men and 0.1% for women. The prevalence of obesity among Korean men and women was 35.6% and 26.5%, respectively. Moreover, about 35% of women aged 50 and over had osteoporosis. Muscle and fat seem to affect the bone, but the relationship is still controversial. It is relatively well established that muscle mass is positively correlated with bone mineral density (BMD) and the loss of muscle mass is associated with bone loss in the elderly. It is associated with an increased risk of fractures consequent upon a greater predisposition to falls, but also to the lack of bone remodeling due to reduced muscle mechanical strength. However, the positive association between muscle strength and BMD disappeared when we adjusted the muscle strength by muscle mass, indicating that the effects of muscle strength on BMD may be an indirect phenomenon, possibly mediated by muscle mass. The other study demonstrated that the association between leg muscle strength and femur neck BMD appeared to be dependent on leg muscle mass. Muscle quality can be one factor as an independent factor for BMD. Goodpaster et al. reported that a thigh muscle attenuation coefficient measured by computed tomography (CT) was associated with skeletal muscle lipid content and reflected muscle quality. In the Korean Longitudinal Study on Health and Aging (KLoSHA) (242 men and 231 women aged over 65 years), fat infiltration as measured by mid-thigh muscle attenuation values in Hounsfield units had an additional role in femur neck BMD and was the strongest parameter influencing the femoral neck BMD, regardless of BMI or physical activity. Greater leg muscle mass and strength, and lower fat infiltration are positively associated with higher femoral neck BMD in elderly Koreans. BMD increases with body fat mass, and obesity has a

protective effect against osteoporosis. This protective effect is explained by a combination of hormonal (peripheral aromatization of androgens to estrogens in adipose tissue) and mechanical factors (on weight-bearing bone sites). Fat tissue, once considered as a depot for energy substrate, is a METABOLICALLY-ACTIVE organ. For instance, leptin, a key factor regulating appetite and body weight, has been shown to inhibit bone formation through hypothalamic relay of the beta-adrenergic pathway. Gilsanz et al. found that the visceral fat exerts a negative effects on femoral bone mass and strength while the subcutaneous fat has positive effects. In Ansung cohort, (1564 men and 1862 women > 40 years old from a prospective community-based cohort), we demonstrated that the positive relationship between fat mass and bone mass became negative after adjusting for age and weight. Lean mass, however, maintains a positive relationship with bone mass after adjusting for age and weight. In another study of a large cohort of Chinese by Hsu et al., a negative relationship between percent fat mass and total hip bone mineral content was identified, and the risks of osteoporosis, osteopenia, and non-spine fractures were significantly higher for subjects with higher percentage fat mass, independent of body weight. Moreover, abdominal obesity as measured by waist circumference was significantly inversely associated with bone mineral content independent of total fat mass. In another study conducted in 461 healthy Korean subjects, the visceral fat area on abdominal CT scan was inversely associated with BMD, whereas the subcutaneous fat area showed no significant association. Several studies have shown that both fat mass and muscle mass can contribute to an increase in bone mass, thereby reducing the risk of fractures; other studies have demonstrated a detrimental effect of fat mass on bone mass after controlling for body weight. Further study needed to elucidate the true relationship between muscle, fat and bone in our ethnic group.

SP24 503-4 EFFECT OF VITAMIN D AND PTH ON BONE STRENGTH IN OLDER KOREAN WOMEN

Yumie RHEE (*Yonsei University College of Medicine, Korea*)

Vitamin D deficiency is common, particularly among the elderly. The influence of 25(OH)D on bone health has been extensively examined. However, fewer studies exist in the Korean elderly associated with bone strength. The deficiency in vitamin D is measured by 25(OH)D and the deficiency leads to elevated PTH. This will result in elevated bone turnover with increased fracture risk specially more in the aged persons. Therefore, we analyzed apparently healthy 561 women over 65 years of age measuring 25(OH)D, PTH and bone mineral density (BMD) using dual X-ray absorptiometry including hip structural analysis. The primary endpoint was to look into the femoral BMD and geometry due to increased incidence of falsely high lumbar BMD with aging due to degenerative changes and fracture. The subjects were divided into 3 tertile groups according to the PTH level which is the final effector of the vitamin D deficiency. There was significant negative correlation between PTH and femoral BMD ($R = -0.11$, $P < 0.05$, with age and BMD adjustment). The highest tertile group showed significantly lower calcium, phosphorous and low 25(OH)D level. Regarding bone mass and geometry, the highest tertile group showed marginally low lumbar BMD, but significantly lower hip BMD including neck and total (compared to lowest tertile group, $P < 0.05$, respectively). Moreover, the femoral cortical thickness were significantly thinner and the buckling ratio of the femur was significantly higher in the highest tertile group (compared to lowest tertile group, $P < 0.05$, respectively). In conclusion, there should be more concern on the changes in the elderly femur due to low vitamin D and high PTH which would link to increased risk of hip fractures.

SP24 506

SEMINAR ON ELDER HEALTHCARE BURDEN; IS THERE BEST WAY FOR MEDICAL COST SAVING?

SP24 506-1

CHRONIC DISEASE IMPACT ON HEALTH ECONOMY

John BEARD (*Department of Ageing and Life Course, World Health Organization*)

Population ageing has led to many concerns about the affordability and sustainability of health and social care systems. But estimates of the growing cost of care may be exaggerated. Much greater pressures arise from technological change, inefficiencies and socioeconomic growth. A more useful approach may be to consider health care as an investment and to identify the best way to maximize the return on this. This will require greater emphasis on health promotion and primary care, particularly prevention and management of common conditions such as hypertension and diabetes. It will require a better trained workforce and services that are more age friendly and person centred. But since many acute care services are currently used to cover inadequacies in chronic care provision, building better systems for chronic and long term care will also be crucial. This may be through direct care provision or supporting informal carers. The key will be to create an integrated continuum of health and social care that truly meets the needs of older people.

SP24 506-2

CHRONIC DISEASE, THE WAY AND HOW DOCTORS COULD MANAGE THE COST

J. Michael GAZIANO (*Harvard Medical School, Brigham and Women's Hospital and VA Boston, USA*)

Around the globe there are a number of transitions are occurring that have dramatic impact on global and regional health. Income is growing and populations are aging at a rapid rate. These economic and demographic transitions come with dramatic changes in the burden and types of diseases that cause death and disability. In this epidemiologic transition the world has moved through several phases from pestilence and famine, through the age of receding pandemics, into the age of chronic diseases. In this age of chronic disease we have been able to reduce the risk of some disease and compress morbidity particularly for cardiovascular disease to older and older ages. Now we are seeing the emergence of obesity and inactivity in many parts of the world and increases in diabetes and hypertension. This transition is placing a particular burden in emerging economies because it is happening much faster than it did in the more established high income countries. While this transition took over 100 years in the United States it is happening in only decades in the rapidly growing Asian economies. How can we deal with the increasing demands that the emergence of chronic disease as the dominant cause of death and disability is placing on our health care systems? There are several elements of a progressive health care system that will be essential in adjusting to these trends and doing so in an efficient and cost effective way. First, there needs to be a national effort to understand the burden and nature of disease in every country. There needs to be some investment in surveys and longitudinal tracking of chronic disease as well as major risk factors. In addition, we need to track how well we are doing in managing the major chronic illnesses. Second, there needs to be a thoughtful balance between the investments we make in low cost preventive measures that can be widely disseminated throughout the population; expenditures in more intensive preventive strategies that will target higher risk individuals; and spending on higher cost treatment strategies for acute illnesses. Finally, we need to

empower our patients and the general population to invest time and energy in their own health and to manage their chronic conditions. In this lecture I outline some of the major challenges we face in the United States and the ways we are beginning to tackle these problems in the United States as well as some of the mistakes that we have made along the way. I will focus on the role of health care providers though it is clear that these efforts cannot occur in isolation.

SP24 506-3

AGING AND HEALTH SYSTEM IN KOREA

Soonman KWAN (*School of Public Health, Seoul National University, Korea*)

Tuesday June 25th

SP25 215

KOREA-JAPAN FORUM on Global Ageing and East Asia: ADMINISTRATION OF THE LONG-TERM CARE FACILITIES I

SP25 215-1

A NEW HORIZON FOR THE DEMENTIA CARE SYSTEM IN JAPAN

Yukimichi IMAI (*Wako Hospital, Japan*)

The current aim of dementia care management in the community is to maximize the functional ability of the patient by providing relevant benefits in the key clinical domains along the continuum of the disease. By achieving this goal, medical and social services in the community can improve or preserve the quality of life for the patient and the caregiver for as long as possible, thus changing the outcome of this devastating disorder. Although the long-term care insurance system has been successful in Japan, more high quality services should be provided to all facility or community services. Even if elderly people are in a condition that requires intensive care, it is possible for them to live as they wish, and the aim of dementia care should be the realization of care that maintains the dignity of people with dementia. After the Long-Term Care Insurance was established in 2000, each municipal government implemented effective measures in the community. Formal and informal support systems have provided measures to build community networks, such as the one million dementia supporters, the campaign to build a Dementia-Friendly Community and care management fully Involving dementia patients and their families. Medical service systems are provided in cooperation with Medical Center for Dementia, Dementia support doctor and Family doctor (GP). It is fundamentally important to provide a comprehensive care system for the demented elderly and their family caregivers. For this purpose, it is important to work in close cooperation with medical, social and informal services in their community.

SP25 215-2

PRESENT STATUS AND PROSPECT IN DEMENTIA CARE IN KOREA

Ki Woong KIM (*Department of Neuropsychiatry, Seoul National University Bundang Hospital, Korea*)

Korea has the quickest aging rate in the world. It will take only 26 years for Korea to move from an ageing society to a super-aged society. The current number of dementia patients in Korea is about half a million, but expected to be doubled every twenty years, reaching 1 million in 2025 and 2 million in 2043. The current annual national dementia cost is about 9 billion USD, but expected to be doubled

every 10 years to reach about 81 billion USD in 2050. Furthermore, the rapid industrialization of the past four decades has brought seismic changes in the structure and value of Korean families, and resulted in care-crisis for dementia patients. In the last two decades, Korea has implemented several key policies on dementia. In 1996, the first public long-term care hospital opened based on the Welfare of the Aged Act. In 2007, the National Long-term Care Insurance and the National Dementia Early Detection Program were launched. In 2008, the first National Dementia Plan was established. In 2012, the Dementia Management Act (DeMA) went into effect and Seoul National University Bundang Hospital was designated as the National Institute of Dementia (NID). With the NID as the headquarter, the Dementia Service Delivery System that comprises of Regional Dementia Centers and Local Dementia Counseling Centers will be established around the country. The NID will fight against dementia in collaboration with the government, academic societies and NGOs using 25 key strategies in 5 areas including care, education, infra-building, research and network. Keywords : Dementia, Korea, Prospects

SP25 301
SAMSUNG INTERNATIONAL SYMPOSIUM "ENCORE LIFE, ENCORE CAREER"

SP25 301-1
THE BIG SHIFT: MAKING THE MOST OF THE LONGEVITY REVOLUTION
Marc FREEDMAN (*Civic Ventures, USA*)

Tens of thousands of individuals in America, Asia, and Europe are turning 60 each day, part of a demographic revolution that is reshaping the globe. For the most part, this transformation is portrayed as a problem, a source of growing dependency, declining innovation, and coming generational strife. What's more, we're told that these outcomes are inevitable, that demography is destiny--and despair. But there is an alternative to this grim prospect. It's time to muster a vision and a blueprint for the graying of society that is built around tapping the productive potential and generativity of older people, one that holds the potential to turn the purported longevity paradox--good for individuals, bad for the nations--into a vast payoff, now and for generations to come.

SP25 301-2
EXTENDING WORKING LIVES ? CHALLENGES AND SOLUTIONS IN THE UK
Tom WRIGHT (*Age UK, United Kingdom*)

Like Korea, the UK is experiencing a longevity revolution. Through our knowledge hub, Age UK is at the fore-front in identifying, collecting and presenting research evidence to identify the challenges which face our ageing workforce and to create solutions to meet these challenges. In this symposium, we shall present some of this evidence and demonstrate how Age UK, the largest charity for older people in the UK, uses evidence to provide solutions to improve the working lives of older people. The UK, along with much of the developed world, has an ageing workforce. Both longevity and healthy longevity are increasing, though at different rates. With these increases and the rise in State Pension age, more people will need to remain in work for longer. This represents both a challenge and an opportunity for policy makers, employers and individuals alike. The evidence shows that at present far too many people in, or approaching, later life want to work, but find their prospects of doing so restricted. It is Age UK's position that that everybody who chooses to work, and who is capable of doing so, should not be limited because of their age. From the individuals'

perspective, there are significant barriers to working longer. Age discrimination is rife, particularly in recruitment, and older workers are all too often rejected from job opportunities without being given a chance to demonstrate their skills and expertise. This situation will only improve if both Governments and employers must do more to reject the age-based stereotypes, create age-friendly workplaces and change organizational practices. Such changes include offering more opportunities for flexible working that offer a genuine response to the challenges people face in their personal lives, for example meeting caring responsibilities; and improving the standard of back-to-work support on offer, so that people who find themselves out of work have the best possible chance of finding alternative employment.

SP25 301-3
WORK AFTER RETIREMENT FOR KOREANS IN THEIR 50S
Jisung PARK (*Retirement Research Center, Samsung Life Insurance, Korea*)

Koreans' aspiration for work is among the highest in the world. Especially, most of the Korean baby boomers in their 50s hardly think of retiring but wish to continue working after leaving their job because they are not prepared well for their later years. Based on the survey results that the Retirement Research Center at Samsung Life conducted in 2012 (sample size of 1,000), this presentation explores the needs of the Korean wage earners in their 50s on work after retirement, experiences of job-seeking efforts, and expectations for work opportunities. Policy implications will be suggested to both public and private sectors.

SP25 301-4
WORK OPPORTUNITIES FOR THE KOREAN BABY BOOMERS
Kyunghee CHUNG (*Population Strategy Research Division, Korea Institute for Health and Social Affairs, Korea*)

Baby boomers, who account for 14.6% of the Korean population, are different from the previous generation as they lived through rapid socioeconomic changes in their early years. Their uniqueness calls for a paradigm shift in policy on baby boomers and their quality of life. A clear picture of the baby boomers' characteristics and policy profiles for them is critical in discussing and implementing effective policy options. This study consists of four parts. The first part reviews major surveys conducted to examine the characteristics of baby boomers, especially compared to the living profiles of older persons. Because of the compressed socioeconomic development in Korea, we are witnessing rapid enhancement in human capital by age and changes in the structure of industry. The second part analyzes retirement patterns of the baby boomers and reviews the projection regarding labor supply and demand in the context of population ageing. The third part examines recent policy responses to the baby boomers' retirement and ageing. Main visions, objectives, policy tasks suggested and implemented by the government are reviewed. The last part discusses policy options to promote their economic activities and to help them stay longer in the labor market.

SP25 301-5
LEISURE CAREER DEVELOPMENT AND NEW JOB OPPORTUNITIES
So-Young YOON (*Leisure Policy Research Center, Korea Culture & Tourism Institute, Korea*)

Greeting the '100-year-old generation', we start having been interested in living long and happy. The life-cycle of which getting education in

adolescence, going out to the society, getting a job, building one's career, retiring at about 60, and passing away after decades is not generalized anymore. It is now important to actively participate in leisure activity as a crucial part of the life from the early phase of the life-cycle. It is also important to maintain it throughout the entire life-cycle. After retiring, especially, one can find one's life worth living by continuing leisure activity and keeping social relationships. It is positively evaluated that it cannot only satisfy one's personal pleasure through leisure activity, but also expand social relationship network, and form the social integration. There is also an advantage that the specialization process through leisure activity can create new jobs. That said, it is expected that from now on, the importance of one's leisure activity gets emphasized, so that from one's young age, one can experience more, develop it to one's career, and make personal, social, and financial profits. Therefore, this study tries to look at the process of leisure career development, suggest new methods that can last leisure career through club activities and social community activities. It also tries to introduce some cases which were connected straight to new jobs.

SP25 315

KOREA-JAPAN FORUM ON GLOBAL AGEING AND EAST ASIA: ADMINISTRATION OF THE LONG-TERM CARE FACILITIES II

SP25 315-1

CURRENT TREND AND POSSIBILITY IN MANAGEMENT OF LONG-TERM CARE FACILITIES IN KOREA

Eun Young LEE (*Korea Institute of Care Service Quality, Gye Myeong Welfare Foundation, Korea*)

In recent years, Korean Long-Term Care (will be referred as LTC hereafter) facilities are experiencing a new environment like severe market competition with introduction of 'Act on LTC insurance for the Aged' in 2008. As of today, February in 2012, our current number of LTC facilities across the country is 4,182 (5.6% of total elderly population) which increased by 2.5 times more in numbers compared to 1,717 (2.9% of total elderly population) on June of 2008 when the law began to enforce. In one sense, it's positive because this oversupply could give more opportunities to ordinary people who are potential clients of facilities for various facilities and services provided. On the contrary, it could be challenging for LTC service providers who are likely to face financial difficulty if they are left out in competition. And LTC facilities are given with more strengthened responsibility to provide high quality care service to clients in pursuit of customer satisfaction beyond fulfilling service needs of clients and users. It's time to make efforts to maximize organizational performance of LTC facilities toward the goal of customer satisfaction. However, in the realities of LTC facilities are put, unlawful things like 'price competition', 'client inducement' have been often surfaced instead of quality enhancement of LTC facilities that had been expected. For organizational performance perspective, facilities have been pressured to emphasize on 'more profit generation', 'expenditure control', 'financial performance' rather than 'client change and satisfaction' thus causing labor quality of facilities to get worse and service level facilities and services provided has been wider across the country. In order to operate LTC facilities toward the direction to increase organizational performances and service quality provided to clients, it's desperately necessary to introduce new management techniques by overcoming passive and bureaucratic management system. As such, it could provide clients with optimal services caused by reasonable organizational management that creates clients satisfaction while maintaining social work ideal and philosophy. Through this

research, it's observed the present conditions the LTC facilities have undergone like politic environment and market changes while referring to a few business models of Business and Administration industry in recent years. Based on the results above, I would like to make following suggestions, First, the key to successful organizational performance enhancement of LTC facilities is in the leadership change. In order to become an organization which is able to achieve set target and focus on customer, organization's leadership needs to make democratic communication. Secondly, LTC facilities needs to strengthen information management function such as information collection and analysis abilities. LTC facilities should respond to clients' needs that are very changeable to elderly related policy agenda of our society. For that to happen, it's required for LTC facilities to make detailed analysis in local elderly population trends, their application to LTC services, status of local LTC facilities, service satisfaction and complaints of users and etc. Thirdly, LTC facilities are required to be changed toward users (clients) and market focused organization. As in the research result, customer and market focus variable is confirmed to be directly producing business performance. Customers like elderlies, guardians, internal customers such as employees, volunteers, sponsors, partner corporate need to be classified in more detail and then their evaluation and feedback must be reflected in service monitoring system and if necessary changed to meet the needs of each customer. Fourthly, service provision process needs to be monitored on a regular basis in each LTC facilities. First of all, various manual related to all activities that occurred in the facilities like service delivery, care delivery, care risk management and performance need to be developed in more detail and standardized which could lead to increased quality. LTC facilities' overall operation system need to be improved in order to deliver satisfaction and happiness to clients by increasing their service quality. And operation system improvement should be involving the whole facilities which need to be brought by continuous innovation and it has to be as Long-Term transition process rather than one time event. Rational reform of the service delivery process would result in organizational performance increasing. Overall monitoring in customer, market, human resources, performance process and field based problem resolution are expected to bring excellent organizational performance enhancement.

SP25 315-2

ADMINISTRATION OF UNIT CARE FACILITY IN JAPAN

Yukitsumu OKUBO (*Social Welfare Juridical Person KOSEIKAI, Japan*)

Group home care for elderly people with dementia is introduced and institutionalized in Japan 1998. Since then, enriching the mind of resident has become an important idea in nursing homes, and they began to provide care that residents can feel "safe", "inspiring", and "comfort" in their daily lives. The traditional way of care in nursing homes was to provide an "efficient", "fast" and "equal" service. Staffs in large scale facilities were busy to follow work flows and sometimes they felt desperate between the gap of ideal and reality. To change the feelings of despair to hope, the unit care started as a practical breakthrough. After an introduction of Long-Term Care Insurance in 2000, the unit care has started to individual care in nursing homes. Private and unit type nursing homes are established and institutionalized in Japan and the efforts of unit care are progressing. However, managing a private and unit type nursing home is financially difficult now. Because its construction costs are high and it requires more staffs to provide intensive individual care, and nursing care compensation is not so different comparing to that of a traditional multiple bedroom type nursing home. Based on the data of

“Management fact-finding survey in 2011” by General Incorporated Association National Private and Unit type Facilities Promotion Council, I analyzed the management performance according to management indicators of private and unit type facilities in the following four perspectives; profitability, functionality, rationality and stability. And I'd like to explain on the current situation of the management, problems and prospects of unit care facilities from the major changes of the management indicators.

SP25 412

BUSSE AWARD IN BIOMEDICAL SCIENCE LECTURE

SP25 412-1

HUMAN EXCEPTIONAL LONGEVITY

Thomas PERLS (*Medicine and Geriatrics, Boston University Medical Center, USA*)

Studies of human longevity or exceptional longevity have been marred by inconsistent definitions of what human subjects are being studied in terms of their degree of rarity or selection. The importance of such precision will be discussed, including taking into account birth cohort, in discovering phenotypic and genetic variants associated with extreme survival. Survival to extreme old age (e.g. the oldest 0.1%) is associated with a compression of morbidity and disability towards the end of life. The genetic component of influencing survival at extreme old age increases with more and more select survival beyond the oldest 1% of the population and a number of recent genetic discoveries are detailed. Such survival entails the influence of many genetic variants that individually have modest effects but as a group, they have a powerful influence.

SP25 415

KOREA-JAPAN FORUM ON GLOBAL AGEING AND EAST ASIA: MANAGEMENT OF DEMENTIA I

SP25 415-1

DIRECTION OF THE NATIONAL DEMENTIA STRATEGY IN THE CONTEXT OF THE ESTABLISHMENT OF A COMMUNITY-BASED INTEGRATED CARE SYSTEM: EARLY DIAGNOSIS AND INTERVENTION

Shuichi AWATA (*Tokyo Metropolitan Institute of Gerontology, Japan*)

The Japanese Ministry of Health, Labor, and Welfare released the Direction of the National Dementia Strategy on 18th June 2012 and the Five Year's Plan for Promoting Dementia Strategy (Orange Plan) in 5th on September 2012. These are regarded as the national plan for establishment of community-based integrated care systems supporting the lives of people with dementia and their families at this stage. In the context of community-based integrated care systems, it is especially important to establish the early diagnosis and intervention system through addressing prejudice against dementia among general population, strengthening the function of the Community-based Integrated Support Centers, promoting the capacity of Primary Care Physicians, placing adequate number of the Medical Centers for Dementia and/or comprehensive memory clinics, and creating the local strategy for integration of community care.

SP25 415-2

SEOUL DEMENTIA MANAGEMENT PROJECT (SDMP): A COMMUNITY-BASED INTEGRATIVE MANAGEMENT SYSTEM FOR DEMENTIA

Dong Young LEE (*Seoul National University Hospital, Seoul*)

Metropolitan Center for Dementia, Korea)

The purpose of this presentation is to briefly describe background, organizational scheme, activities, and achievements of the Seoul Dementia Management Project (SDMP) and introduce the Seoul Metropolitan Center for Dementia (SMCD), which is responsible for planning and managing the overall process of the SDMP. The SDMP is a “community-based integrative management system for dementia” and started on December 2006 in Seoul, Korea. The project encompasses public education, prevention programs, early detection and early therapeutic interventions, as well as providing proper care services, for dementia and high risk individuals. All activities related to the SDMP are closely linked to online case-registration system. The SDMP places special emphasis not only on integrating medical or public health approaches with various welfare services, but also on utilizing pre-existing community resource. Besides the SMCD, the Supporting Center for Dementia (SCD), which functions as a local executive unit of the SDMP, was established for each of the 25 districts in Seoul. The SDMP is expected to be a leading model for a community-based dementia management system that could be a reference to other domestic or international cities.

SP25 515

KOREA-JAPAN FORUM ON GLOBAL AGEING AND EAST ASIA: MANAGEMENT OF DEMENTIA II

SP25 515-1

CARE FOR INDIVIDUALS WITH DEMENTIA IN JAPAN

Mio ITO (*Human Care Research Team, Tokyo Metropolitan Institute of Gerontology, Japan*)

Behavioral and Psychological Symptoms of Dementia (BPSD) is recently recognized as “disagreement behavioral message” from the patients, which makes healthcare provider easier to understand the situation and leads to better care for them. Humanitude, created by Gineste and Marescotti in France, is the novel care method based on the philosophy of human attitude. It was implemented to hospitals in Japan in 2012 and widely accepted by nurses, care givers and physicians who have difficulties taking care of demented patients. In this session, we will introduce “disagreement behavioral message” and Humanitude to nurses and care staff in Asian countries.

SP25 515-2

MEDICAL TREATMENT & LONG-TERM CARE FOR DEMENTIA IN KOREA : TOWARD INTEGRATION

Seung-ho RYU (*Konkuk University Medical Center, Korea*)

Korea is the most rapidly aging society in the world. The rapid aging of the population results in the increase of the mental illnesses of the elderly such as dementia. But the traditional support system which was maintained mainly by the family and community is rapidly collapsing by the rapid industrialization and urbanization of the Korean society and the rapid nuclearization of the Korean family. So there is an urgent need to establish a system to deal with this problem of dementia. The Korean government has started the long-term care system for the elderly people, which is partially dealing with the welfare services for dementia. For more efficient management of dementia, the welfare service such as long-term care service should be more integrated with the medical service for dementia. The author will suggest the way for the integration between medical services and long-term care services for dementia. The pathway from linkage through coordination to full integration will be discussed.

Wednesday June 26th

SP26 205

GARY ANDREWS MEMORIAL SYMPOSIUM

SP26 205-1

REFLECTIONS ON THE LIFE AND WORK OF GARY ANDREWS

Melinda ANDREWS, Wendy ANDREWS (*Center for Ageing Studies, Australia*)

This is not a scientific paper but rather a reflection on the life and work of Gary Andrews as seen through the eyes of Melinda, his daughter with photos supplied by Wendy, his wife. Melinda Andrews worked with her father on and off for a total of ten years and will share some of her experiences as well as outlining some of Gary Andrews' career achievements before showing a slide show of photos spanning his life.

SP26 205-2

THE IMPROVABILITY OF AGEING OVER THE LIFE COURSE

Hal KENDIG (*Centre for Research on Ageing Health and Wellbeing, Australian National University, Australia*)

A societal goal of ageing well requires a vision and knowledge as to how quality of life can be fostered by enabling opportunities and overcoming adversity over the life course. The IAGG Research Agenda on Ageing, led by Professor Gary Andrews, outlined how research evidence can contribute to constructive responses to individual and population ageing in developed and developing countries. In Australia the National Research Priority for Promoting and Maintaining Good Health includes goals of A Healthy Start in Life, Ageing Well and Ageing Productively, and Strengthening Australia's Social and Economic Fabric. This new view of ageing, broadly in line with the social determinants of health, has been difficult to achieve in the contest for research funding and policy development. Further evidence can underpin inclusion of ageing in health promotion and employment strategies and policy initiatives such as Living Longer, Living Better reforms in aged care. This paper draws on three main information sources to report on the improvability of ageing experiences. The Australian Survey of Social Attitudes (AUSSA) 2009-2010 reveals sympathetic but nonetheless negative public views on the capacities of older people. The Life History and Health (LHH) Survey 2010-11 demonstrates the importance of childhood and mid life socio-economic opportunities for productivity and wellbeing among babyboomers. The Melbourne Longitudinal Surveys of Healthy Ageing (MELSHA) 1994-2011 demonstrate substantial variability and change in health and wellbeing as people move through later life. Findings are reported on critical factors in enabling individuals and social groups who have been able to overcome adverse circumstances earlier in life and as well as health and social losses in later life. The address concludes by developing an ethical, social and economic case for an inclusive life span approach to policy development attentive to social justice and social change. Keywords : international gerontology, longitudinal research, developing countries

SP26 205-3

INTERNATIONAL PRIORITIES IN AGEING RESEARCH; GLOBAL AND EUROPEAN

Alan WALKER (*Sociological Studies, University of Sheffield, United Kingdom*)

This paper will look first at the pioneering work that Gary Andrews did on the UN/IAGG Research Agenda on Ageing for the 21st Century. In particular it will show how the agenda reflects the Madrid International Plan of Action on Ageing and, therefore, represents a truly global approach to research. This section will draw on Gary's own analysis of the relationship between the UN/IAGG ageing research agenda and those of national and regional bodies. The second part of the paper will focus on the most recently produced international ageing research agenda, the European Road Map. Following a brief description of the Road Map its contents will be compared to the the global UN/IAGG agenda.

SP26 301

WHO SYMPOSIUM ON DEVELOPING INDICATORS FOR WHO AGE-FRIENDLY CITIES: MEASURING THE AGE-FRIENDLINESS OF CITIES AROUND THE WORLD

SP26 301-1

THE WHO AGE-FRIENDLY CITIES INDICATOR DEVELOPMENT PROJECT

Megumi KANO¹, Louise PLOUFFE², Katsunori KONDO³, Katrin ENGELHARDT⁴, Amit PRASAD¹ (*1. Centre for Health Development, World Health Organization, Japan; 2. Policy Research, International Longevity Centre, Brazil; 3. Center for Wellbeing and Society, Nihon Fukushi University, Japan; 4. Western Pacific Regional Office, World Health Organization, Philippines*)

Introduction : The WHO published a guide on essential features of an 'age-friendly' city, and has been promoting political commitment and action at the municipal level to create more age-friendly cities and communities, globally. In order to assist in the planning, monitoring, evaluation and bench-marking of age-friendly cities, WHO has taken the initiative to develop Age-Friendly City Indicators. Method : An extensive review of existing indicators of health and the broader determinants of health related to the older adult population was conducted. An international expert meeting was convened to review these indicators and identify candidates to be included in a core set of Age-Friendly City Indicators. A preliminary set of 67 indicators selected by the expert group was piloted in several cities and countries around the world to test their feasibility and utility. Results : Based on the pilot study results, the 67 indicators were ranked according to their ratings on ten criteria, including validity, replicability, sensitivity to change, social acceptability and others. The ranking results were used to narrow down the set of indicators with additional consideration to ensure coverage of the key domains of an Age-Friendly City. Conclusion : WHO has developed a set of core indicators to evaluate Age-Friendly Cities through a process involving a comprehensive desk-top review, expert consultation and multi-site piloting. Next steps include further refinement of the core indicators and developing guidance on how to use the indicators. Keywords : Age-Friendly City, Indicators, WHO

SP26 301-2

HEALTHY CITIES IN THE WESTERN PACIFIC REGION: INTEGRATING AN AGEING-FRIENDLY FOCUS

Katrin ENGELHARDT (*Health Promotion and Noncommunicable Diseases, WHO, Philippines*)

Introduction : Healthy Settings, including Healthy Cities, offer effective ways to address public health priorities. In 2010, the Member States of the WHO Western Pacific Region adopted a resolution on healthy settings (WPR/RC61.R6) noting that recent rapid economic, environmental and social changes call for scaling up and revitalizing

the Healthy Cities and Healthy Islands approaches in the Region. Method : A Regional Framework for Scaling up and Expanding Healthy Cities 2011-2015 was subsequently launched in order to promote and strengthen the Healthy Cities approach to maximize its potential positive impact on the urban living environment and lives of urban residents. Results : An important demographic change, and a positive outcome of improved public health, education and healthcare over the past century is that in many countries - and urban areas - people are living longer. This is one of the challenges that cities - as settings for health promotion - face. The Healthy Cities movement needs to be proactive and adapt to this trend. An important step is to have indicators for age-friendly cities available to enable the identification of the needs of older urban populations. Conclusion : The indicators that have been developed by the WHO will be field tested in cities within the WHO Western Pacific Region. This presentation will share the results of the field test and provide recommendations for wider implementation of the indicators. Keywords : Healthy Cities Ageing

SP26 301-3

JAGES HEART: ACHIEVEMENT AND CHALLENGES

Katsunori KONDO¹, Yukinobu ICHIDA¹, Kayo SUZUKI¹, Naoki KONDO², Toshiyuki OJIMA³ (1. Center for Well-being and Society, Nihon Fukushi University, Japan; 2. Graduate School of Medicine, The University of Tokyo, Japan; 3. Community Health and Preventive Medicine, Hamamatsu University School of Medicine, Japan)

Introduction : JAGES HEART was jointly developed with the WHO Kobe Center (WKC) as indicators for Age-Friendly Cities (AFC). Here we describe its development, examine the validity of indicators, and discuss JAGES HEART challenges. Method : We developed an indicator framework comprised of 5 elements and 2 dimensions, and used 6 criteria to select 71 benchmark indicators from 238 possibilities. To harmonize with Urban HEART (Health Equity Assessment and Response Tool) developed by the WKC, we divided those indicators into health outcomes and determinants of health indicators. To examine the feasibility of data collection and validity of indicators, we administered the JAGES (Japan Gerontological Evaluation Study) survey to 100,000 older people (response rate: 66.3%) living in 31 municipalities across Japan, and analyzed correlations among indicators. Results : We narrowed down 21 core indicators that included health outcomes such as all-cause mortality and proportion eligible for long-term care insurance, and determinants of health indicators, such as proportion of people with a park or road nearby suitable for walking, participation in sports clubs, and average taxable income. There were some significant differences between school districts, such as the percentage of people who fell down, ranging from 11.8-33.9% for 65-74 year olds, which correlated with the rate of sports organization participation. Conclusion : Though many challenges remain, development of JAGES HEART is progressing and the validity has been partially examined as AFC indicators for Japanese older people. Keywords : Age Friendly Cities, Urban HEART , indicators

SP26 301-4

AGE-FRIENDLY CITY INDICATOR DEVELOPMENT: THE EXPERIENCE IN OTTAWA, CANADA

Louise PLOUFFE¹, Clara FREIRE², Dominique PARIS-MACKAY³ (1. Policy Research, Brazil International Longevity Centre, Brazil; 2. Community and Social Services, City of Ottawa, Canada; 3. Age Friendly Ottawa Project, Council on Aging of Ottawa, Canada)

Introduction : The WHO Age-Friendly Cities initiative was originally

developed to guide cities in adapting their structures and services to promote Active Ageing. Assessing baseline 'age-friendliness' in eight policy domains and monitoring and evaluating corrective action from a seniors' viewpoint and with their full engagement was the key direction of the WHO initiative. This direction was adopted by the City of Ottawa and a coalition of community organizations led by the Ottawa Council on Aging when they implemented the WHO Age-friendly Cities initiative in 2011-12, and joined the WHO Global Network of Age Friendly Communities. Because developing indicators to monitor and evaluate local age-friendly actions was an essential component for success, piloting the development of global indicators was considered a win-win opportunity. Method : Following extensive consultations with older persons, including persons from socially marginalized or minority groups, the City of Ottawa's Older Adult Plan, and the community-based Age-Friendly Ottawa developed action plans with identified goals, activities and indicators in the 8 domains of age-friendly cities. Using the indicator piloting template provided by the World Kobe Centre for the global indicators project. Results : City and community officials are assessing the proposed global indicators. in light of their relevance, adequacy and feasibility at the local level. Conclusion : It is expected that confirmation and adoption of a set of common age-friendly community indicators at the local and global level will enhance the authoritativeness of the initiative locally and enable WHO to evaluate and sustain the Age Friendly Cities initiative globally. Keywords : active ageing age-friendly cities, indicator development project

SP26 301-5

STATUS AND FUTURE PLAN OF AGE-FRIENDLY CITY SEOUL: ITS EVALUATION AND DEVELOPMENT PLAN

Sangchul LEE (R&D Department, Aging Policy Team, Seoul Welfare Foundation, Korea)

The AFC background is that Seoul is getting old very fast and emerging as the biggest social and economic issue in the city. It could be a so-called "Age-Quake." So, a comprehensive, strategic response is mandatory. Problems caused by the fast pace of population aging in Seoul can be summarized as follows: First, the demand for healthcare, welfare and safety keeps increasing. Second, the economic growth is expected to slow down. Third, the social status of the elderly is deteriorating. Our new policies will be implemented in three directions. First, our policy areas for the elderly will expand from just traditional welfare programs to virtually all the areas covered by the city administration. Second, our new elderly policies will cover not just the population of over the age of 65 as stipulated by the Elderly Welfare Act but also the baby boomers born between 1955 and 1963. Third, our new policies will custom-tailor our services depending on their age, health and income among others. We are promoting the establishment of an age-friendly city in four stages. Step 1: the institutional support through the update of a city ordinance in line with a changed environment. Step 2: the organizational reshuffle with the mayor taking the helm of the affairs. Step 3: the publication of guidelines based on the findings of in-depth surveys and interviews. Step 4: the establishment of action plans and the establishment of evaluation systems

SP26 304

NPS SYMPOSIUM ON WAYS TO STRENGTHEN OLD AGE INCOME SECURITY

SP26 304-1

VULNERABLE PEOPLE IN PUBLIC PENSIONS: IDEAS, INSTRUMENTS AND CONTRADICTIONAL MECHANISMS IN

EUROPE

Patricia FRERICKS (*Faculty of Economic and Social Sciences, Centre for Globalisierung and Governance, Hamburg University, Germany*)

European welfare states are so-called mature welfare states. Starting in the 19th century they “matured” across the western part of the continent after the Second World War. However, their design, aims and effects widely differ from one another. Therefore, established welfare systems have been inclusive in different ways. In addition, European welfare states change dramatically since the 1990s, pointing towards convergence of the continent’s systems as well as to a further diversification of them. The examination of coverage (3) I will combine both with the analysis of the level of benefits (2) to gain insights into the essence of coverage over the life-course, and with the analysis of the states’ objectives (1) in order to understand current shifts in pension coverage (‘marketization’). I will refer to different stages of European pension systems to show their ideas, instruments and contradictory mechanisms in terms of coverage and the changing definition of the vulnerable in the systems’ “adulthood” and today.

SP26 304-2

A FEASIBILITY STUDY ON THE MINIMUM GUARANTEE PENSION SCHEME IN JAPAN

Katsuya YAMAMOTO (*Department of Social Security I, National Institute of Population and Social Security Research, Japan*)

Recently, the young are compelled to work as non-regular workers in Japan, and as they don’t have the enough pensions in the future, the newly problem; the extension of coverage to non-regular workers in employees’ pension system is emerging. In this paper, we attempt to estimate the cost of the former ruling party’s pension blueprint. However, the key of success to introduce the MPG is the working and economic condition. If Japanese economy doesn’t improve significantly, the level of consumption tax for the MGP is to raise 20% more, and making the basis of low-income 1.8 million yen to 1.0 million yen, we need to raise 14%. It is the long way for reform. Keywords : minimum guarantee pension, actuarial simulation, non-regular worker, consumption tax

SP26 304-3

EXTENSION OF COVERAGE TO VULNERABLE PEOPLE IN PUBLIC PENSION

Hosun YOO (*National Pension Research Institute, Korea*)

The purpose of the study is to examine the coverage of the Korean National Pension and suggest alternative policy to extend the coverage especially focused on women. Because the coverage of women in Korean National Pension is lower than that of man. We suggest alternative policy, especially, focused on credit system for women.

SP26 304-4

SENIORS LIFE DESIGN IN POSITIVE-WELFARE ERA

Yoko HOSOE (*Joetsu University of Education, Japan*)

1. Economical Globalization
 - Severe changes in Japanese society
 - The purpose of life design (life planning)
 - The life plan is subject to change
2. Seniors Life Design until now
 - Purpose
 - Objects

- Method
3. Change of welfare in Japanese society
 - Change to positive welfare from negative welfare
 - Causes for switching to positive welfare era
 4. Changes of situation and conditions in Japanese Society
 - Changes of population structure
 - Changes of economical conditions
 - Changes of life environment
 5. New life design ability becomes necessary.
 - Cultivation of high-level life management ability.
 - New Senior life management areas
 6. Necessary to expand to private, public, and life-philosophy (concept) area
 - Private
 - Public
 - Life-philosophy (concept) area

SP26 304-5

FINANCIALLY LITERACY AND RETIREMENT PLANNING OF MARRIED COUPLE

Wonah YOON (*Samsung Life Insurance, Korea*)

We examine financial literacy in Korea, wherein we demonstrate that financial literacy is particularly low among the young, women, and the less-educated. As result, we show that people who score higher on the financial literacy questions are also much more likely to plan for retirement.

SP26 304-6

LATER LIFE PLANNING IN THE PUBLIC SECTOR

Heayoung SUNG (*National Pension Research Institute, Korea*)

It is necessary to build up later life planning in individual and family level. The reason is that the period of after retirement is longer than before and people cannot expect any support from their children due to a change of support consciousness. Because of the complexity of social system and the diversity of welfare systems, the elderly, women and low-educated groups are very vulnerable to plan their own later life. Therefore it is becoming more important to provide counseling, pension education and information about government services. As the earning replacement rate of national pension reduced by 40% due to the 2007 pension reform, it is required to guarantee a disposable income including retirement pension and individual pension. In order to support these process, the role of the public sector becomes very important. The purpose of providing later life planning in the public sector is to assist people in deciding the priority of their own life and to be aware of the importance of preparing for old age. The National Pension Service (NPS) has provided later life planning service to its insured people from 2008. Each area of later life planning is divided into financial planning, health, jobs, family relationships and leisure. The financial planning is the most important part of later life planning and national pension is a basic source of income of old age. The NPS tries to help people to get their retirement pension and individual pension in addition to national pension. Life models after retirement are inevitably different from individuals because family types or lifestyles are more various than ever before. Therefore later life planning in the public sector should be focused on improving an ability of planning their own life.

Deadline for Abstract Submission: January 20, 2014

IANA 2014

International Academy on Nutrition and Aging

**Nutrition and Aging:
From Cells to
Body Systems and
Populations**

July 10 & 11, 2014

Hotel Albuquerque at Old Town,
Albuquerque, New Mexico, USA

som.unm.edu/2014/IANA.html

For More Information Contact: Kathy Breckenridge, Program Coordinator • 001-505-272-3942 • kbreckenridge@salud.unm.edu

Presented by:



Topics:

**Nutrition and Age
Related Disease
Nutrition Function
and Aging**

POSTERS

Tuesday June 25th

PP25 B-001

IMPACT OF THE HELICOBACTER PYLORI INFECTION ON THE ALZHEIMER'S DISEASE SEVERITY: A STUDY ON MURIN MODEL

Claire ROUBAUD BAUDRON¹, Suzanna PIETROPAULO², Christine VARON³, Lucie CHAMBONNIER³, Alice BUISSIONNIERE³, Nathalie MACREZ⁴, Valerie FENELON⁵, Isabelle BOURDEL MARCHASSON⁶, Yoon CHO⁷, Francis MEGRAUD³, Nathalie SALLES⁸ (1. INSERM U 853, Univ Bordeaux Segalen, Pole de Gerontologie Clinique, CHU Hopitaux de Bordeaux, France; 2. INCIA, Univ. Bordeaux 1, CNRS UMR 5287, France; 3. INSERM U 853, Univ. Bordeaux 2, France; 4. CNRS UMR 5293, Univ. Bordeaux 2, France; 5. INSERM U862, Univ. Bordeaux 2, France; 6. Pole de Gerontologie Clinique, CHU Hopitaux de Bordeaux, France; 7. INCIA, Univ. Bordeaux 1, France; 8. INSERM U 853, Univ Bordeaux Segalen, Pole de Gerontologie Clinique, CHU hopitaux de Bordeaux, France)

Introduction : Helicobacter pylori infection seems to play a critical role in extragastric diseases including Alzheimer's dementia (AD). We found that H. pylori infection was associated with a higher cognitive impairment in AD patients. Chronic H. pylori infection could worsen AD lesions via atherosclerosis and inflammation. Thus, our aim was to infect AD transgenic (Tg) mice and their wild type (WT) littermates by Helicobacter species in order to explore their cerebral and behavioural lesions. Method : In a first study, C57Bl/6 mice were infected during 18 months with H. pylori SS1 strain (n=6) or Helicobacter felis (n=6) or left uninfected (n=6). In a second study, two groups of Tg mice (APP^{swe}+PS1^{de9}) and their WT littermates were infected with SS1 (n=75) or H. felis (n=75) or uninfected (n=75) and sacrificed after 3, 6 and 9 months. For the 2 studies, brain and stomach were processed to detect cerebral amyloid plaques (thioflavine S stain), astroglial and microglial cells (immunohistochemistry anti-GFAP and anti-IBA1 respectively) and gastric lesions (hematoxylin and eosin stain). For the second study only, spatial memory, social interaction and anxiety were tested before sacrifice. Results : In the first study, no amyloid plaque was observed in C57Bl/6 infected mice but astroglial activation tended to increase in the hippocampus of these mice compared to non-infected mice. Behavioural and histological experiments related to the Tg mice are currently in progress. Conclusion : Based on epidemiological arguments supporting an AD - H. pylori association, this murine model should provide elements on the impact of H. pylori infection on the brain. Keywords : Helicobacter pylori, Alzheimer's dementia, murin model

PP25 B-002

ALTERATION IN CELL CYCLE REGULATION CAN BE THE UNDERLYING CAUSE OF COCKAYNE SYNDROME

Mi-Sun KANG¹, Sung-Lim YU², Ho-Yeol KIM¹, Choco Michael GOROSPE³, Sung-Keun LEE¹ (1. Department of Pharmacology, College of Medicine Inha University, Korea; 2. Inha Research

Institute for Medical Sciences, College of Medicine Inha University, Korea; 3. Department of Molecular Biomedicine, Inha University, Korea)

Introduction : RAD2, a yeast counterpart of human XPG gene, encodes a well known DNA repair related endonuclease that specifically cleaves the 3' side of a DNA lesion. RAD2 is also known to be involved in transcription elongation. Defects of XPG gene cause xeroderma pigmentosum (XP) and/or Cockayne syndrome (CS), two distinct hereditary human disorders. XP is characterized by increased UV sensitivity and predisposition of cancer incidence due to the accumulation of damaged-DNA, while CS is characterized by growth retardation, neurological abnormalities, and premature aging without increased cancer rate. Transcriptional defects have been suggested as the cause of CS, but it is still elusive. Method : Using yeast genetics, we have examined a novel function of RAD2 in CS. Results : Over-expression of RAD2, which mimics induction of RAD2 expression in response to DNA damage, caused cell cycle arrest. Further analysis revealed that the C-terminal region of Rad2p is responsible for cell cycle arrest. Later, we examined the phenotypes of rad2 C-terminal deletion mutant (rad2CΔ) that resembles the C-terminal truncation of XPG in XPG/CS patients caused alteration in cell cycle after irradiation of ultra violet (UV) light. rad2CΔ mutant exhibits abnormal cell morphology, a defective α-factor response, shortened lifespan and cell polarity defect. Conclusion : These results implicate that post-UV cell cycle arrest due to the C-terminal truncation is the fundamental cause of XPG/CS. Keywords : RAD2/XPG, Cockayne syndrome, cell cycle regulation

PP25 B-003

INCREASED TH17 DIFFERENTIATION IN AGED MICE IS SIGNIFICANTLY ASSOCIATED WITH HIGH IL-1B LEVEL AND LOW IL-2 EXPRESSION

Mi-Ae LIM¹, Jennifer LEE¹, Jin-Sil PARK¹, Joo-Yeon JHUN¹, Young-Mi MOON¹, Mi-La CHO¹, Ho-Youn KIM² (1. Rheumatism Research Center, The Catholic University of Korea, Korea; 2. Division of Rheumatology, Department of Internal Medicine, Konkuk University, Korea)

Introduction : Aging has been reported to be associated with changes in immune function. Although frequent infection and development of malignancy suggest the decline of immune function with aging, changes toward proinflammatory conditions also develop at the same time. We investigated changes in the Th17 population during aging to elucidate a possible mechanism for this response. Method : Splenocytes were isolated from 2-month-old (young) and 20-month-old (aged) mice. The frequency of IL-17-producing cells was measured by flow cytometry. The expression of IL-17 and Th17-related factors at the mRNA level was measured by RT-PCR. The expression of IL-17 and IL-1β in spleen tissues was additionally assessed by confocal microscopy. Results : The proportion of IL-17-producing CD4⁺ T cells was higher in the splenocytes of old mice than those of young mice. In addition, the expression of retinoic acid receptor-related orphan nuclear receptor gamma t (RORγt) and other

Th17-related factors was increased in the splenocytes of aged mice compared to those of young mice. The expression of IL-1 β , which was reported to promote Th17 differentiation, was higher in the aged mice. CD4+ T cell expression of IL-1R was also higher in the aged mice, suggesting that the CD4+ T cells of the aged mice could more easily differentiate into Th17 cells in response to IL-1 β . When an anti-IL-2 antibody was applied, the proportion of IL-17-producing cells increased more prominently in the young mice. Conclusion : The proportion of Th17 cells was increased in the aged mice. Keywords : aging, Th17

PP25 B-004

VASCULAR DYSFUNCTION AND ALZHEIMER'S DISEASE

Alice BREINING¹, Chantal BOULANGER², Veronique FAUCOUNAU¹, Marc VERNY¹, Jean-Sebastien SILVESTRE², Jacques BODDAERT¹ (1. Geriatric Department, Peri-Operative Unit, Pitie-Salpetriere Hospital, APHP, UPMC Paris 6, France; 2. U970, INSERM, France)

Introduction : Search for new diagnostic or prognostic tools in Alzheimer's disease (AD) is challenging. Since current evidence suggests a role for cerebro-vascular dysfunction in AD, the aim of our study was to analyze the interest of endothelial dysfunction biomarkers in AD patients. Method : Community dwelling older persons who present to our reference center with a memory complaint were included. AD diagnostic and prognostic value of 3 biomarkers were studied in blood sample: endothelial microparticules (EMP), circulating endothelial cells (CEC) and endothelial progenitor cells (EPC). Results : 132 patients were included and classified into three groups: patients with dementia (n=84), with Mild Cognitive Impairment (n=11) and control patients (n=37). Sixty two patients had a neurodegenerative dementia, among which 48 (57%) had AD, 20 a vascular or mixed dementia (24%) and 2 patients undetermined dementia. No significant difference was found in the level of EMP, CEC and EPC between patients without or with dementia, whether it was a neurodegenerative or vascular dementia. Those results were not modified after adjusting on cardiovascular risk factors. No correlation was found between the level of EMP, CEC and EPC and rapid cognitive decline during the following year. Conclusion : Endothelial dysfunction biomarkers do not allow to diagnose dementia, nor its aetiology. Nor do they allow to predict cognitive decline. Further studies on endothelial dysfunction markers in the cerebrospinal fluid open new perspectives on diagnosis of dementia. Keywords : Alzheimer, microparticules, biomarker

PP25 B-005

CROSSING HUMAN APP WILD TYPE MICE WITH PS1(M146V)KI MICE REVEALS A β DEPENDENT SYNAPTIC DEFICITS

Kiyoka KINUGAWA¹, Noemie NOEL², Hadi ZANJANI², Mark MATTSON³, Jean MARIANI², Catherine ROVIRA² (1. Functional Exploration Unit, Charles Foix Hospital, Assistance Publique des Hopitaux de Paris, France; 2. UMR7102 Neurobiologie des Processus Adaptatifs, University Paris 6 Pierre and Marie Curie, Centre National de la Recherche Scientifique, France; 3. Laboratory of Neurosciences, National Institute on Aging Intramural Research Program, USA)

Introduction : Alteration of hippocampal synaptic efficacy is thought to be one of the earliest events in Alzheimer's disease. Early onset Alzheimer's disease is mainly caused by mutation in the PS1 gene. We know that A β hypersecretion may lead to synapse loss and at latter stage to neuron loss. We showed that transgenic mice Knock-in for the

M146V mutation exhibit an inhibition of the early LTP at 12 months but also of the late-LTP in 3-month-old mice. These deficits are likely Abeta-independent since murine A β do not aggregate and mutated PS1 mice do not exhibit amyloid plaques. In this work we aimed to investigate the A β -dependent effect of PS1(M146V)KI mutation on synaptic plasticity. Method : We crossed mice overexpressing wild type Human APP with PS1(M146V)KI mice to obtain double transgenic mice hAPPwt/PS1(M146V)KI mice. We recorded in the CA1 region from hippocampal slice the early LTP in 9-month-old mice. Results : We find no significative differences between control mice : +/+ mice (1,29 \pm 0,0027, 8 mice, 11 slices); +/APP mice (1,242 \pm 0,0027, 7 mice, 10 slices); PS1 KI/KI mice (1,2563 \pm 0,0032, 6 mice, 10 slices). On the other hand there was a clear deficit in the early LTP in the hAPPwt/PS1(M146V)KI mice (0,0997 \pm 0,0018, 10 mice, 11 slices). Conclusion : Therefore this study reveals early Abeta-dependent synaptic deficits caused by the PS1(M146V)KI mutation. This work was supported by grants from LECMA and foundation Lejeune. Keywords : Alzheimer's disease, Long Term Potentiation, amyloid peptide

PP25 B-006

THE IMPACT OF PHYSICAL REHABILITATION IN THE FRAIL SYNDROME OF ELDERLY IN THE COMMUNITY

Debora Melo SIGNORETTI¹, Lilian Tiemi SONODA², Milene Silva FERREIRA³, Gabriela SATO⁴, Miriam Ikeda RIBEIRO⁵, Sandra Alves BARBOSA⁶ (1. Physicaltherapy, Residencial Albert Einstein, Brazil; 2. Physiotherapy, Residencial Israelita Albert Einstein, Brazil; 3. Physician, Residencial Israelita Albert Einstein, Brazil; 4. Coordinator, Residencial Israelita Albert Einstein, Brazil; 5. Manager, Residencial Israelita Albert Einstein, Brazil; 6. Nurse, Residencial Israelita Albert Einstein, Brazil)

Introduction : The objective was to verify the results of a physical rehabilitation program directed to frail elderly of the community. Method : A study was held with 12 elderly of the community, attended at Residencial Israelita Albert Einstein geriatric clinic. Data comparison was run before and after the physical rehabilitation program, according to SPPB (Short Performance Physical Battery) variables, handgrip strength, age, gender and number of falls in the last year. Results : By the sample comprised by 12 elderly it was verified that after 4 months (48 physiotherapy sessions) there was an improvement in all parameters assessed. The male individuals have improved 106% whereas the female have improved 31.54%. There was 15% improvement in the gait speed, 147% in the muscular strength of the lower limbs and 70% improvement in balance. In the right and left handgrip strength there was 32% and 25% increase, respectively. In TUG (Timed Up and Go) there was 27.9% improvement. The elderly that were 80 or more years old have shown 83% improvement while those that were less than 80 had 41%. 50% showed correlation between the falls and the handgrip strength lower than 17Kg/F. Conclusion : The physical rehabilitation program directed to the frail elderly is able to demonstrate a significant improvement in the gait speed and balance parameters and in the muscular strength of the lower limbs. There was a difference in the results by gender and age. Moderate correlation of parameters with number of falls and handgrip strength. Keywords : elderly, frailty, community

PP25 B-007

DIMINISHED HEMISPHERIC LATERALIZATION OF MOTOR CONTROL IN ELDERLY

Jinsung WANG (Kinesiology, University of Wisconsin, USA)

Introduction : Hemispheric asymmetry reduction in older adults (HAROLD) has been reported in previous imaging studies that employed not only cognitive, but also motor tasks. However, whether age-related reductions in asymmetry of hemispheric activations affect the symmetry of motor behavior in older adults remains largely untested. In the present study, we examined the effect of aging on lateralization of motor adaptation and transfer by investigating adaptation to a novel visuomotor environment in both old and young adults. We have previously reported substantial asymmetries in interlimb transfer of visuomotor adaptation in young adults, and attributed these asymmetries to hemispheric lateralization for motor control. Based on the HAROLD model, we reasoned that older adults should recruit more symmetrical hemispheric activity, and thus show more symmetrical transfer of visuomotor adaptation across the arms. **Method :** Half of the subjects in each age group first adapted to a rotated visual display with the left arm, then with the right arm; and the other half in the reversed order. Naive performance with one arm and the same-arm performance following opposite arm adaptation were compared to determine the extent of transfer in each age group. **Results :** Our results indicated that interlimb transfer of initial direction information only occurred from the nondominant to dominant arm in young adults, whereas it occurred in both directions in older adults. **Conclusion :** Our findings clearly indicate substantially reduced asymmetry in visuomotor adaptation in older adults, and suggest that this reduced motor asymmetry might be related to diminished hemispheric lateralization for motor control. **Keywords :** Hemispheric lateralization, Motor control, Reaching movement

PP25 B-008

CORRELATIONS BETWEEN PHYSICAL FITNESS AND SERUM BIOCHEMISTRY PARAMETERS IN ELDERLY MALE LIVED IN RURAL AREA

Yi-Chen TUNG¹, Jin Jong CHEN¹, Meng-Tzu HOU¹, Chih-Hsing WU²
(1. *Physical Therapy and Assistive Technology, National Yang-Ming University, Taiwan*; 2. *Family Medicine, National Cheng Kung University Hospital, Taiwan*)

Introduction : The purpose of this study was to disclose the relationship between serum biochemistry parameters and physical fitness performance in old male lived in rural community in Taiwan. **Method :** In 2010, 1033 men aged 65 and over lived in Tianliao District was selected in an epidemiological survey. A total of 414 subjects were enrolled, the respond rate was 60.8%. Structured questionnaires included age, living state, occupation state, living habits, socioeconomic state and physical activity of weekly etc. which were inquired by face-to-face instructor for each subject. The physical fitness tests had grasp test of dominant hand, muscle strength/endurance, balance, flexibility, and reaction. Then serum biochemistry parameters were collected, percent body fat and hip bone mineral density (DAX) were also obtained accordingly. **Results :** There were 402 subjects completed the study, the average age was 74.5±6.0 (range=65-98) y/o. Using multiple linear regression models, the independent factors (β coefficient) for different physical function tests were listed as followings: 30-s chair stand test = age(-0.295), percent body fat(-0.136), creatinine with 1.5ng/ml cut point(-0.099) and GFR-MDRDs with 60 ml/min/1.73 m² cut point(0.106); open-eye stand= age(-0.386), BMI(-0.17) and fasting plasma glucose (-0.175); chair sit-and-reach test= age(-0.169); 8-feet walking test= age(0.322), BMI(0.156), tea(-0.122), physical activity(-0.22) and fasting plasma glucose (0.1); hand grip test= age(-0.386), BMI(0.207), physical activity(0.144), albumin(0.135). Vitamin and HDLC didn't have correlation with any physical fitness performance significantly. **Conclusion :** We can use creatinine and GFR-MDRDs to predict the

muscle strength and endurance of elderly, and fasting plasma glucose may use to predict balance and reaction ability of elderly. **Keywords :** physical fitness, elderly

PP25 B-009

ACUTE EFFECTS OF ANTI-AGING PROGRAMS ON HEALTH-RELATED PHYSICAL FITNESS, CARDIOVASCULAR ADAPTATION AND ANTIOXIDANT IN THAI ELDERLY

Apiwan NUTTAMONWARAKUL¹, Amornrat SATTHATUMARAT²
(1. *Medical Service, Geriatric Institute, Thailand*; 2. *The Supreme Patriarch Center on Aging, Ministry of Public Health, Thailand*)

Introduction : Anti-aging as a specialty practice is growing rapidly in contemporary medical practice. The approach becomes common in many areas of fields, with provable scientific basis. Even if aging is inevitable, with successful treatment, it can be possible for delaying or extending period of good health. The objective of this research was to study and develop a program to slowing down effect of aging. **Method:** One-hundred subjects were assigned either to experimental group anti-aging program (n=50) or health promotion program control group (n=50) for a period of one week. **Results :** Body weight, BMI, body fat (%), systolic blood pressure, heart rate rest and rate pressure product were decreased significantly (p <0.05) after the end of the Anti-aging program over a period of 1 week. But there was no significant difference between the two groups whereas, strength, flexibility, basal metabolic rate (BMR) and maximum oxygen consumption (VO₂max) were increased significantly (p <0.05) after 1 week of the Anti-aging program and also found statistically significant at the .05 level between groups, which the experimental group had BMR and VO₂max higher than the control group. The levels of Dehydroepiandrosterone Sulfate (DHEA-S) and blood urea nitrogen (BUN) were decreased significantly (p <0.05) in both group. But, there was no significant difference between the two groups. **Conclusion :** Anti-aging program included CRAN, interval exercise training, Pray and Anapanasati meditation for a period of 1 week shown result in slowing the process of aging in the body to act effectively affect longevity with good health more than general health promotion program. **Keywords :** anti-aging, antioxidant, elderly

PP25 B-010

PROTECTIVE EFFECT OF BIOCHANIN A ON IN-VITRO MODEL OF ALZHEIMER'S DISEASE: A POSSIBLE FUTURE FRONTIER AGAINST AGEING

Ji Wei TAN, Min Kyu KIM (*Institute of Bioscience, Universiti Putra Malaysia, Malaysia*)

Introduction : Alzheimer's disease is currently the most common form of dementia in the world which is closely related with ageing. In this current study, biochanin A, a phytoestrogen compound found in *Trifolium pretense*, was used to investigate its effects against β -amyloid-induced cytotoxicity in PC12 cells. **Method :** The study was carried out by exposing PC12 cells to β -amyloid with or without biochanin A. The cell viability test was accessed using thiazolyl blue tetrazolium bromide assay. In addition, annexin V/Propidium iodide staining was used to quantitate the apoptotic cells whereas the mitochondrial membrane potential (MMP) was accessed through rhodamine123 fluorescent probe. The result data were evaluated using one-way ANOVA followed by Fisher's Least Significant Difference test as a post-hoc test. **Results :** Exposure of PC12 cells solely to β -amyloid was found to significantly increase cell viability loss and apoptosis as compare to untreated control group (P < 0.01). However, in the present of biochanin A, such adverse effects induced by β -

amyloid were attenuated as indicated by the recovering of cell viability and also decreasing of apoptosis. Moreover, the decrease in MMP caused by β -amyloid ($P < 0.01$) was able to show sign of increase in the present of biochanin A. Conclusion : As a conclusion, biochanin A was able to act as a potential compound to exert its protective effects against β -amyloid-induced cytotoxicity. The outcome of this study may, in the future, contribute to anti-ageing in some extend. However, more tests still need to be conducted to further investigate and fully understand the potentials. Keywords : Alzheimer's disease, Mitochondrial, Biochanin A

PP25 B-011

MECHANISM OF NANOMETER PREPARATION OF DOGWOOD AGAINST ENCEPHALIC ANAPLASIA IN AGING
Qin OU¹, Shu-Qiu WANG², Jin-Hua PIAO¹, Ming-Fu WANG¹, Li-Na LIU¹ (1. Department of Biochemistry & Molecular Biology, College of Basic Medicine, Jiamusi University, China; 2. Department of Pathophysiology, College of Basic Medicine, Jiamusi University, China)

Introduction : By detecting the mRNA expression of Bdnf, TrkB, Syp and P-ERK protein expression in hippocampus of aging model rats , To explore the relation between the learning and memory capabilities and the BDNF-TrkB signal transduction pathway and the effect of nanometer particle of dogwood on it. Method : Forty male SD rats (body weight 350g~400g) were randomly divided into 4 groups, the youth compare group (YCM), the aging model group(AMG), water extract and nanometer particle of dogwood groups (WER and NPR). The ability of learning and memory were measured by Morris water maze. Serum SOD and MDA were detected by chemical method; The mRNA expression of Bdnf, TrkB and Syp in hippocampus were measured by RT-PCR method. The expression of P-ERK protein was examined by western blot method. Results : The ability of learning and memory and the activity of SOD were decreased significantly, the expression of Bdnf、TrkB、Syp mRNA and P-ERK protein were decreased significantly ($p < 0.01$) than those in YCM. Compared with ACG rats, the capacity of learning and memory of the medication administration group were improved significantly ($p < 0.01$), The activity of SOD ($p < 0.01$), the amount of Bdnf ($p < 0.01$), TrkB ($p < 0.01$) and Syp mRNA ($p < 0.01$) and the expression of P-ERK protein were increased ($p < 0.01$). Furthermore, the effect of NPR is more obvious than WER of dogwood ($p < 0.05$). Conclusion : Cognition deterioration of aging model rats is related to the abnormality of cognition related gene Bdnf, TrkB and Syp mRNA expression. Dogwood could improve the learning and memory capabilities by increasing the Bdnf, TrkB and Syp mRNA and P-ERK protein expression in hippocampus. The effect of NPR is superior to its WER. Keywords : dogwood; BDNF-TrkB; learning and memory

PP25 B-012

THE ANTI-INFLAMM-AGING AND HEPATOPROTECTIVE EFFECTS OF HUPERZINE A IN D-GALACTOSE-TREATED RATS

Qingwei RUAN¹, Fang LIU², Zhanjuan GAO², Yongxing MA³, Zhijun BAO², Zhuowei YU⁴ (1. Shanghai Institute of Geriatrics, Central laboratory, Huadong Hospital, Shanghai Medical College, Fudan University, China; 2. Department of Gastroenterology, Shanghai Institute of Geriatrics, Huadong Hospital, Shanghai Medical College, Fudan University, China; 3. Shanghai Institute of Geriatrics, Huadong Hospital, Shanghai Medical College, Fudan University, China; 4. Central laboratory, Shanghai Institute of Geriatrics, Huadong

Hospital, Shanghai Medical College, Fudan University, China)

Introduction : Oxidative stress contributes to a chronic inflammatory process referred to as inflamm-aging. Acetylcholinesterase inhibitors (AChEI) can enhance cholinergic transmission and act as anti-inflammatory agents via immunocompetent cells expressing α -7 acetylcholine receptors (AChR). The present study has been conducted to explore the possible role of huperzine A, a reversible and selective AChEI, against D-galactose-induced oxidative damage, cell toxicity and inflamm-aging in rat livers. Method : In two-month-old rat with normal liver function, an eight-week administration of D-galactose (300 mg/Kg subcutaneously (s.c.)) was used to induce liver inflamm-aging. An eight-week co-administration of both D-galactose (300 mg/Kg s.c.) and huperzine A (0.1 mg/Kg s.c.) was used to study anti-inflamm-aging and the hepatoprotective effects of huperzine A. Results : D-galactose significantly increased hepatic function impairment, ROS generation and oxidative damage, hepatic senescence, nuclear factor-kappa B (NF- κ B) activation and inflammatory responses. Huperzine A not only significantly decreased D-galactose induced hepatic function impairment, ROS generation, oxidative damage, but also suppressed inflamm-aging by inhibiting hepatic replicative senescence, AChE activity, I α B α degradation, NF- κ B p65 nuclear translocation and inflammatory responses. The expressions of mRNAs and proteins of pro-inflammatory cytokines, such as TNF α , IL-1 β , and IL-6 decrease significantly, and the protein levels of the anti-inflammatory cytokine IL-10 increase obviously. Conclusion : Huperzine A exhibited protective effects against D-galactose-induced hepatotoxicity, inflamm-aging by inhibiting AChE activity and the activation of the cholinergic anti-inflammatory pathway. The huperzine A mechanism might be involved in the inhibition of DAMPs mediated NF- κ B nuclear localization and activation. Keywords : D-galactose; huperzine A; inflamm-aging; inflammation and anti-inflammation; cholinergic anti-inflam

PP25 B-013

INHIBITION OF ANGIOTENSINII-INDUCED CARDIAC HYPERTROPHY BY PUERARIN THROUGH REACTIVE OXYGEN SPECIES

Gang CHEN, Cong SHEN, Xiumin ZHANG, Qiyang HE (Institute of Medicinal Biotechnology, Chinese Academy of Medical Sciences and Peking Union Medical College, China)

Introduction : Puerarin, an isoflavone purified from Chinese herb radix of Pueraria lobata, possesses comprehensive pharmacological actions for treatment of cardiovascular diseases and diabetes mellitus. However, whether it affects cardiac hypertrophy remains elusive. Method : Potent inhibition of cardiac hypertrophy by puerarin was shown in the angiotensin II-induced mice model after intraperitoneally administration of puerarin injection. The cardiac hypertrophic morphology and ratio of heart weight/body weight were markedly improved by puerarin in comparison with the angiotensin II-treated-alone mice. The inhibition of cardiac hypertrophy markers such as atrial natriuretic peptide, brain natriuretic peptide, β -myosin heavy chain mRNA expressions and suppression of extracellular signal-regulated kinase 1/2 phosphorylation were observed. Results : The cardiac hypertrophic morphology and ratio of heart weight/body weight were markedly improved by puerarin in comparison with the angiotensin II-treated-alone mice. The inhibition of cardiac hypertrophy markers such as atrial natriuretic peptide, brain natriuretic peptide, β -myosin heavy chain mRNA expressions and suppression of extracellular signal-regulated kinase 1/2 phosphorylation were observed in the mice and primary cultured cardiomyocytes after exposure to puerarin. Furthermore, puerarin inhibited the generation of

reactive oxygen species and decreased in proportion of DNA synthesis phase distribution stimulated by angiotensin II in the cultured cardiomyocytes. Conclusion : Puerarin prevents cardiac hypertrophy by inhibiting the generation of reactive oxygen species and the signaling pathway of extracellular signal-regulated kinase 1/2. Keywords : puerarin; angiotensin II; cardiac hypertrophy; reactive oxygen species; extracellular signal-regulat

PP25 B-014

ANTIOXIDANT ENZYMES ACTIVITY AND MALONDIALDEHYDE LEVELS CAN BE MODULATED BY PIPER BETLE, TOCOTRIENOL RICH FRACTION AND CHLORELLA VULGARIS IN AGING C57BL/6 MICE

Yasmin MOHD YUSOF, Nor Syahida ALIAHMAT, Suzana MAKPOL, Wan Zurinah WAN NGAH (*Department of Biochemistry, Faculty of Medicine, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, Malaysia*)

Introduction : Ageing has been associated with increased reactive oxygen species (ROS) in our body. A balance between ROS and antioxidants is essential for a healthy ageing. The aim of this study was to determine the erythrocyte antioxidant enzymes activities, superoxide dismutase (SOD), catalase (CAT), glutathione peroxidase (GPx) and plasma malondialdehyde (MDA) levels in aging mice and its modulation by potential antioxidants; Tocotrienol Rich Fraction (TRF), Piper betle (PB) and Chlorella vulgaris (CV). Method : One hundred and twenty male C57BL/6 inbred mice were divided into three age groups, young (6 months old), middle (12 months old) and old age (18 months old). Each age group consisted of two control groups (distilled water and olive oil) and three treatment groups: PB (50 mg/kg body weight), TRF (30 mg/kg) and CV (50 mg/kg). The duration of treatment for all groups was two months. Blood was withdrawn from orbital sinus for biochemical determination. Results : PB increased the activities of CAT, GPx and SOD in young, middle and old age groups respectively. TRF decreased SOD activity in the middle and old age groups but it had no effect on CAT and GPx activities in all age groups. CV increased GPx and decreased CAT activities in the middle and young age groups and reduced lipid peroxidation (MDA levels) in all age groups. No significant changes of MDA levels were seen with TRF and PB treatments. Conclusion : We found equivocal age-related changes in erythrocyte antioxidant enzymes activity with PB, TRF and CV treatments. Keywords : antioxidant enzymes, Piper betle, Chlorella vulgaris

PP25 B-015

THE ANTI-AGING EFFECT OF ORION COULD BE ASSOCIATED WITH ELEVATED STABILITY OF MACROMOLECULES AND/OR ENHANCED REMOVAL OF CELLULAR GARBAGE

Vladislav Victorovich BEZRUKOV¹, Sergey Anatolevich MIKHALSKY², Vasiliy Nikolaevich BONDAR³, Oleg Igorevich ZHUKOVSKY⁴, Vladimir Ilich POLYAKOV⁵, Khachik Kazarovich MURADIAN¹ (*1. Physiology, Institute of Gerontology NAMS Ukraine, Ukraine; 2. Morphology, Institute of Gerontology NAMS Ukraine, Ukraine; 3. Orion 387, Charitable fund 'Kievskaya rus', Ukraine; 4 Orion, International charitable fund 'Kievskaya rus', Ukraine; 5 Orion387, International charitable fund 'Kievskaya rus', Ukraine*)

Introduction : Orion is a drug based on derivatives of taurocholic acid and several other compounds. It could be one of few genuine geroprotectors because its anti-aging efficiency manifested only in old animals. In our experiments with drosophila, Orion was ineffective at

early periods of ontogenesis. The geroprotective effect, nevertheless, gradually elevated with flies aging, resulting in several folds increase of the remaining life span and survival at stresses which could primarily be associated with higher resistance of macromolecules to denaturation (heat shock, acidic or alkaline feeding medium). It is known that significant part of proteins (around 30 %) misfolds augmenting the pool of useless macromolecules. Given that the content of such malfunctioned macromolecules and lipofuscin-like products dramatically increases with aging, it was tempting to speculate whether the late-ontogenetic effects of Orion could be associated with stabilization of macromolecules and/or enhanced removal of cellular garbage. Method : Number and surface of granules of lipofuscin-like products, as well as destructed laminar and vacuolar products were measured in electron-microscopic study of glia and neurons of old (50-60 days) drosophila after 1-2 weeks maintenance on the medium with Orion (1-2 %). Results : Data obtained support the ameliorating potential of the drug. On the background of moderate decline in the number of granules, highly significant decrease of their surface was observed, implying gradual erosion of garbage-like products. Conclusion : Although further research is clearly warranted to confirm the remarkable anti-aging capacities, Orion could be one of few drugs provoking macromolecule stabilization, cellular garbage removal and life span extension specifically in old. Keywords : Orion, anti-aging, cellular garbage

PP25 B-016

PEPTIDES SLOW DOWN AGING OF THE BRAIN AND THYMUS CELLS

Vladimir KHAVINSON, Natalia LINKOVA, Valerii BENBERIN, Roman UMNNOV, Natalia CHERVIAKOVA, Svetlana TROFIKOVA (*Biogerontology, Saint Petersburg Institute of Bioregulation and Gerontology, Russia*)

Introduction : Some causes of mortality in people aged 60 and older are neurodegenerative diseases which reduce brain and immune functions. Moreover major part of pathologies associated with neurons destruction and reduced cognitive functions (Alzheimer's disease, Parkinson's disease and other), age-related thymus involution (autoimmune, infectious, oncological diseases) in elderly people represent a big problem. Method : A new approach to the restoration of brain and thymus functions is an application of peptide geroprotectors. Results : Tripeptide enhances proliferation and differentiation of brain cortex neurons, it exerts neuroprotective effect, contributes to the antioxidant system activation and increased capacity for work. Dipeptide restores immunogenesis in the thymus and spleen, induces T- and B-lymphocytes proliferation and differentiation, stimulates regeneration processes, contributes to the increased average lifespan. Conclusion : It was revealed that peptides penetrate into the nucleus and nucleolus of the cell and bind with one- or double-stranded DNA fragments. This evidences peptide effect on epigenetic mechanisms of gene expression regulation. Keywords : peptides, immune system, brain, aging

PP25 B-017

EXPERIMENTAL STUDY OF ARGININE EFFECT ON THE HEMOPOIETIC FUNCTION OF MATURE LABORATORY ANIMALS UNDER PHYSIOLOGICAL CONDITIONS AND UNDER CONDITIONS OF IONIZING RADIATION

Dmitry GREBNEV, Anatoly YASTREBOV, Irina MAKHLAKOVA (*Laboratory of Patological Physiology of Aging, Institute of Medical Cell Technologies, Russia*)

Introduction : The objective of our study was to investigate arginine

effect on hematosis in mature laboratory animals under physiological conditions and conditions of ionizing radiation. Method : Laboratory animals were divided into four groups. The first group was composed of animals free of extreme factor influence. The second group getting arginine under physiological conditions. The third group under the effect of ionizing radiation (4.0 Gr), the fourth group were being given arginine per os 1 hour after ionizing radiation. Results : The analysis of myelogram on the 7th day after arginine introduction showed increase of myelocytes number in granulocyte differon ($0,34\pm 0,07$, $p<0,05$). At the same time a 39 % increase of erythroblasts was noted in erythroid sprout. But it did not change general content of erythroid elements. While analyzing myelogram of laboratory animals on the 7th day after arginine insertion and irradiation it was noted that in granulocyte sprout there was increase of myeloblasts ($0,25\pm 0,03$, $p<0,05$), and myelocytes ($0,23\pm 0,03$, $p<0,05$). At the same time general content of granulocytes did not different from the control group data. In the erythroid growth increase in polychromatophile normoblasts was noted. At the same time general content of erythroid elements was similar to the control subgroup. Conclusion : So the introduction of arginine under physiological conditions promotes the increase of erythroblasts and myelocytes in the myeloid tissue, while its introduction under the ionizing radiation condition brings the increase of polychromatophile normoblasts, myeloblasts and myelocytes. Keywords : haemopoiesis, regeneration, arginine

PP25 B-018

THE EXPERIMENTAL STUDY OF ARGININE ACTION ON THE HEMATOPOIESIS STIMULATION OF THE OLD LABORATORY ANIMALS UNDER THE PHYSIOLOGICAL CONDITIONS AND CONDITIONS OF IONIZING RADIATION
Dmitry GREBNEV, Anatoly YASTREBOV, Irina MAKLAKOVA
(Laboratory of Patological Physiology of Aging, Institute of Medical Cell Technologies, Russia)

Introduction : The key question in this study was the investigation of arginine action on the hematopoiesis of old laboratory animals both under the physiological conditions and the conditions of ionizing radiation. Method : Experiments were conducted on 72 white male laboratory animals of CBA breed aged 18 months, weighing 60g. Radiation was achieved with the help of the AGAT-C Gamma-therapeutic device with radionucleur Co-60 source[1]. Arginine was introduced in the dose of 4.2 mg/kg in a 0.4ml solution. The control group received a 0.4ml NaCl solution. The investigation of hematosis tissue were conducted on the 1st and the 7th day. Results : On the 1st day after arginine introduction no changes in the thropoiesis and granulocytopenesis were noted. On the 7th day after arginine introduction in animals the analysis of myelogram showed an increase of promyelocytes content. In the erythroid growth the increase in erythroblasts and polychromatophilic normoblasts. The changes mentioned brought an increase in general erythroid elements number. On the 7th day significant increase of reticulocytes in the peripheral blood was observed. Analyzing myelogram after radiation and arginine introduction the increase of proliferating elements of erythroid sprout was noted. The changes noted led to the general increase of erythroid elements, being is the evidence of erythropoiesis activation in the old laboratory animals after arginine introduction. A significant increase of granulocytic elements. Conclusion : Thus, arginine both under physiological conditions and conditions of ionizing radiation produces erythroid differon stimulation and the increase in proliferating elements of granulocytic differon of the old laboratory animals. Keywords : haemopoiesis, regeneration, arginine, ionizing radiation

PP25 B-019

A TIME-SERIES ANALYSIS OF GENE EXPRESSION PROFILES OF REPLICATIVE SENESENCE IN HUMAN DIPLOID FIBROBLAST

Hae-ok BYUN¹, You-mi KIM¹, Hyun Woo CHO², Hyun Goo WOO², Gyesoon YOON¹ (1. Department of Biochemistry, Ajou University School of Medicine, Korea; 2. Department of Physiology, Ajou University School of Medicine, Korea)

Introduction : Cellular senescence has long been implicated in aging-associated diseases. However, it is not clear which cellular features provide susceptibility to the diseases. To address this, we employed replicative senescence of human diploid fibroblast. The senescence progress was divided into 12 stages according to their population doubling number and resultant doubling time. Method : Typical senescent phenotypes, such as senescence-associated β -galactosidase activity and increase of cellular mass, granularity and intracellular reactive oxygen species, were monitored and compared to gene expression profile which was obtained by cDNA microarray analysis. The heatmap of the gene expression profile revealed four distinct modules (G1, G2, G3 and G4) which are prominently expressed during the senescence process and the functional characterization of each module was performed by Gene Ontology analysis. Results : G1 showed the prominent enrichment of cell cycle-related genes indicating active proliferation activity. This was suppressed at the end of G1 phase (doubling time, 2 days) suggesting the event of the 'senescence growth arrest' might occur at this time point. In the young-to-mid-old phase of G2 module, metabolic process-related genes and tRNA/RNA processing were prominently expressed. In the mid-old phase (G3), immune-related functions such as defense response and antigen processing were significantly enriched. In far-old phase (G4), the genes related with cell death and cell growth control were prominently activated. NF- κ B pathway-related genes were also activated, which was previously notified to play important role in the aging process. Conclusion : We suggest that senescent phenotypes may provide different pathologic background according to the senescence stage, implying a potential link to age-associated diseases. Keywords : Cellular senescence, senescence-associated β -galactosidase activity, cDNA microarray analysis

PP25 B-020

INVOLVEMENT OF MITOCHONDRIAL COMPLEX IV DEFECT AND GSK3 INACTIVATION IN TGF β 1-INDUCED SENESENCE

Hyun-Jung JUNG, Hae-Ok BYUN, Young-Kyoung LEE, Gyesoon YOON (Department of Biochemistry & Molecular Biology, Ajou University School of Medicine, Korea)

Introduction : Transforming growth factor β 1 (TGF β 1) induces Mv1Lu cell senescence by persistently producing mitochondrial ROS through decreased complex IV activity. Here, we investigated the molecular mechanism underlying the effect of TGF β 1 on mitochondrial complex IV activity. Method : Mv1Lu cells exposed to TGF β 1 or SB412586, a GSK3-specific inhibitor. To generate siRNAs for mink GSK3 α and β , partial cDNAs of mink GSK3 α and β were obtained by RT-PCR against total mRNAs of Mv1Lu. SA- β -gal was assayed at pH6.0 as described by Dimri et al with a slight modification. Intracellular ROS levels were estimated by DCFH-DA and MitoSOX staining followed by flow cytometry. OCR and complex IV activities were also measured in situ with cultured cells using XF-24 Extracellular Flux Analyzer. Results : TGF β 1 progressively phosphorylated the negative regulatory sites of both GSK3 α and β , corresponding well to the intracellular ROS generation profile.

Interestingly, pharmacological inhibition of GSK3 by SB415286 significantly increased mitochondrial ROS, decreased complex IV activity and cellular respiration rate, implying that GSK3 phosphorylation is an upstream event of the ROS generation. Interestingly, we found that active GSK3 exists within mitochondria and binds subunit 6b1 of complex IV which is known to be topologically located in mitochondrial intermembrane space. Silencing of the subunit 6b1 significantly decreased complex IV activity and overall respiration rate. Finally, TGF β 1 treatment decreased the binding of the subunit 6b to GSK3 and subunit 6b phosphorylation. Conclusion : Our results suggest that GSK3 inactivation is involved in TGF β 1-induced complex IV defects by binding the subunit 6b1, thereby persistently generating senescence-associated ROS. Keywords: Transforming growth factor β 1 (TGF β 1), senescence, Glycogen synthase kinase 3 (GSK3)

PP25 B-021
APOPTOTIC EFFECTS OF IA PI3K/AKT SIGNALING PATHWAY ON LEUKEMIA HL-60 CELLS INDUCED BY OLEANOLIC ACID

Pengxia ZHANG, Di-Di WANG (*Department of Biochemistry & Molecular Biology, College of Basic Medicine, Jiamusi University, China*)

Introduction : To provide new clues for AML targeted therapy by researching the apoptotic effects of IA PI3K/AKT signaling pathway on leukemia HL-60 cells induced by oleanolic acid. Method : The growth-inhibiting effects of PI3K inhibitor (LY294002) on HL-60 cells were detected by MTT assay ; After being treated by drug, the morphological and structural changes of the cells were observed by transmission electro microscopy ; In HL-60 cells, after being treated by OA, the mRNA expressions of cav-1, pi3k, akt were measured by RT-PCR; CAV-1, AKT, p-AKT protein levels were measured by Western blot. Results : MTT experiment proved PI3K inhibitor (LY294002) has growth-inhibiting effects on HL-60 cells, which are enhanced with the increase of concentration in 24h; In HL-60 cells, after being treated by OA, apoptotic morphology changes are found by transmission electro microscopy, the mRNA expression of cav-1 is upregulated while the mRNA expressions of pi3k、 akt are down regulated by RT-PCR test, CAV-1 protein level is increased and AKT、 p-AKT protein levels are reduced by Western blot test. Conclusion : After being treated by 50 μ mol/L PI3K inhibitor (LY294002) in 24h, the growth-inhibiting effects on HL-60 cells are the best; OA can inhibit proliferation of HL-60 cells by PI3K/AKT Signaling pathway, the ratio of the P-AKT/AKT in medication group in 24h compared with LY294002 group is 1.18, explaining its inhibition effect is equivalent to 84.72% of LY294002 group; OA can inhibit PI3K/ AKT signaling pathway by upregulating the expression of CAV-1, resulting in inhibiting cell proliferation and promoting apoptosis in HL-60 cells. Keywords : OA; HL-60; PI3K/AKT

PP25 B-022
EFFECTS OF GANODERMA LUCIDUM SPORES ON THE CHANGE OF CASPASE-8 AND NESTIN IN EPILEPSY RATS

Shu-Qiu WANG¹, Xiao-Jie LI², Xiao-Ru MA¹, Lei LIU¹, Jun-Xing LIU¹, Xiao-Lian ZHAO¹, Fang-Fang WANG¹ (*1. Department of Pathophysiology, College of Basic Medicine, Jiamusi University, China; 2. Rehabilitation Medical Collge, Jiamusi University, China*)

Introduction : To investigate the effects of ganoderma lucidum spores on caspase-8 and nestin in brain tissue of rats with epilepsy induced by pentylenetetrazol (PTZ), and to further study the pathogenesis of

epilepsy and the anti-epilepsy mechanism of ganoderma lucidum spores. Method : Thirty-six male Sprague-Dawley rats were divided into control, PTZ epilepsy and ganoderma lucidum spores (GLS) groups. Results : The results showed that caspase-8-positive cell in rats of PTZ model group were higher than normal control and GLS group, while the content of caspase-8-positive cell were decreased in the GLS group compared with the epileptic model group. The content of nestin were higher in PTZ model group than those of control group and GLS group at in cortex and hippocampus, also The content of nestin in GLS group were higher than control group. Conclusion : Ganoderma lucidum spores can effectively reduce the expression of apoptosis cell and inhibit the caspase-8 activations in the epileptic rat's brain tissue, strengthen the function of anti-oxidize in brain tissue, and can supply recovering of epilepsy nerve cell with important basis by reducing the content of nestin neural internality protect mechanism can be strengthened to reduce the damage on nerve system induced by falling sickness. Ganoderma lucidum spores is an assistant medicine to cure epilepsy, it can be very useful in clinic application. Keywords : ganoderma lucidum spores; epilepsy; nestin; caspase-8

PP25 B-023
THE STUDY OF CONTENT OF HCY IN THE HIGH HOMOCYSTEINE RATS TO AFFECTING CARBON MONOXIDE/ADD OXYGEN ENZYME 2 (CO/HO-2) IN PENIS

Wen-Bo QIN¹, Wen-Jun HUANG¹, Bao-Jin CHI², Hao-Lin HE¹, Da Ren CHEN¹, Shu-Qiu WANG² (*1. Department of Urology, The second Affiliated Hospital of Jiamusi University, China; 2. Department of Pathophysiology, College of Basic Medicine, Jiamusi University, China*)

Introduction : To study the high homocysteine rats, to explore the sponge body homocysteine hemoglobin content of carbon monoxide/add oxygen enzyme 2 (CO/HO-2) the influence of the system. Method : The forty male wistar rats divided into normal control group (group A), Hhcy rats way of treatment (group B), Hhcy betaine hydrochloride treatment group (group C) and zinc porphyrin IX interention group (D group). Results : The rat models whether raised homocysteine levels in the blood increased significantly, penile erectile rate reduced significantly, and CO content and HO-2 activities were to drop, and homocysteine levels was negatively related (P < 0.01). The penis sponge body treatment group HCY CO and HO-2 content and the treatment group is obviously higher, penile erectile rate increased significantly (P < 0.01), there is statistical significance. Conclusion : Hhcy cause penile erectile function is reduced, may and CO content and the penis sponge body HO-2 express reduce relevant, added to Hhcy betaine produced a certain role influence ED relief. Keywords : hcy; CO/HO-2; The penis sponge body

PP25 B-024
CELL MARKERS OF THE AGING PROCESS IN PATIENTS WITH MULTI ORGAN PATHOLOGIES -- POSSIBILITIES OF LABORATORY DIAGNOSTICS

Viktor MESHCHANINOV, Ilya GAVRILOV, Mariya BALUEVA and Olga MOLOSTOVA (*Laboratory of Antiage Technologies, Institute of Medical Cell Technologies, Russia*)

Introduction : The existing hetero-protective measures are not very effective as they don't prevent fading of the organism's cellular functions. Perhaps, by using cell oriented techniques it might be possible to optimize age preventing technologies. Method : Two groups of patients participated in the research: 73 adults with an average age of 41, and 19 seniors with an average age of 62. Blood serum was used to determine concentrations of TTG, T3, T4, protein

S100, BDNF with the help of immune fermenting blood analysis (IA). IA was carried out using the complex 'Chem Well' with the set of reagents 'R&D'. Biological age (BA) was determined by techniques of the Institute of gerontology (Ukraine). BA was calculated in 'BIOAGE' program. The results were processed in Stata 6.0 program. Results : A negative correlation between BA and T4 level ($r=-0.658$) and a positive correlation between BA and T3 level ($r=0.829$, $p<0.05$) were revealed. A negative correlation between BA and protein content in blood, S100 ($r=-0.31$, $p<0.05$) was observed. Conclusion : 1. The increase in the age causes the decrease of the average T4 concentrations and the increase of the average T3 concentrations. Protein concentrations S100, BDNF decrease with age insignificantly. 2. There is a reliable correlations between protein S100 and BA and between T3 and BA. 3. Substances T3 and protein S100, being the predictors of the aging, have been revealed. Keywords : bioage, markers of aging

PP25 B-025

CELLULAR, METABOLIC, NANOMOLECULAR AND SOCIAL COMPONENTS OF HUMAN LIFE EXPECTANCY

Viktor MESHCHANINOV¹, Evgeniy TKACHENKO¹, Konstantin EGORIN¹, Sergey ZHARKOV¹, Ilya GAVRILOV¹, Viktor MYAKOTNYKH² (1. Laboratory of Antiage Technologies, Institute for Medical Cell Technologies, Russia; 2. Gerontology Department, Ural State Medical Academy, Russia)

Introduction : For the Sverdlovsk region of Russia low life expectancy of the population is characteristic. We have conducted the research for disclosing of the possible reasons of it. Excitation of human body cells by oxygen, pro- and antioxidants can influence on ageing processes. Method : The research lipid peroxidation in plasma and blood cells was carried out during 10 years. More than 1800 patients with a polypathology of mature, elderly and senile age received hypoxitherapy, hyperbaric oxygenation, ozonotherapy, dry carbonic baths, L-arginin. These patients were measured the biological age and was registered the death rate indicator. Results : Hypoxitherapy and hyperbaric oxygenation activated lipid peroxidation in erythrocytes and plasma of human blood elderly and senile age persons, reduced a life of erythrocytes, increased a biological age and did not influence duration of a calendar life. Nanoparticles of ferric oxide did not render influences on this process. After carrying out of dry carbonic baths courses in all age groups and hypoxitherapy in group of mature age patients lipid peroxidation and the biological age decreased, and antioxidizing activity and life time of erythrocytes increased. Ozonotherapy in all human groups normalized the studied indicators. We have created the mathematical model connecting lipid peroxidation in erythrocytes and blood plasma, the biological age, real life expectancy of blood cells and of a human organism. Conclusion : The correction lipid peroxidation in erythrocytes, blood plasma and a human organism by means of gas therapy is effective like a geroprophylactic remedy depending on age of patients. Keywords : biological age cellular

PP25 B-026

SYSTEMIC LUPUS IN THE ELDERLY: REPORT OF A CASE AND REVIEW OF LITERATURE

Abrar-Ahmad ZULFIQAR¹, Yann DUVAL¹, Rachid MAHMOUDI¹, Mustapha DRAME², Jean-Loup PENNAFORTE³, Jean-Luc NOVELLA¹ (1. Medecine Interne et Geriatrie, CHU REIMS, France; 2. Unite D'aide Methodologique-pole Recherche, CHU REIMS, France; 3. Medecine Interne, CHU REIMS, France)

Introduction : Systemic lupus is a multisystem inflammatory disease

predominantly occurring in females of childbearing age. The late-onset systemic lupus has been poorly studied so far. We report here a case of severe lupus in a 72 year-old male. Method : A 72 year-old man presented with thrombocytopenia 29 G/L, asthenia and scheduled inflammatory arthralgia predominant in both hands. Biological assessment found positive anti-nuclear and anti-DNA native antibodies, with autoimmune thrombocytopenia. Thoracic scanner allowed to find the presence of straight pulmonary arterial thrombi despite the absence of clinical signs. Systemic lupus was diagnosed according to the criteria of ACR. Oral corticosteroids associated with hydroxychloroquine and curative anticoagulation were initiated, allowing clinical and biological improvement. Results : The late-onset lupus is rare. Late-onset lupus patients have a more insidious onset, a longer lag time from disease onset to diagnosis, and a decrease in female preponderance compared to patients with young systemic lupus. The clinic is insidious and atypical. The onset in old age is seldom associated with malar rash, arthralgia, renal impairment as first symptom, whereas deterioration of general status and thrombosis are very frequent. Anti-nuclear antibodies are constant, anti-DNA native are often positive, while specificity of lymphopenia in the elderly is discussed. Late-onset lupus has a poor long-term prognosis. Infection is the major cause of death in patients with late-onset lupus. Mortality remains high in aged patients with late-onset lupus. Conclusion : Lupus in the elderly remains a rare event and difficult to evoke. Strategies to reduce disease activity and better medical care may be effective in improving outcome of late-onset lupus. Considering the peculiarity of older patients is essential for optimal management. Keywords : Systemic lupus, Late-onset, elderly

PP25 B-027

IDENTIFICATION OF CELLULAR SENESCENCE-RELATED GENES IN HUMAN BONE MARROW-DERIVED MESENCHYMAL STEM CELLS UNDER INFLAMMATORY STIMULUS

Hee-Young SOHN, So Young PARK, Sang Ick PARK (Division of Brain Diseases, National Institute of Health, Korea)

Introduction : Human mesenchymal stem cells (hMSCs) are capable of differentiating to osteocytic, chondrocytic and adipocytic lineages, and thus provide potential for the regeneration therapy. Also, MSCs can modulate functions of immune cells by secretion of immunomodulatory molecules such as cytokine and chemokines. However, regeneration potential of MSCs decreases with age. The chronic inflammation leads to degenerative conditions associated with ageing. In this study, we investigated the effects of proinflammatory cytokines IFN- γ and TNF- α on cellular ageing of hMSCs based on gene expression profile by microarray analysis. Method : Human bone marrow-derived MSCs were incubated with interferon- γ (IFN- γ) and tumor necrosis factor- α (TNF- α) for 72 h. Illumina HumanHT-12 v4 Expression BeadChip was used for microarray analysis. RT-PCR was performed to confirm the microarray data. Results : Cytokines changed typical fibroblast-like features to rounded shapes, but did not affect cell viability. Immunomodulatory factors including indoleamine 2,3 dioxygenase (IDO), IL-6, cyclooxygenase-2 (COX-2) were enhanced in cytokines-treated hMSCs. Microarray analysis showed that 707 genes were upregulated and 493 genes were downregulated when analyzed by 2-fold expression change of cutoff. Among these, the IL8 and CCL5 genes were drastically upregulated by 138-fold and 137-fold, respectively. In addition, age-related marker genes of hMSCs, SERPINB2, PSG4 and EDN1 were increased by the proinflammatory stimulus. Conclusion : Genome-wide gene expression profile was analyzed to find common marker genes of both inflammation and ageing in human mesenchymal stem cells. These results provide

molecular evidence that the processes of inflammation are a potent source of promoting development of ageing. Keywords : Mesenchymal stem cell, Inflammation, Ageing

PP25 B-028

THE NEUROVASCULAR PROTECTIVE EFFECTS OF HUPERZINE A IN D-GALACTOSE-INDUCED INFLAMMATORY DAMAGE IN RAT HIPPOCAMPUS

Qingwei RUAN¹, Zhanjuan GAO², Fang LIU², Zhijun BAO², Yongxing MA³, Zhuowei YU⁴ (1. Central Laboratory, Shanghai Institute of Geriatrics, Huadong Hospital, Shanghai Medical College, Fudan University, China; 2. Department of Gastroenterology, Huadong Hospital, Shanghai Medical College, Fudan University, China; 3. Institute of Geriatrics, Huadong Hospital, Shanghai Medical College, Fudan University, China; 4. Central laboratory, Shanghai Institute of Geriatrics, Huadong Hospital, Shanghai Medical College, Fudan University, China)

Introduction : Chronic inflammation results in the excessive or sustained expression of adhesion molecules, excessive recruitment of inflammatory cells, the releases of pro-inflammatory cytokines from glial and endothelial cells, causing neuronal and vascular dysfunction and damage. Acetylcholinesterase inhibitor plays an anti-inflammatory role by the activation of $\alpha 7$ nicotinic acetylcholine receptor mediated cholinergic anti-inflammation pathway in glial and endothelial cells. Method : The aging rat model was obtained by injecting D-galactose (300 mg/Kg) subcutaneously for 8 weeks in 4-week-old rat. The control rat was injected with saline. Huperzine A-treated aging rat that Co-administration of both Huperzine A (0.1 mg/Kg) and D-galactose (300 mg/Kg) subcutaneously for 8 weeks were compared with D-galactose induced aging rat in terms of cell death, inflammation, and the changes of TJs. Results : Huperzine A markedly suppressed D-galactose induced neuronal cell apoptosis, the upregulations of cell-associated adhesion molecules ICAM-1 and VCAM-1 in mRNA levels, and the decreases of TJs in both mRNA and protein levels in hippocampus. Huperzine A also significantly suppressed D-galactose induced releases of inflammatory cytokines TNF- α , IL-1 β and IL-6 by inhibiting D-galactose induced I κ B α degradation and NF κ B nuclear translocation. Finally, huperzine A can obviously suppressed acetylcholinesterase activity. Conclusion : These findings indicate that D-galactose induced neuronal cell apoptosis with the decrease of TJ proteins in the blood-brain barrier is associated with the development of proinflammatory phenotype mediated by NF κ B in rat hippocampus. Huperzine A suppresses D-galactose induced neuronal and vascular damages in rat hippocampus partly by inhibiting acetylcholinesterase activity and preventing NF κ B nuclear translocation mediated chronic sterile inflammation. Keywords : Huperzine A; D-galactose; Apoptosis; neuroinflammation; Tight junction protein; Hippocampus

PP25 B-029

THE MULTIPLE AND COMPLEX OF MECHANISMS OF AGING AND LONGEVITY

Yongxing MA, Qingwei RUAN, Zhijun BAO, Zhuowei YU (Department of Aging, Antiaging and Cognitive Function, Shanghai Institute of Gerontology and Geriatrics, Affiliated Huadong Hospital, Shanghai Medical Collage, Fudan University, China)

Introduction : Fifteen hereditary and postnatal factors were reported to verify the mechanisms of ageing and longevity. Method : 1. HLA-A9 was highly associated with longevity (frequency of longevity 38% in 201, frequency of the control group 24% in 211 cases, Fisher's $P=0.0007$). 2. The allele frequency of APOE $\epsilon 4$ in the very old age

group (≥ 85 years ; $n=71$, APOE $\epsilon 4$, 2. 8%) was significantly lower than that in the 20-39($n=137$, APOE $\epsilon 4$, 8. 4%) , 40-59 ($n=232$, APOE $\epsilon 4$, 8. 4%), 60-84($n=1360$, APOE $\epsilon 4$, 7. 6%) years old group, $P<0. 05$. 3. The mean value of SOD contents of RBC (determined in 542 healthy)of the adult ($558\pm 41\mu\text{g/gHb}$) was significantly lower than that of the youths ($587\pm 50\mu\text{g/gHb}$), but no significantly decline thereafter. 4. The changes of SOD, GSH-PX, CAT, G-6-PD, POD, and LPO with aging in the healthy person, Wistar rat and rhesus monkey were reported. 5. Nature killer cells tends to fall in 70-79years group but rises again in 70 longevous among 232 persons. Results : 6. Chromosome aberration (1. $22\pm 0. 53$, 0. $57\pm 0. 23$ and 0. $23\pm 0. 24\%$ in the person groups of PaO $_2<75$, 75-84 and $\geq 85\text{mmHg}$, $P<0. 025$) was significantly associated with PaO $_2$ in the healthy elderly. 7. The % of type B behavior pattern of the longevous is 55. 5% which was much higher than that of 26. 6% of the aged ($P<0. 01$) in 896 subjects, type B behavior pattern may be favorable for longevity. Conclusion : 9. The oxidation-inflammation Mechanisms is an Important aspects of aging, and the involvement of the immune system in oxi-inflamm-aging. 10. The mechanisms of aging is comprehensive, therefore the measures of antiaging (aging retarding) must be comprehensive too. Keywords : Mechanism of Aging HLA APOE $\epsilon 4$ FR NK PaO $_2$ Behavior Microcirculation

PP25 B-030

SAFETY, TOLERABILITY, AND IMMUNOGENICITY OF A BOOSTER DOSE OF ZOSTER VACCINE (ZV) ADMINISTERED ≥ 10 YEARS AFTER A FIRST DOSE COMPARED WITH A FIRST DOSE OF ZV

Myron J. LEVIN¹, Kenneth E. SCHMADER², Gary O. ZERBE³, Adriana WEINBERG⁴, Shu-chih SU⁵, Liang CHEN⁵, Angela WILLIAMS-DIAZ⁶, Janie PARRINO⁶ (1. Pediatric Infectious Diseases & Vaccine Clinical Trials, University of Colorado Denver and Health Sciences Center, USA; 2. Geriatrics, Duke University / GRECC, Durham VAMC, USA; 3. CSPH, University of Colorado Denver and Health Sciences Center, Aurora, CO, USA; 4. School of Medicine, University of Colorado Denver and Health Sciences Center, Aurora, CO, USA; 5. BARDS, Merck, Sharp, & Dohme Corp., USA; 6. MRL, Merck, Sharp, & Dohme Corp., USA)

Introduction : Open-label study evaluated the safety, tolerability, and immunogenicity of a booster dose of zoster vaccine (ZV) administered ≥ 10 years after a first dose. Method : Herpes zoster (HZ) history-negative subjects-70 years of age were assigned to Group 1 (booster dose group: 201 subjects who received ZV ~ 10 years previously) or Group 2 (ZV-naive group: 199 subjects who had never received ZV). Blood samples were obtained Day 1 and \sim Day 42 postvaccination for varicella-zoster virus (VZV) antibody testing by glycoprotein ELISA (gpELISA). Subjects were followed for adverse experiences (AEs) for 42 days postvaccination. Results : VZV gpELISA baseline titers were similar in Group 1 (248.0 [95% CI: 219.7, 280.0]) and Group 2 (254.2 [95% CI: 223.5, 289.3]). VZV gpELISA antibody response at Week 6 postvaccination was non-inferior in Group 1 (389.1) compared to Group 2 (366.6); estimated geometric mean titer ratio (Group 1/Group 2) 1.05 (95% CI: 0.97, 1.15). VZV antibody response was acceptable in Group 1 with geometric fold rise of 1.5 (95% CI: 1.4, 1.7). The proportions of subjects reporting injection-site and systemic clinical AEs were numerically but not significantly higher in Group 1 than Group 2. No vaccine-related serious AEs were reported. Conclusion : In subjects-70 years receiving a booster dose of ZV ~ 10 years after a first dose, the VZV antibody response was acceptable and non-inferior

to the VZV antibody response of age-matched subjects receiving a first dose of ZV. ZV given as a booster dose ~10 years after a first dose was generally well-tolerated. Keywords : zoster vaccine, immunogenicity, safety

PP25 B-031
CORRELATION RISK FALL WITH MORTALITY IN AMAZON RIPARIAN OLDER PEOPLE

Ednea Aguiar MAIA RIBEIRO¹, Karin VIEGAS², Euler Esteves RIBEIRO³, Ivana Beatrice Manica DA CRUZ⁴, Kennya Marcia MOTA⁵, Jose Antonio DE PAZ¹ (1. Instituto de Biomedicina (IBIOMED), Universidad de Leon, Spain; 2. Enfermagem, Universidade Federal de Ciencias da Saude de Porto Alegre, Brazil; 3. Universidade Aberta da Terceira Idade, Universidade do Estado do Amazonas, Brazil; 4. Programa de Pos-Graduacao em Bioquimica Toxicologica e Programa de Pos-Graduacao em Farmacologia, Universidade Federal de Santa Maria, Brazil; 5. Universidade Aberta da Terceira Idade, Universidade Estadual do Amazonas, Brazil)

Introduction : The aim of this study has been to correlation among the follow issues: 1) functional fitness, 2) balance condition factors, and 3) risk of falling with mortality Amazon riparian older people. Method : A longitudinal study was conducted with 637 riverine elderly residents (≥ 60 years old) in the Maues city Amazonas, Brazil. Results : 42 elderly residents died three years later (males = 19; females = 23. $p=0.131$). The died causes was: 48% natural death, 16% cardiovascular morbidities, 14% cancer, 8% pulmonary causes, 4% transmissible diseases, 2% external causes. There was statistic association between of advantage age (>75 years ($p=0.000$), lower equilibrium (score Berg Scale <45 points), less hand strength (<14 Kg ($p=0.025$) and poor self-perceived health ($p=0.012$). Conclusion : The number of men and women who died was equal. The most part elders died without medical care. This issue did not allow an analysis and the causes of mortality with health physical factors analyzed herein. Keywords : Falls; riverine people; mortality

PP25 B-032
THE COMPARISON OF LIFE EXPECTANCY AT BIRTH (YRS) OF CHINA IN RECENT YEARS WITH WORLD AND MORE DEVELOPED COUNTRIES POPULATION

Yongxing MA, Yue ZHU, Qingwei RUAN, Peifang LU (Department of Aging, Antiaging and Cognitive Function, Shanghai Institute of Gerontology and Geriatri, Affiliated Huadong Hospital, Shanghai Medical Collage, Fudan University, China)

Introduction : Compare the life expectancy at birth (yrs) of China increscent years with world and more developed countries Population. Method : Compare the life expectancy at birth(yrs) from the data in ① Unit Nations Population Reference Bureau (PRB): 2000-2012, World Population Data Sheet.② The State Statistics Bureau. SSB. Results : ① China: 2000-2003, 71 yrs; 2005-2006, 72 yrs; 2007-2009, 73 yrs; 2010-2011, 74 yrs; 2012, 75 yrs. ② World: 2000-2006, 67yrs; 2007-2008, 68 yrs; 2009-2010, 69 yrs; 2011-2012, 70 yrs. ③ More developed countries: 2000-2006, 76 yrs; 2007-2010, 77 yrs; 2011-2012, 78 yrs. Conclusion : ①China: The population life expectancy at birth (yrs) increased 4 yrs in ten yrs. ② World: The population Life expectancy at birth (yrs): increased 3 yrs in ten yrs. ③ More developed countries increased 2 yrs in ten yrs. ④ The population life expectancy at birth (yrs) of more developed countries is 5 yrs higher than China in 2000-2003, 4 yrs in 2005-2009 and 3 yrs in 2010-2012. ⑤The population life expectancy at birth (yrs) of China is 4-5 yrs higher than world in recent yrs. ⑥These suggested the results of active

aging, and so ageing well together. Keywords : life expectancy at birth, China , World ,More developed countries

PP25 B-033
THE COMPARISON OF LIFE EXPECTANCY AT BIRTH (YRS) OF SHANGHAI IN RECENT YEARS WITH HONGKONG AND MACAO POPULATION

Zhijun BAO, Yue ZHU, Yongxing MA (Department of Aging, Antiaging and Cognitive Function, Shanghai Institute of Gerontology and Geriatri, Affiliated Huadong Hospital , Shanghai Medical Collage, Fudan University, China)

Introduction : Comparison the life expectancy at birth (yrs) of Shanghai in recent years with HongKong and Macao population. Method : Compare the life expectancy at birth(yrs) from the data in: ① Unit Nations Population Reference Bureau (PRB): 2000-2012, World Population Data Sheet. ② Shanghai Bureau of Civil Administration. Results : ①Shanghai: 2003-2005, 80 yrs; 2006-2008, 81 yrs; 2009-2010, 82 yrs; 2011-2012, 82.5 yrs. ② HongKong: 2003,80 yrs; 2007-2009,82 yrs; 2010-2012,83 yrs. ③Macao: 2008-2012, 82 yrs. Conclusion : ①The population life expectancy at birth (yrs) of Shanghai is one yr lower than HongKong ②The population life expectancy at birth (yrs) of Shanghai is similar as Macao in 2009-2012. Keywords : life expectancy at birth, Shanghai ,HongKong, Macao

PP25 B-034
SYSTEMS BIOLOGY ABOUT EMERGENCE, DEVELOPMENT, AND CONTROL OF AGING

Alexander KHALYAVKIN (Kinetics of Biological Processes, Inst of Biochem Physics, RAS & Inst for Systems Analysis, RAS, Russia)

Introduction : The evidence is currently accumulating that many age-related changes in cells and organs are quite reversible and that the normal somatic cell lines are potentially immortal like cancer or germ-line cells. In this connection 'the efforts of evolutionists-gerontologists should probably be directed at clarifying the question of why the organism consisting of potentially immortal cells gets old'. Method : Critical analysis of the array of published findings was applied for interpretation of these findings in order to unite at the one conception many separate and various data obtained from the molecular level up to the level of population. The systems approach application is useful for understanding of the causes and mechanisms of aging because the organism represents a supercomplex system, consisting of a hierarchy of cooperating subsystems. Results : Some researchers agree that the aging of the whole animal is more a function of breakdown in integrative mechanisms than of primary changes in individual cells. The normal cells do not exist in isolation in the body, and their functions are regulated by out-of-cells factors. The levels and activities of most of these factors are highly dependent on the current response of living being to external challenges. Conclusion : Current knowledge of the problem and a better understanding of some phenomenological peculiarities of macro-systems in different environment might lead us to the development of useful approaches to the origin of aging and its control. The lowering environmental pressures beyond the critical threshold must inevitably result in senescence, which is statistically expressed in age-related rise in mortality rate. Keywords : Origin of Aging, Systems Approach, Environmental Influences

PP25 B-035
REGULATION OF FOXO3A AS A MEDIATOR OF DNA DAMAGE RESPONSE SIGNAL

Jee-In HEO, Jeong-Hyeon KIM, Seung-Min LEE, Jeong-Min LEE, Jae-Bong PARK, Jaebong KIM, Sung-Chan KIM, Jae-Yong LEE (Hallym University, Medical School, Department of Biochemistry, Korea)

Introduction : FOXO3a is a transcriptional factor that is involved in multiple cellular processes including cell cycle arrest, apoptosis, differentiation, DNA repair, and metabolism. FOXO3a has been known to be activated by various DNA damaging agents and oxidative stresses. **Method :** Doxorubicin was treated to induce FOXO3a in human embryonic fibroblasts (HEFs) and SH-SY5Y cells. An inhibitor of ATM and ATM-null cell were used to analyze ATM-dependance of FOXO3a stability. Protein stability of FOXO3a was measured and phosphorylation of FOXO3a by ATM was analyzed. **Results :** Protein levels of FOXO3a were rapidly increased within 10 min in response to doxorubicin treatment in human embryonic fibroblasts (HEFs) and SH-SY5Y cells. However, RNA levels of FOXO3a were unchanged, indicating the protein stability is increased. Induction of FOXO3a protein in response to doxorubicin treatment was inhibited by an inhibitor of ATM and in ATM-null cell, suggesting that the increase of FOXO3a protein stability is dependent on ATM. FOXO3a was phosphorylated in Ser and Thr residues by doxorubicin treatment. This phosphorylation is also dependent on ATM. Interaction between FOXO3a and MDM2 turned out to be decreased by doxorubicin treatment so that FOXO3a stability is increased. **Conclusion :** Taken together, the result showed that the protein stability of FOXO3a increased rapidly through ATM-dependent manner in response to doxorubicin treatment, implying that FOXO3a plays an important role in DNA damage response possibly through interaction with ATM and activation of DNA repair activity. **Keywords :** FOXO3a, ATM, MDM2

PP25 B-036

MODULATION OF CELLULAR SENEESCENCE AND SKIN AGING BY NONSTEROIDAL ANTIINFLAMMATORY DRUGS
So Ra KIM¹, Mi Eun LEE¹, Sung Chul PARK², Jeong A. HAN¹
(1. Department of Biochemistry and Molecular Biology, Kangwon National University School of Medicine, Korea; 2. Lee Gil Ya Cancer and Diabetes Institute, Gachon University, Korea)

Introduction : It has been proposed that pro-inflammatory genes such as cyclooxygenase-2 (COX-2) play a key role in the aging process. However, it remains unclear whether the pro-inflammatory catalytic activity of COX-2 is involved in the aging process and whether COX-2 inhibitors prevent aging. **Method :** We here examined the effect of COX-2 inhibitors on aging both in the replicative cellular senescence model of human dermal fibroblasts and in the intrinsic skin aging model of hairless mice. **Results :** We observed that among three selective COX-2 inhibitors studied, only NS-398 inhibited the cellular senescence whereas celecoxib and nimesulide accelerated the senescence. Non-selective COX inhibitors including aspirin, ibuprofen and flurbiprofen accelerated the senescence. Also, we observed that only NS-398 inhibited the skin aging while celecoxib and aspirin accelerated the skin aging. **Conclusion :** These results suggest that the pro-inflammatory catalytic activity of COX-2 does not mediate the aging process at least in our models and that the COX-2 inhibitors modulate the aging process via catalytic activity-independent mechanisms. **Keywords :** cyclooxygenase-2, inhibitor, cellular senescence, skin aging

PP25 B-037

ACTIVE TELOMERASE HOLOENZYME IS ASSEMBLED IN THE NUCLEOLUS DURING S PHASE

Ji Hoon LEE¹, Yang Shin LEE², Sun Ah JEONG², Prabhat KHADKA¹, Roth JURGEN², In Kwon CHUNG¹ (1. Department of Systems Biology, Department of Integrated Omics for Biomedical Science, WCU program, Yonsei University, Korea; 2. Department of Integrated Omics for Biomedical Science, WCU program, Yonsei University, Korea)

Introduction : The maintenance of human telomeres requires the ribonucleoprotein (RNP) enzyme telomerase, which is composed of telomerase reverse transcriptase (TERT), telomerase RNA component (TERC), and several additional proteins for assembly and activity. Telomere elongation by telomerase in human cancer cells involves multiple steps including telomerase RNA biogenesis, holoenzyme assembly, subnuclear trafficking, and telomerase recruitment to telomeres. Although telomerase has been shown to accumulate in Cajal bodies for association with telomeric chromatin, it is unclear how and where the assembly and trafficking of catalytically active telomerase is regulated in the context of nuclear architecture. **Method :** Cell culture, Small interfering RNA transfections, Immunoprecipitation and immunoblotting, Telomerase assay, Immunoelectron microscopy, Immunofluorescence microscopy, Fluorescence-activated cell sorter (FACS) analysis, Double thymidine block of HeLa cells. **Results :** Here, we show that the catalytically active holoenzyme is initially assembled in the dense fibrillar component of the nucleolus during S phase. Our findings indicate that the telomerase RNP (hTERT-TERC-dyskerin RNP) is retained in nucleoli through the interaction of hTERT with nucleolin, a major nucleolar phosphoprotein. Upon association with TCAB1 in S phase, the telomerase RNP is transported from nucleoli to Cajal bodies, suggesting that TCAB1 acts as an S phase-specific holoenzyme component. **Conclusion :** These results suggest that the TCAB1-dependent trafficking of telomerase to Cajal bodies occurs in a step separate from the holoenzyme assembly in nucleoli. We propose that the nucleolus is the provider of an active telomerase RNP for supporting the continued proliferation of cancer and stem cells. **Keywords :** Telomerase, Telomere, Active holoenzyme assembly

PP25 B-038

RETROSPECTIVE AND PROSPECT OF MECHANISM FOR ACUPUNCTURE IN POSTPONING AGING

Lihui LI¹, Jun ZOU², Jie YANG¹, Lingli ZHANG¹, Junni WU¹
(1. School of Kinesiology, Shanghai University of Sport, China; 2. Department of Scientific Research, Shanghai University of Sport, China)

Introduction : It has gained much progress during the recent 10 years in studying the mechanism of acupuncture for anti-aging. Acupuncture may play a role of postponing aging by the overall integration of meridians and acupoints. The present article was going to summarize the action mechanism for highlighting the further research and providing testimonies, and promoting the application of acupuncture in anti-aging. **Method :** To review recent progress in the mechanism of acupuncture-resisting aging in recent ten years from clinical treatment and studies and animal experiments, and put forward several practical views and suggestions on them. **Results :** Aging is the procedure in which all the systems of the body gradually decline, and it is relative to the lowered or disordered endocrine system, free radicals, immune system. Modern medicine holds that acupuncture postpones aging possibly through regulating anti-free radicals injury, regulating neuroendocrine function, regulating immune function, regulating aging gene of the aged organism, thus to postpone the aging. In addition, the article also makes a preliminary analysis on the extant problems of techniques of both genomics and proteomics in acupuncture research

at the present and predict their applicable prospect. Conclusion : Various acupuncture therapies have the actions of disease prevention, health enhancement, life lengthening, with the application of acupuncture as the most common one in particular. More studies should be carried out in the future in the diversified researches, crossing points searching, stressing on the senescence-associated gene regulation mechanism for promoter, methodology searching, the integration of clinical observation and experimental studies. Keywords: acupuncture; aging; mechanism; review

PP25 B-039

RADIATION EFFECTS ON AGING: RADIATION EFFECTS RESEARCH FOUNDATION ADULT HEALTH STUDY

Michiko YAMADA (*Department of Clinical Studies, Radiation Effects Research Foundation, Japan*)

Introduction : To investigate whether or not radiation exposure accelerates aging, many studies into radiation effects on the shortening of lifespan and on the aging process have been carried out among atomic bomb survivors. Method : RERF's Adult Health Study (AHS) has been conducted since 1958 to collect disease incidence and health information through biennial health examinations. Several studies of aging-related diseases including cardiovascular diseases, dementia, osteoporosis, and cataract have been conducted within the AHS. Results : RERF's Life Span Study has pointed to increased risks of leukemia, cancer, and non-cancer diseases due to radiation exposure and the shortening of lifespan among exposed subjects. In the AHS, although many cross-sectional studies concerning morphological and functional changes with aging have failed to show clear acceleration of aging due to radiation exposure, longitudinal studies regarding changes in levels of hemoglobin and cholesterol suggest radiation effects on aging. The AHS study did not reveal radiation effects on cognitive function/occurrence of dementia and bone mass/occurrence of osteoporosis. On the other hand, however, the incidences of cardiovascular diseases such as hypertension and myocardial infarction as well as cataract increased among exposed subjects at relatively young ages. Conclusion : Mechanisms of the aging process and aging-related diseases are beginning to be understood, with similar biological mechanisms shown to be associated with radiation exposure. Major progress is therefore anticipated in the AHS and other such longitudinal aging studies of radiation exposure as it relates to the phenomenon of aging. Keywords : radiation, aging, atomic bomb survivors

PP25 B-040

INTERLEUKIN-2 AS A POTENTIAL GEROPROTECTOR

Sergey ZHARKOV, Viktor MESHCHANINOV, Evgeny TKACHENKO (*Anti-aging Laboratory, Institute of Medical Cellular Technologies, Russia*)

Introduction : The injection of embryonic stem cells is prohibited by the Russian federation due to numerous dangerous complications and negative cross effects. The possible solution for this is a stimulation of the individual organism stem cells with cytokines. Method : The experiment was set up using a group of rats, who had regular blood loss, to imitate hard life conditions, resulting in premature aging. The next stage was the determination of biological age by the «Bioage polynom®» method among patients before and after use of interleukin-2. Effectually IL-2 was the same as some of the other cytokines (M. Marzec, 2007). Additionally different age-dependent blood parameters were also studied in patients. Results : The result of the study is that a reliable decrease in the mortality of rats, who had a

blood loss up to 26.7%, was consistent with data regarding IL-2 hematopoiesis stimulation (Popovich A.M., 2004). In contrast to the control blood loss group, the livers of the rats who had IL-2 resulted in no focal hepatocytes necrosis and less dystrophic changes. The beneficial effects on people showed in other works (S.Seidler,2012), as well as on anti-tumor effects (W.Cheng,2012). Patients had an average decrease of biological age 14.9%. There was increasing the number of white blood cells (+18.1%), lymphocytes (+9.9%) and granulocytes(+25.5%). Conclusion : Presently interleukin-2 is used in medicine mostly for the correcting of the immune system, but this cytokine can also be applied for the improvement of hematological parameters, such as liver protection and decreasing biological age. Keywords : interleukin-2, biological age, stem cells

PP25 B-041

HAPLOTYPE ANALYSIS OF WRN GENE REGION AMONG ASIAN POPULATIONS AND WERNER'S SYNDROME PATIENTS

Shinji HARIHARA¹, Yuka ONOGI², Worawit LOUTHRENOO³, Fujio TAKEUCHI² (*1. Department of Biological Sciences, Graduate School of Science, The University of Tokyo, Japan; 2. Department of Internal Medicine, Faculty of Medicine, The University of Tokyo, Japan; 3. Department of Internal Medicine, Faculty of Medicine, Chiang Mai University, Thailand*)

Introduction : Werner's syndrome (WS) is one of the premature aging disorders and it is due to some mutation in the gene of WRN. Though many mutations causing the disease have been reported, the mechanism of gene mutation or distribution of mutations which are related to disease is still obscure. Therefore we are investigating several SNPs in the WRN gene and analyze the distribution of haplotypes among Asian populations and Werner syndrome patients. Method : DNAs were extracted from 100 normal Japanese, 99 normal Thais and 4 Japanese WS patients. Types for seven SNPs sites were determined using PCR-RFLP method. Based on each data of SNPs sites, distribution of haplotypes was estimated. Results : Six SNPs sites were polymorphic among both Japanese and Thai populations, though one site was not polymorphic. More than 30 haplotypes were observed in both Japanese and Thai populations. Though frequent haplotypes were common in the two populations, the distributions for the two populations were significantly different. Two haplotypes, which were frequent ones in Japanese normal population, were detected in the four WS patients. Conclusion : WRN gene region is rather much polymorphic and many haplotypes were detected in the Asian populations. Mutation, which cause WS disease, may be related to a few frequent haplotypes. Keywords : Werner syndrome, WRN gene, haplotype

PP25 B-042

SENESCENCE-RELATED CHANGES IN GENE EXPRESSION OF PERIPHERAL BLOOD MONONUCLEAR CELLS FROM OCTO/NONAGENARIANS COMPARED TO THEIR OFFSPRING

Wan Zurinah WAN NGAH¹, Amirah ABDUL RAHMAN¹, Norwahidah ABDUL KARIM¹, Noor Aini ABD HAMID² (*1. Dept. of Biochemistry, Universiti Kebangsaan Malaysia, Malaysia; 2. Dept. of Biochemistry, Cyberjaya University of Medical Sciences, Malaysia*)

Introduction : Mechanisms determining both functional rate of decline and the time of onset in aging remain elusive. Elucidation of the complex process of aging are fairly limited, especially those involving the comparison of long-lived individuals and young controls. Therefore, this research aims to determine the differential gene

expression profile in related individuals from villages in Pahang, Malaysia to control for environmental factors. Method : Genome-wide microarray analysis of 18 samples of peripheral blood mononuclear cells (PBMC) from two groups: octo/nonagenarians (80-99 years old) and their offspring (50.2 ± 2.0 years old) revealed 477 transcripts were age-induced and 335 transcripts were age-repressed with fold changes ≥1.2 in octo/nonagenarians compared to offspring. Results : Interestingly, changes in gene expression were associated with increased capacity for apoptosis (BAK1), cell cycle regulation (CDKN1B), metabolic process (LRPAP1), insulin action (IGF2R) and increased immune and inflammatory response (IL27RA), whereas response to stress (HSPA8), damage stimulus (XRCC6) and chromatin remodelling (TINF2) pathways were down-regulated in octo/nonagenarians. These results suggested that systemic telomere maintenance, metabolic, cell signalling and redox regulation may be important for individuals to maintain their healthy state with advancing age. Conclusion : We hypothesize that these biological processes play a critical role in the determination of a healthy long lifespan, wherein genes involved in these pathways could be the regulators of the complex aging process in human. Keywords : Microarray, nonagenarians, offspring

PP25 B-043

AGE-RELATED CHANGES OF PEPTIDYLARGININE DEIMINASE 2 IN THE MOUSE BRAIN

Yayoi KAGAMI¹, Nobuko SHIMADA¹, Setsuko HANDA¹, Eun-Kyoung CHOI², Yong-Sun KIM², Hideki ITO³, Naoki MARUYAMA¹, Akihito ISHIGAMI¹ (1. *Molecular Regulation of Aging, Tokyo Metropolitan Institute of Gerontology, Japan*; 2. *Ilsong Institute of Life Science, Hallym University, Korea*; 3. *Internal Medicine, Tokyo Metropolitan Geriatric Hospital, Japan*)

Introduction : Peptidylarginine deiminases (PADs) are a group of posttranslational modification enzymes that citrullinate (deiminate) protein arginine residues in a Ca²⁺-dependent manner. Enzymatic citrullination abolishes positive charges of native protein molecules, inevitably causing significant alterations in their structure and functions. Among the five isoforms of PADs, PAD2 and PAD4 are proved occupants of the central nervous system (CNS), and especially PAD2 is a main PAD enzyme expressed in the CNS. We previously reported that abnormal protein citrullination by PAD2 has been closely associated with the pathogenesis of neurodegenerative disorders such as Alzheimer's disease and prion disease. Protein citrullination in these patients is thought to play a role during the initiation and/or progression of disease. However, the contribution of changes in PAD2 levels, and consequent citrullination, during developmental and aging processes remained unclear. Method : We used quantitative RT-PCR, Western blot analysis, and immunohistochemical methods to measure PAD2 expression and localization in the brain during developmental and aging processes. Results : PAD2 mRNA expression was detected in the brains of mice as early as embryonic day 15, and its expression in cerebral cortex, hippocampus, and cerebellum increased significantly as the animals aged from 3 to 30 months old. No citrullinated proteins were detected during that period. Moreover, we found that PAD2 localized specifically in the neuronal cells of the cerebral cortex and Purkinje cells of the cerebellum. Conclusion : Despite PAD2's normally inactive status, it becomes active and citrullinates cellular proteins, but only when the intracellular Ca²⁺-balance is upset during neurodegenerative changes. Keywords : Peptidylarginine deiminase, citrullination, Alzheimer's disease

PP25 B-044

HP1 α -MEDIATED PREMATURE AGING VIA INTERACTION

WITH PRELAMIN A IN ZMPSTE24-DEFICIENT MOUSE EMBRYONIC FIBROBLASTS

Jia LIU¹, Xianhui YIN¹, Guangqian ZHOU¹, Baohua LIU², Huiling ZHENG², Vaidehi KRISHNAN³, Zimei WANG¹ (1. *Biochemistry and Molecular Biology, School of Medicine, Shenzhen University, China*; 2. *Biochemistry, Li Ka Shing Faculty of Medicine, The University of HongKong, Hong Kong*; 3. *Cancer Science Institute of Singapore, National University of Singapore, Singapore*)

Introduction : HP1 (heterochromatin protein 1) is not only an important chromatin-associated protein to remain heterochromatin organization but also interacts with various proteins including lamin A to trigger versatile functions in nuclei. In this study, we investigated the effects of prelamins A accumulation on the HP1 expression, sub-cellular distribution, phosphorylation after DNA damage and its relationship to premature cellular senescence in laminopathy-based Zmpste24 gene knockout mouse embryonic fibroblasts (Zmpste24^{-/-}-MEFs). Method : Primary Zmpste24^{-/-} and wild type MEFs which obtained from 13.5 days embryos were identified with PCR genotyping. HP1 interaction with prelamins A was detected by Co-IP, Western blotting and subcellular fractionations were used separately to examine HP1 expression, distribution and site-specific phosphorylation. Via depletion of HP1 by RNAi, P16 expression and senescence-associated β -galactosidase activity was examined. Results : (1) All three HP1 family members had interaction with prelamins A in an extent similar to lamin A, especially HP1 α ; (2) HP1 α expression and distribution in heterochromatin and nuclear matrix were significantly higher in Zmpste24^{-/-} MEFs than that in Zmpste24^{+/+}; (3) Following DNA damage with 4 μ M Camptothecin, though HP1 α expression showed no changes, HP1 α Thr50 position was characterized as an important phosphorylation site after DNA damage, but such phosphorylation was found to be in an obscure level and delayed in Zmpste24^{-/-} MEFs; (4) Furthermore, depletion of HP1 α by RNAi reversed cellular senescence in Zmpste24^{-/-} MEFs, as indicated with down-regulation of P16 expression and reduction of SA- β -gal activity. Conclusion : Taken together, these results suggest a novel mechanism of HP1 α -mediated defective DNA damage response and premature aging via interaction with prelamins A in Zmpste24-deficient premature mice model. Keywords : Premature aging; Heterochromatin protein 1 (HP1), Lamin A

PP25 B-045

A NEW HYPOTHESIS OF THE ORIGIN OF MENOPAUSE

Amalia Gabriela DIACONEASA, Mariana RACHITA (Biology of Aging, Ana Aslan National Institute of Gerontology & Geriatrics, Romania)

Introduction : Menopause is an intriguing human trait. Although the decrease in fertility with age is among the criteria of aging, a sudden cease of fertility is uncommon in mammals. There are some hypotheses that try to explain the origin of menopause in Homo sapiens supposing that this trait may have some selective advantages, as the recent "grandmother hypothesis". Method : Based on the analysis of certain metabolic human traits, we developed a new hypothesis of the human evolution. Results : According to this hypothesis, ecological conditions documented in the human species' history, i.e. alternating resource scarcity and relative abundance might determine epigenetic changes reflected in alterations of the activity and regulation of the IGF1/insulin pathway, involved in cell survival, division and differentiation. A high activity of the IGF1/insulin pathway in humans may alter the cell proliferation/differentiation ratio. These changes may be responsible for the occurrence of certain

unique human traits. Obesity in women is often associated with the ovarian polycystic syndrome, while small intervals between ovulations when numerous ova produced fail to mature leading to earlier menopause. The prediction of this hypothesis is the appearance of menopause in species with insulin resistance or high IGF1 level. In fact menopause was signaled in zoo in female gorillas, species with high IGF1, and in *Macaca mulata*, species that develop diabetes (1%) when adopts the western diet. Menopause is present in some dolphins and whales, animals with big fat deposits. Conclusion : Menopause may result from premature oocyte exhaustion and impaired differentiation because of the particular IGF1/pathway in humans. Keywords : menopause, human evolution

PP25 B-046

A NEW HYPOTHESIS OF AGING BASED ON BIOCHEMICAL ASPECTS

Amalia Gabriela DIACONEASA (*Research, Qeme Project, Romania*)

Introduction : Although during the last decades some genes and biochemical pathways with crucial effects in aging were discovered, the progress in understanding aging is very modest. Method : Taking into account the most important experiments related to the aging modulation, as well as the data on aging patterns and dynamics in various species, a new evolutionary hypothesis of aging is developed. Results : This hypothesis states that the aging phenotype results from gradual decrease in some specific reactions in differentiated tissues. A lack of stimulation of these reactions, especially during and after organism maturation, may be the cause of this phenomenon. Consequently, a systemic imbalance of local and distant reactions appears, that affects not only the specific functions of the differentiated tissue, but also the proper differentiation of the cell stem. Misrepairs at different levels, meta-differentiation, abnormal cell proliferation and immune reactions may occur. Aging may be a consequence of the developmental dysregulation more than of “wear and tear”. This hypothesis agrees with the patterns of the epigenetic changes during aging, the limited influence of free radicals on aging pace, and explains the actions of caloric restriction and other ways of prolonging the life span in various species. It also explains the differences in senescence rhythm and longevity in various species, the influence of weight, metabolic rate, and other physiologic aspects. Conclusion : This hypothesis provides a new vision of aging and degeneration, opening the door to multiple theoretic and medical applications in aging and degenerative disorders. Keywords : aging, developmental dysregulation, hypothesis

PP25 B-047

AGED-RELATED DIFFERENCES IN THE FORCE TO STRETCH SOLEUS MUSCLE OF FEMALE RATS

Talita G.G. ZOTZ¹, Sabrina Peviani MESSA², Eduard Wolfgang GOOSEN¹, Rafael ZOTZ³, Anna Silveira GOMES⁴ (*1. Physical Education, Federal University of Parana, Brazil; 2. Physical Therapy, Fderal University of Sao Carlos, Brazil; 3. Biotherium, Pontificia Universidade Catolica do Parana, Brazil; 4. Physiotherapy and Physical Education, Universidade Federal do Parana, Brazil*)

Introduction : Stretching exercise is performed applying a force to deform the muscle-tendon unit. However, how much force is needed to induce muscle-tendon deformation is not known and it can differ between young and aged rats. Main: to compare the force (N) to stretch soleus muscle of young and old rats. Method : Twelve Wistar female rats were divided into two groups: Young Group (YG, n=6, 311±11g)-rats 3 month old; Aged Group (AG, n=6, 351±43g)- rats 15 month old. Left soleus muscle was submitted to passive stretching

following the protocol: 1 set of 10 repetitions of 60s of stretching with 45s interval between repetitions, performed once a day, twice a week, during 1 week. The rats were previously anesthetized and to stretch soleus muscle the left ankle was held mechanically in full dorsal flexion through an apparatus constituted by a load cell, to measure the force (N) to induce the muscle-tendon unit deformation. Data were compared by ANOVA (parametric) or Kruskal-Wallis (non-parametric) ($p \leq 0.05$). Results : There was no difference between the force applied on young or aged group (intragroups comparisons). However, it was found significant decrease on force applied when compared aged ($0,48 \pm 0,04$ N) to young ($0,65 \pm 0,04$ N) rats ($p < 0.05$) along the most part of the repetitions (first to 10th repetition). Conclusion : In the aged rats the force to induce muscle-tendon deformation was significantly lesser compared to the force applied in young rats. This may have occurred because aged soleus muscle has a decline in the passive torque despite an increase in connective tissue. Keywords : Muscle Stretching Exercise, Rats, Force

PP25 B-048

WAIST CIRCUMFERENCE (WC) EVALUATION OF ELDERLY IN SOUTHERN BRAZIL

Maria Marina Serrao CABRAL¹, Claudine Lamanna SCHIRMER², Angelo Jose G. BOS² (*1. Nutrition, Federal University of Santa Maria, Brazil; 2. Institute of Geriatrics and Gerontology, Pontifical Catholic University of Rio Grande do Sul, Brazil*)

Introduction : Changes in body composition, with fat redistribution, which reduces the peripheral level and increases inside the abdomen, and reduced lean body mass are peculiarities related to the aging process. As becomes necessary to assess more completely the corporal composition, additional anthropometric data must be obtained. The Waist Circumference (WC) becomes important, as has been pointed out as one of the best anthropometric indicators of visceral fat. Objectives: To determine the Waist Circumference and assess risks for metabolic disorders in this population. Method : We measured the waist circumference of 7315 elderly people, of both sexes, aged ≥ 60 years randomly selected from their homes. To measure used was flexible and inextensible tape, placed in the horizontal plane at the natural waist line, the midpoint between the iliac crest and the last rib, readings were made at the time of expiration. Statistical analysis of data was by Epi Info version 3.5.3. Results : For the measurement of waist circumference, we found that the female has a significantly lower mean value ($89 \text{ cm} \pm 13.65 \text{ cm}$) compared to males ($93.01 \text{ cm} \pm 13.50 \text{ cm}$). The cutoffs for such classification were recommended by the World Health Organization (WHO, 1998), according to the degree of risk for metabolic complications associated with obesity: increased risk for women ($WC > 80 \text{ cm}$) and men ($WC > 94 \text{ cm}$), and very high risk $WC > 88 \text{ cm}$ and $WC > 102 \text{ cm}$ for men and women, respectively. Conclusion : There are women at high risk for metabolic complications and men they are not at risk. Keywords : Anthropometric assessment, Obesity, Health promotion

PP25 B-049

EVALUATION OF BODY MASS INDEX IN SOUTHERN BRAZILIAN ELDERLY

Maria Marina Serrao CABRAL¹, Claudine Lamanna SCHIRMER², Angelo Jose G. BOS² (*1. Nutrition, Federal University of Santa Maria, Brazil; 2. Institute of Geriatrics and Gerontology, Pontifical Catholic University of Rio Grande do Sul, Brazil*)

Introduction : Body composition alters with age, increasing the adipose tissue and reducing muscle tissue. Therefore, it is essential to use specific reference standards for this age group. Objectives: To

compare the Body Mass Index (BMI) of elderly. Method : The study involved 7315 elderly people, of both sexes, aged ≥ 60 years randomly selected from their homes. Measurements of weight and height were requested verbally to participants. Results : We found that men had a mean weight of 76.5 ± 12.09 Kg higher than women (68.8 ± 11.63 Kg), most likely due to the average value height is also greater in males (169.6 ± 7.27 cm) than women (162.4 ± 7.61 cm). By analyzing BMI results, in women the mean was 26.09 ± 3.96 kg/m² and slightly higher in males (26.54 ± 3.57 kg/m²), both classified as eutrophic, according Lipschitz parameters (parameters considered normal BMI between 22 kg/m² and 27 kg/m²). In total, 60.2% (n=461) of women and 39.8% (n=305) of men classified into a state of slimness and 1479 (54%) men and 1,261 (46%) women are inside overweight range. Within the cutoffs for normal, are 53.6% (n=1,875) of women and 46.4% (n=1,626) of men. It is noteworthy that 4.2% (n=308) of respondents did not have a measurement of weight and/or height, which are unable to perform the calculation of BMI. Conclusion : We found that there is a higher prevalence of overweight and normal weight men among women. Also, is the low prevalence of thinness, being higher in females. Keywords : Obesity, Health promotion, Anthropometry

PP25 B-050

THE EFFECTS OF AQUATIC EXERCISE TRAINING ON CUTANEOUS REACTIVE HYPEREMIA IN OLDER WOMEN WITH TYPE 2 DIABETES MELLITUS

Apiwan NUTTAMONWARAKUL¹, Supathra AMATYAKUL², Daroonwan SUKSOM³ (1. Inter-department of Biomedical Sciences, Chulalongkorn University, Thailand; 2. Department of Physiology, Faculty of Dentistry, Thailand; 3. Faculty of Sport Science, Chulalongkorn University, Thailand)

Introduction : Hyperglycemia associated with diabetes because endothelial dysfunctions by increasing oxidative stress lead to increase risk of hypertension, atherosclerosis and disorders of the microcirculation. Aerobic exercise training has traditionally been advocated as an essential component in the medical management of type 2 diabetic patients. Therefore, the present study investigated whether aerobic aquatic exercise training could improve endothelial function in older women with type 2 diabetes mellitus. Method : Twenty-four older type 2 diabetic women (age 65 ± 5 years) were assigned to aquatic exercise (AE; n=12) group and control (C; n=12) group. AE group performed aerobic exercise in swimming pool (water temp $\sim 34-36$ °C) which consisted of 4 day/week at 65-75% of maximum heart rate for 30 min. Before and after 12 weeks, all subjects were monitored in fasting plasma sugar (FBS), glycosylated hemoglobin (HbA1c) and physical fitness. Cutaneous reactive hyperemia (cRH) was also measured by using a laser Doppler flowmetry. Results : After 12-weeks, AE group had lower in resting heart rate, systolic blood pressure and the percentage of body fat ($p < 0.05$). Maximal oxygen consumption (VO₂max) was significantly higher after aquatic exercise training ($p < 0.05$). We found the improvement of FBS and HbA1c in AE group ($p < 0.05$). The greater in peak cRH of AE group were also observed ($p < 0.05$). Conclusion : These results demonstrated that aerobic aquatic exercise training improved physical fitness and endothelial function in type 2 diabetic patients. Therefore, aerobic aquatic exercise may be an effective therapeutic modality in the treatment of diabetic cardiovascular complications. Keywords : aquatic exercise, type 2 diabetes

PP25 B-051

THE MEAL EVALUATION OF LOCAL SENIOR WELFARE CENTER : A FOCUS ON SO

Chorong OH¹, Jae-kyung NO¹, Sunkug JHO², Ju Young KANG¹, Hoon Ji BAK¹, Hye Bin PARK¹, Eun Jin CHOI¹ (1. Department of Nutrition and Health Care, Kyungsoong University, Korea; 2. Rehabilitation Medicine/Clinical Aging Research Institute, Busan Medical Center, Korea)

Introduction : Theseday as increasing the elderly who visit to local senior welfare center, investigation of their provided lunch meal , eating habits , body composition chages is very significant on evaluation of SO. Therefore the purpose of this study is to fine the role of major nutrients related body composition for prevention SO in elderly. Method : we analyzed 118 subjects (60 for men, 58 for women) through a survey at two welfare centers in Busan by SPSS 19.0 and evaluated meal service menu by the Can Pro 4.0. Results : The results of this study are as follows : Average ages (75.5 ± 6.0 for men vs 72.1 ± 6.7 for women), grip strength (28.6 ± 11.7 vs 16.3 ± 6.6), obese (16.6% vs 31.0%), rate snack intake (76.6% vs 79.4%), and the kinds of chronic diseases - cardiovascular disease ,musculoskeletal disorder , endocrine disease are a high rank .There are nutritional assessment such as intake of a meal : protein (37.76 g), fiber (12.94 g), vitamin C (51.62 mg),vitamin D ($3.17 \mu\text{g}$), calcium (276.89 g), sodium (3.2 g), vitamin B12 ($4.95 \mu\text{g}$). Conclusion : In this study, grip strength was lower than cut-off point (< 30 kg for men, < 20 kg for women) in both gender which may explain they must be considered to be at risk of SO. Compared with the ecommended amount (RDA), generally nutritional assessment was high exsept calcium (276.89 mg). For muscle and bone health , calcium is required enough amount with sufficient vitamin D. Keywords : local senior welfare center, sarcopenic obesity , nutrients

PP25 B-052

THE NUTRITIONAL SITUATION IN THE CHILEAN ELDERLY: WERE THERE CHANGES BETWEEN THE YEARS 2003 AND 2010?

Chung Bin YU¹, Luis VILLARROEL², Pedro Paulo MARIN³ (1. Acute Geriatric Hospitalization Unit, Instituto Nacional de Geriatria, Chile; 2. Public Health, Department of Family Medicine, Faculty of Medicine, Pontificia Universidad Catolica de Chile, Chile; 3. Geriatrics and Gerontology, Department of Internal Medicine, Faculty of Medicine, Pontificia Universidad Catolica de Chile, Chile)

Introduction : The nutritional status has an important impact on the health of the person. In the elderly, being underweight is associated with an increased mortality risk, in comparison to those who are eutrophic. There is controversial evidence of how obesity affects the longevity in the older adult (OA). The objective of this study is to describe the tendency and compare the anthropometric measurements and nutritional status in the elderly in Chile, during a seven year period (2003-2010). Method : Analysis of the Body Mass Index (BMI), nutritional status, and sedentarism in a representative sample of elderly in Chile. The data was obtained from the Chilean 'Encuesta Nacional de Salud' (ENS) or National Health Survey, from the years 2003 and 2010. Results : The prevalence of overweight and obese elderly (BMI equivalent or more than 25) was 72.4% and 73.9% ($p = 0.656$), the years 2003 and 2010, respectively. The prevalence of underweight elderly did not vary between both years (1.7%, $p = 0.896$). There was also a tendency towards sedentarism in the OA, which increased from 95.7% to 96.1%, in this time period. Conclusion : There were no statistically significant differences in the prevalence of overweight or obese elderly in seven years, although there was an increasing trend. The prevalence of those OA who are overweight and/or obese are still high, and considering a slight tendency towards sedentarism, this might imply a failure in the politics of health promotion and primary

prevention, in a period of seven years. Keywords : Longevity, aged, obesity

PP25 B-053

THE ESTABLISHMENT OF ANIMAL MODEL FOR SARCOPENIC OBESITY

Ken SUGIMOTO, Xiang WANG, Yukiko YASUNOBE, Mitsuru OHISHI and Hiromi RAKUGI (*Geriatric Medicine, Osaka University Graduate School of Medicine, Japan*)

Introduction : The age-related changes in body composition, a combination of excess weight (obesity) and reduced muscle mass or strength (sarcopenia), have been recently defined as sarcopenic obesity. It is estimated that their individual effects on physical disability, morbidity and mortality would be synergistically potentiated when occurring simultaneously. A good animal model for sarcopenic obesity is needed to clarify the mechanism, however, it has not yet been established. Here, we tried to establish a suitable animal model for the understanding of these relations using Spontaneously Hypertensive rats (SHR). Method : 20-week-old male SHR rats were divided into two groups, SHR fed a normal diet (SHR-ND) and SHR fed a high fat & fructose diet (SHR-HF) At 32 weeks of age, the soleus muscle (SOL) and the extensor digitorum longus muscle (EDL) were extracted after exercise. The morphological and molecular biological analyses were performed using these muscles. Male Wistar Kyoto rats (WKY) were used as controls. Results : There was no difference in the weight of SOL among three groups, however the weight of EDL was lower in SHR-ND and SHR-HF than in WKY. The expressions of inflammatory cytokines were higher in SHR-HF than in SHR-ND and WKY. The expressions of atrogen1, MuRF1 (ubiquitin?ligases) and Pax7 (a marker of muscle satellite cells) were higher in SHR-HF than in SHR-ND and WKY. Conclusion : The changes observed in this animal model are similar to the changes in the subjects with sarcopenic obesity, so this model might be useful for clarifying the mechanisms for sarcopenic obesity. Keywords : obesity, sarcopenia, SHR

PP25 B-054

CANNABINOID RECEPTOR 1 (CNR1) POLYMORPHISM WAS ASSOCIATED WITH OBESITY IN JAPANESE MEN

Masayuki YAMASAKI¹, Paulin Beya Wa Bitadi MUTOMBO¹, Toru NABIKA², Kuninori SHIWAKU¹ (*1. Department of Environmental & Preventive Medicine, Shimane University School of Medicine, Japan; 2. Department of Functional Pathology, Shimane University School of Medicine, Japan*)

Introduction : The endocannabinoid system (ECS) has been well demonstrated to be involved in the regulation food intake process and lipid and glucose metabolisms. ECS over activation is associated with obesity and obesity-related cardiovascular disease (CVD). The aim of this study was to investigate the association of cannabinoid receptor 1 (CNR1)4895 C/T gene polymorphism (rs806368) with obesity and obesity-related cardiovascular disease (CVD) risk factors in Japanese. Method : This study included 1,452 Japanese (678 men and 774 women, aged 56.8±13.4) from rural communities in Shimane Prefecture, Japan. Results : The frequency of the C minor allele of CNR1 4895 C/T polymorphism was 47%. In men, the CC genotype carriers showed significantly greater body mass index (BMI) and waist circumference (WC) values than T allele carriers, even after adjusting for age and medications for hypertension, dyslipidemia and type 2 diabetes. The frequency of obesity (BMI ≥25 kg/m²) in CC genotype carriers was significantly greater than in T allele carriers (31.8% vs 21.5%), but the frequency of central obesity (WC ≥ 85 for men and WC ≥90 cm for women) was not significant by CNR1 4895 C/T

genotype. CC genotype carriers of CNR1 4895 C/T showed significantly greater odds for obesity than T allele carriers, even after adjustment for age and the abovementioned medications. Conclusion : This study supports the association of CNR1 4895 C/T with interindividual differences in obesity in men. Keywords : CNR1, Obesity

PP25 B-055

EFFECTS OF SYMBIOTIC SUPPLEMENTATION ON INFLAMMATION AND BODY COMPOSITION IN ELDERLY: A RANDOMIZED DOUBLE-BLIND STUDY

Joao VALENTINI NETO¹, Camila Maria DE MELO², Sandra Maria LIMA RIBEIRO³ (*1. PRONUT, University of Sao Paulo, Brazil; 2. EACH - USP, University of Sao Paulo, Brazil; 3. School of Arts, Sciences and Humanities, University of Sao Paulo, Brazil*)

Introduction : Symbiotic substances intake has been recommended in order to preserve or recover the gut microbial balance, which is related to systemic inflammation. We hypothesized that administration of symbiotic by elderly can improve tissue integrity, reducing risk of muscle loss, by reducing systemic inflammation. Purpose: To evaluate some effects of supplementation (for 3 months) of a symbiotic substance on body composition and inflammatory markers of elderly with risk of frailty. Method : Double blind and randomized study. Were studied 17 individuals, between 65-75 years old, both genders, free-living, and fulfilling at least one frailty criteria. Were excluded the ones referring chronic or acute intestinal disease, recent antibiotics use, and recent intake of prebiotic, probiotic, symbiotic or anti-diarrheic substances. The individuals were randomly distributed in two groups: S (n=10) - daily intake of a symbiotic substance; and P (n=7)- placebo. Before and after the experiment we analyzed: body mass index (BMI), skinfold thicknesses, body circumferences, grip strength, bioelectric impedance by vectorial analysis (BIVA), and plasma concentration of inflammatory cytokines (IL-6 and TNF- α). Statistical analysis: ANOVA and Hotelling's T² for vectorial analysis. Results : Mean comparison between groups did not show significant difference in any variable investigated. Individual analysis of tissues electrical properties (BIVA) pointed a trend of "S" group to become more hydrated at the end of the supplementation period. Conclusion : individual analysis, but not the statistical comparison between groups, pointed symbiotic supplementation to be associated with better hydration status and therefore better tissue integrity, reducing risk of tissue loss. Keywords : Symbiotic, tissue loss, frailty

PP25 B-056

FACTORS ASSOCIATED WITH FOOD INTAKE AMONG INDONESIAN ELDERLY POPULATION : MULTI-CENTRE STUDY

Siti SETIATI (*Department of Internal Medicine, Faculty of Medicine Universitas Indonesia, Indonesia*)

Introduction : Aim To obtain factors associated with energy intake in Indonesian elderly population. Method : A multicentre-cross sectional study conducted in 13 hospitals across Indonesia between January ? April 2011 among 387 subjects. The study population consisted of individuals aged 60 years and older, of both genders who attend to geriatric clinic (outpatient). The data collection consisted of demographic characteristics, functional status (ADL score), cognitive status (MMSE score), mental status (GDS score), nutritional status (MNA score), food intake, present activities, and data on self reported chronic diseases. Food intake was obtained by 24-hour food recall. Data was analyzed using statistical package software. Results : Age range of subjects in this study was 60-90 years, with mean age 69.8

years old. Most of subjects (58.4%) were women and had educational background senior high school or higher degree (61.1%). More than half of subjects (87.6%) were not active. Average energy intake was 1266.7 (336.5) calories. Bivariate analysis showed that age, sex, hypertension, osteoporosis, osteoarthritis, hyperuricemia, vision impairment, and functional status were significantly associated with energy intake. Multivariate analysis showed variables sex, education, and osteoporosis significantly associated with energy intake. Analysis of food intake found that subjects with educational background junior high school or lower consume less amount of eggs, fats/oil, fruits and juice, legumes, and snack. Osteoporotic subjects consume eggs, fruits and juice, seafood, milk, and other non-alcoholic beverages more than non-osteoporotic subjects. Conclusion : Factors associated with energy intake are sex, education, and osteoporosis. Keywords : Elderly, energy intake, food intake

PP25 B-057

SATISFACTION WITH LIFE IN EUROPEAN OLDER ADULTS WITH TYPE 2 DIABETES

Sofia VON HUMBOLDT, Isabel LEAL, Susana SANTOS (*Research Unit in Psychology and Health, R&D, ISPA-Instituto Universitario, Portugal*)

Introduction : Objectives: The population's increased longevity is leading to a worldwide concern about older adults' well-being and about the incidence of chronic diseases such as diabetes. The present research intends to determine significant differences among three groups of older adults with diverse diabetes diagnosis, namely, participants with only type 2 diabetes, participants with diabetes and other chronic diseases and the remaining without any chronic disease, regarding the satisfaction with life (SWL). Method : Method: We recruited 304 non-institutionalized older adults aged between 74-100 years (M=82.9; SD= 6.71), who were allocated to three groups, according to their diagnosed medical condition. Measures were completed, including demographics and the Satisfaction with Life Scale. All estimates were statistically significant ($p < .01$). Results : Results: Significant differences were found regarding the SWL among the three groups. The lowest SWL score were found in the 'only diabetes' group. In specific, the ANOVA indicated that there are significant differences between at the least two groups ($F(2)=7.598$, $p < .01$). Post hoc comparisons of means (Tukey's honestly significant difference) indicated that the 'diabetes and other' participants had a significantly lower SWL score than the 'no diabetes' group ($M=-.335$, $p < .05$). This latter had a significantly higher SWL score than the 'only diabetes' group ($M=.483$, $p < .05$). Conclusion : Conclusions: Findings suggest that diabetes, as well as the existence of comorbidities, differently influence both SWL. This study discloses the importance of SWL for the elderly with diabetes, and their relevance in the context of healthy aging in older populations. Keywords : Chronic diseases, diabetes, older adults, satisfaction with life

PP25 B-058

SENSE OF COHERENCE AND SATISFACTION WITH LIFE IN A CROSS-NATIONAL SAMPLE OF OLDER ADULTS WITH TYPE 2 DIABETES

Sofia VON HUMBOLDT, Isabel LEAL, Susana SANTOS (*Research Unit in Psychology and Health, R&D, ISPA-Instituto Universitario, Portugal*)

Introduction : Objectives: The present research intends to: (a) determine significant differences among three groups of older adults with diverse diabetes diagnosis, namely, participants with only type 2 diabetes, participants with diabetes and other chronic diseases and the

remaining without any chronic disease, regarding the satisfaction with life (SWL) and sense of coherence (SOC) scores, and (b) to assess the association of SWL with SOC in these groups. Method : Method: We recruited 304 non-institutionalized older adults aged between 74-100 years (M=82.9; SD= 6.71), who were allocated to three groups, according to their diagnosed medical condition. Measures were completed, including demographics, the Satisfaction with Life Scale and the Sense of Coherence Scale. Results : Results: Significant differences were found regarding the SWL and SOC among the three groups. A moderate positive correlation between the total SOC score and SWL ($r=.447$, $p \leq .01$) in the 'only diabetes' group was found. Findings showed a higher association between the score of 'manageability' and SWL ($r=.493$, $p \leq .01$), a weak correlation between 'meaningfulness' and SWL ($r=.207$, $p \leq .05$), a weak positive correlation between the scores of 'manageability' and SWL ($r=.218$, $p \leq .01$) as well as a weak and negative correlation between 'meaningfulness' and SWL ($r=-.201$, $p \leq .05$) in the 'diabetes and other' group. Conclusion : Conclusions: These pertinent findings contribute to an understanding of diabetes beyond the medicalized approach that is common in the literature and enhance the important role played both by SOC and SWL in older patients' diabetes adaptation to their medical condition. Keywords : Diabetes, older adults, satisfaction with life, sense of coherence

PP25 B-059

ACUTE CHANGES IN BLOOD GLUCOSE LEVEL BY A SHORT BOUT OF STAIR CLIMBING-DESCENDING EXERCISE AND A BICYCLE EXERCISE

Tetsuo TAKAISHI¹, Tatsuya HAYASHI² (*1. Graduate School of Natural Sciences, Nagoya City University, Japan; 2. Graduate School of Human and Environmental Studies, Kyoto University, Japan*)

Introduction : This study was designed to compare the acute hypoglycemic effect of a short bout of stair climbing-descending exercise (ST-EX) and a bicycle ergometer exercise (BI-EX) at the same heart rate. Method : Six elderly persons with T2DM (age 72.5 ± 4.3 y, fasting blood glucose 112 ± 7 mg/dl, HbA1c 6.7 ± 0.5 %) joined this study. On separate days, 5 h after breakfast, the subjects ingested a test meal composed of carbohydrate and protein (660 kcal), and then (1) kept sitting on a chair for 150 min (REST), (2) kept sitting for 90 min, then performed BI-EX for about 8.5 min and then kept sitting until 150 min (BIKE), or (3) kept sitting for 90 min, then performed ST-EX for about 8.5 min and then kept sitting until 150 min (STAIR). ST-EX comprised 16 sets of climbing a stairway to a second floor (18 cm height, 21 steps) at the rate of 90 steps/min followed by walking down the stairs slowly to the first floor. Results : At 90 min after ingestion, blood glucose levels (BG90) were not different among the conditions. However, blood glucose decreased more rapidly in STAIR than other conditions, particularly shortly after exercise (BG105-BG90: REST -10 ± 15 , BIKE -44 ± 24 , STAIR $-71 \pm 14^*$ mg/dl. * $P < .05$ vs. REST and BIKE) without dyspnea and leg fatigue. Conclusion: A short bout of ST-EX may be a powerful modality to improve glucose excursions after meals for elderly people with T2DM. Keywords : postprandial hyperglycemia, stairs, indoor

PP25 B-060

BIO-PARAMETERS: ARE DIFERENCES AMONG GENERATIONS?

Zaida Aguiar Sa AZEREDO¹, Eduarda MATOS² (*1. UNIFAI, Portugal; 2. SAude Comunitaria, BioMedical Sciences Institute Abel Salazar, Portugal*)

Introduction : In Portugal it seems new generations are taller than the

old generations. Also the number of obese persons is increasing. The main objectives of the Authors were : to know the prevalence of elderly obesity; to compare with young adults. Method : The Authors studied 403 adults who frequent a GP consultation . It is a opportunistic sample. We divided the participants into 3 age groups : <65; 65-79; >= 80 years old. Results : There are significant differences between young adult and elderly on what concern the BMI and the arm perimeter. The percentage of young adults with obesity or over weight is higher than old people; In the abdominal perimeter there are not differences among the three groups. Conclusion : Although this sample is an opportunistic sample and we can't generalize to the portuguese population we found more obesity in young adults and some other differences among the groups. Also in Portugal the obesity becomes a problem in young generations. Keywords : generations, elderly , bio-parameters

PP25 B-061

SALIDROSIDE, A NATURAL COMPOUND ISOLATED FROM RHODIOLA ROSEA L, PROMOTES OSTEOBLASTIC DIFFERENTIATION THROUGH REGULATION OF BONE MORPHOGENETIC PROTEIN (BMP) SIGNALING PATHWAY

Jinjing CHEN, Diandong LI, Zhen WANG (*Biochemistry Department, The Institute of Medicinal Biotechnology, China*)

Introduction : Salidroside (SAL) is one of main active components of *Rhodiola rosea* L, a traditional Chinese medicine which possesses diverse pharmacological activities including anti-aging effects. Our previous work found that SAL could enhance the transcriptional activity of BMP2, a well-established osteogenic regulator. In this study, the effect of SAL on proliferation, differentiation and mineralization of multipotential mesenchymal cell line C3H10T1/2 and osteoblastic cell line MC3T3-E1 was examined, and the role of SAL in BMP2 pathway was tested. Method : Cellular proliferation was measured by MTT assay. Effects of SAL on osteogenic marker genes and BMP2 pathway was measured by RT-PCR and Western blot. Cellular mineralization was tested with Alizarin Red S staining. Ovariectomized rats were used to study the effect of SAL in vivo. Results : SAL (1-10 μ M) promoted the proliferation of the osteoblastic cells and stimulated osteogenic capacity, evidenced by the increase of ALP activity and mRNA expression of ALP, osteopontin and osteocalcin in C3H10T1/2 and MC3T3-E1 cells after treatment for different time. The mineralization of C3H10T1/2 cells was dose-dependently increased by SAL. Moreover, SAL significantly increased the mRNA level of genes involved in the regulation of BMP2 signaling pathway, including BMP2, BMP4, BMP6, Runx2 and Osterix, and enhanced the phosphorylation of Smad1/5/8. The osteogenic effect of SAL was abolished by dorsomorphin, a BMP pathway inhibitor. Further in vivo study demonstrated that SAL prevented bone loss in the ovariectomized rats. Conclusion : Our findings demonstrate that SAL could stimulate osteoblastic differentiation through BMP signaling pathway, and thus may be developed as a promising anti-osteoporosis drug. Keywords : Salidroside; osteogenesis; BMP2; anti-osteoporosis

PP25 B-062

MODULATORY ROLE OF THIOREDOXIN-1 IN BASE EXCISION REPAIR UNDER REDOX MODULATION

Ji Su SON, Hye Lim KIM, Young Rok SEO (*Department of Life Science, Institute of Environmental Medicine for Green Chemistry, Dongguk University, Korea*)

Introduction : Thioredoxin-1 (Trx1) is an antioxidant enzyme with a

protective role in removal of reactive oxygen species (ROS). We investigated the mechanism of how the redox modulator Trx1 affects base excision repair (BER) activity to understand the protective role of Trx1. Method : To demonstrate the specific mechanism by Trx1, we constructed a Trx1 knockdown system in RKO cells using RNA interference technology. Results : Induced ROS generation and decreased Trx1 expression were concomitantly observed in Trx1 shRNA knockdown cells relative to wild type cells. DNA damage in terms of relative intensity of DNA tail and γ -H2AX foci was markedly higher in the Trx1 shRNA cells compared with that in wild type cells, leading to increased cellular susceptibility to nitrosomethylurea (NMU). In addition, we observed a modulatory role of Trx1 in the BER pathway via the p53 downstream gene, growth arrest and DNA-damage-inducible protein 45 α (Gadd45a). The protein level and function of p53, a Trx1 downstream gene, coincidentally decreased in the Trx1 shRNA cells. Furthermore, Trx1 shRNA cells showed decreased Gadd45a expression and interaction of Gadd45a with apurinic/aprimidinic endonuclease 1 (APE1) as well as APE1 activity. Conclusion : In conclusion, Trx1 might cooperate in the control of APE1 function as one of the critical steps in BER by modulating the p53 function and protein-protein interaction between Gadd45a and APE1, providing insight into the molecular mechanism for modulating BER activity with redox factor Trx1. Keywords : Base excision repair (BER), p53, Thioredoxin-1 (Trx1)

PP25 B-063

ACUTE MODERATE-INTENSITY CYCLING EXERCISE DOSE NOT LEAD CONSISTENTLY INCREASING THE SERUM BDNF IN JAPANESE HEALTHY YOUNG MALE

Akio GODA, Shohei OHGI (*Rehabilitation Sciences, Seirei Christopher University, Japan*)

Introduction : Brain-derived neurotrophic factor (BDNF) is one of a family of neurotrophic factors that participates in neuronal transmission, modulation and plasticity. Previous human-based studies have demonstrated that acute exercise leads to increases in BDNF in the peripheral blood, but there is no study conducted in Japanese subjects. Purpose of this study, to determine the effects of acute exercise on serum BDNF levels in Japanese healthy young male. Method : Forty Japanese male subjects (24.1 \pm 2.9yr) performed a graded exercise test for the determination of peak VO₂ on a cycle ergometer. On separate days, subjects performed 30-min cycle exercise at 60% of peak VO₂. Serum BDNF was analyzed both at rest and after exercise. Results : Twentytwo out of all subjects increased serum BDNF after exercise than rest period. However, in all subjects, there was no significant change in serum BDNF from rest value after exercise (rest 14.7 \pm 5.4 ng/ml; after exercise 15.3 \pm 5.8ng/ml; p=.21). Conclusion : This is the first study showing that serum BDNF levels are not significantly increased immediately after the exercise in Japanese male subjects. Additional research is needed to explore how BDNF change was produced by exercise in Japanese subjects at other age group. Keywords : Brain-derived Neurotrophic Factor, aerobic exercise, Japanese

PP25 B-064

FATIGUE OPTIMIZES NEUROMUSCULAR RESPONSES OF SUBSEQUENT EXERCISE

Hideaki ISHII, Yusuke NISHIDA (*Graduate School of Rehabilitation Sciences, Seirei Christopher University, Japan*)

Introduction : Exercise is associated with fatigue and improved physical function in the elderly. Fatigue during exercise impairs performance but enhances corticomuscular coupling; therefore, fatigue

promotes neuromuscular adaptation. In the elderly, neuromuscular adaptation improves functional tasks. We investigated the effect of fatigue on neuromuscular responses of subsequent exercise. Method : Fourteen healthy young men performed fatigue and non-fatigue protocols. Torque and electromyogram (EMG) responses during sustained maximal voluntary contraction (MVC) of knee extension were measured before protocol initiation. EMG during sustained 50% MVC was measured before and after protocols. In fatigue protocol, subjects performed low-intensity (50% MVC) knee extensions with slow movement and tonic force generation (fatigue exercise). After 5 min rest, subjects performed warm-up for 5 min and cycle ergometer exercise at 30% HRmax for 20 min. In non-fatigue protocol, subjects only performed the ergometer exercise. Neuromuscular efficiency (NME) and %iEMG were assessed. During fatigue exercise, respiratory exchange ratio (RER) was measured. Results : RER was significantly higher during fatigue exercise than during rest ($p < 0.05$); %iEMG was significantly higher after both protocols than before (fatigue protocol: $41.2 \pm 6.2\%$ vs. $44.1 \pm 6.5\%$; non-fatigue protocol: $41.5 \pm 6.6\%$ vs. $46.7 \pm 7.3\%$) ($p < 0.05$). NME was significantly lower after non-fatigue protocol (0.38 ± 0.10 Nm/mV) than before (0.43 ± 0.11 Nm/mV) ($p < 0.05$). Changes in iEMG and NME were significantly larger for non-fatigue than for fatigue protocol ($p < 0.05$). Conclusion : Fatigue optimized neuromuscular responses of subsequent exercise in healthy young men, suggesting that fatigue may provide exercise benefits to the elderly. Keywords : Neuromuscular, Exercise, Fatigue

PP25 B-065

BUTYRIC ACID-INDUCED HEME INCREASE IS CORRELATED WITH SIRT1 DECREASE IN GINGIVAL TISSUES

Marni E. CUENO¹, Kenichi IMAI¹, Noriko MATSUKAWA², Takamitsu TSUKAHARA², Kuniyasu OCHIAI¹ (1. Department of Microbiology, Nihon University School of Dentistry, Japan; 2. Laboratory of Animal Sciences, Kyoto Institute of Nutrition and Pathology Inc, Japan)

Introduction : Aging has been correlated to periodontopathic bacterial accumulation in the gingival tissue which would imply that periodontopathic bacterial metabolite, such as butyric acid (BA), also accumulate. BA is an extracellular metabolite that causes mitochondrial oxidative stress in vitro and associated with latent viral activation and apoptosis induction. It is, however, not clear whether BA contributes to aging. In this study, we determined the possible correlation between BA and aging in rats. Method : Jugular blood was collected 1 hour after BA-injection and separated into blood mitochondrial and cytosolic fractions. Hydrogen peroxide (H₂O₂), superoxide dismutase (SOD) and catalase (CAT) levels were measured in blood mitochondria to establish mitochondrial reactive oxygen species (ROS) homeostasis. NAD kinase (NADK), NADPH oxidase 2 (NOX2) and sirtuin 1 (SIRT1) activities were determined through immunoblotting while NAD⁺ (prerequisite for SIRT1) and NADP⁺ (prerequisite for NOX2) levels were quantified in blood cytosol to determine the possible correlation between BA and SIRT1. Heme levels were likewise determined in both blood mitochondria and cytosol. Results : We found that both pro-oxidants (H₂O₂) and antioxidants (SOD and CAT) levels increased suggesting that mitochondrial ROS homeostasis was affected and, likewise, mitochondrial oxidative stress was not induced. Moreover, we established that cytosolic heme levels and NOX2 activity was increased while SIRT1 activity decreased. Consistently, NAD⁺ amounts measured were decreased whereas NADP⁺ levels were increased. This was further confirmed with an increase in NADK

activity which is needed for NADP⁺ production. Conclusion : Thus, BA-induced heme increase favors NADP⁺ (NOX2) over NAD⁺ (SIRT1) which putatively could contribute to aging. Keywords : butyric acid, gingival tissue, heme

PP25 B-066

THE MECHANISM OF LONGEVITY WITH HORMESIS BY THE LOW DOSE X RAY-IRRADIATION IN C. ELEGANS

Seitaro HAYASHI¹, Kayo YASUDA², Takamasa ISHII¹, Naoaki ISHII¹ (1. Department of Molecular Life Science, Tokai University School of Medicine, Japan; 2. Teaching and Research Support Center, Tokai University School of Medicine, Japan)

Introduction : *Caenorhabditis elegans* development can adopt a quiescent stage called the dauer larva, under adverse environmental conditions such as a high population density or starvation. They can resume normal development when presented with food. The time spent as a dauer larva did not affect the post-dauer life span, giving the impression that dauer larvae suspend the process of aging. A strong beneficial effect was observed when dauer larvae were irradiated and allowed to recover soon after X-ray irradiation; that is, irradiation (30 Gy) to one day old but not 30 days old dauer larvae significantly increased the post-dauer life spans. Method : To be clear the molecular mechanisms of the longevity, a genome-wide gene expression analysis was performed in a comparison between irradiated and non-irradiated worms. Results : In the irradiated worms, activation of antioxidants such as glutathione-S-transferase, alteration of the energy metabolism such as an activation of unsaturated fatty acid synthesis and activations of some signaling pathways were observed by the gene expression analysis. Conclusion : It is suggested that the longevity by X ray-irradiation is due to the activation of antioxidants and the alteration of energy metabolism derived from the activations of some signaling pathways such as JNK and p38 MAPK and an insulin-like ligand-receptor signaling pathway related with stress responses. Keywords : *C. elegans*, Dauer larvae, X ray-irradiation

PP25 B-067

IN-DEPTH ANALYSIS OF UBA1 CYSTEINE UNDER OXIDATIVE STRESS

Ung YANG, Hee-Young YANG, Tae-Hoon LEE (Department of Biochemistry, School of Dentistry, Chonnam National University, Korea)

Introduction : The oxidation of intracellular proteins and the formation of protein aggregates have been suggested to underlie the loss of cellular function and the reduced ability of senescent animals to withstand physiological stresses. Especially, Selective and regulated protein degradation via the ubiquitin-proteasome system is essential for maintenance of cellular homeostasis. In Peroxiredoxin II (Prdx II) knockout mice, morphologically aged cells and aggregated hemoglobins were detected in the dense RBC fractions, which contained markedly higher levels of reactive oxygen species (ROS). Method : To identify oxidation-sensitive cysteines in RBC of Prdx II^{-/-} mice, we performed comparative analysis by nano-UPLC-MSE shotgun proteomics. And then, we confirmed in vitro enzyme activity of UBA1 (ubiquitin activating enzyme E1) using designed five mutants (C23S, C278S, C340S, C494S and C632S). We also evaluated the relation between UBA1 activity and ubiquitination, and the functional role of UBA1 cysteine in both in vivo and in vitro ubiquitination. Results : In this study, we identified oxidation-sensitive cysteines in some candidates in RBCs from PrdxII^{-/-} mice. Among identified targets, UBA1 was detected oxidation-sensitive four cysteines containing reduced form and hyperoxidative form.

Particularly, Cys-278 can affect ubiquitin charging through a change in the structural conformation of UBA1, not through direct interaction at the UBA1-Ub interface. Conclusion : We hypothesized that oxidative stress-induced impairment of UBA1 activity may trigger the accumulation of protein aggregates due to the impaired ubiquitination. Keywords : Red blood cell, cysteine oxidation, UBA1

PP25 B-068

SOD1 INSUFFICIENCY EXACERBATES ALZHEIMER'S-LIKE PHENOTYPES IN MICE

Takahiko SHIMIZU¹, Kazuma MURAKAMI², Shigeo MURAYAMA³, Kazuhiro IRIE², Takuji SHIRASAWA⁴ (1. *Advanced Aging Medicine, Chiba University Graduate School of Medicine, Japan*; 2. *Graduate School of Agriculture, Kyoto University, Japan*; 3. *Neuropathology, Tokyo Metropolitan Institute of Gerontology, Japan*; 4. *Aging Control Medicine, Juntendo University Graduate School of Medicine, Japan*)

Introduction : Oxidative stress is closely linked to the pathogenesis of neurodegeneration. Soluble amyloid β (A β) oligomers cause cognitive impairment and synaptic dysfunction in Alzheimer's disease (AD). However, the relationship between oligomers, oxidative stress and their localization during disease progression is uncertain. Method : Our previous study demonstrated that mice deficient in cytoplasmic copper/zinc superoxide dismutase (CuZn-SOD, SOD1) have features of drusen formation, a hallmark of age-related macular degeneration. Amyloid assembly has been implicated as a common mechanism of plaque and drusen formation. Results : Here, we show that Sod1 deficiency in an amyloid precursor protein-overexpressing mouse model (AD mouse, Tg2576) accelerated A β oligomerization and memory impairment as compared with control AD mouse, and that these phenomena were basically mediated by oxidative damage. The increased plaque and neuronal inflammation were accompanied by the generation of N ϵ -carboxymethyl lysine in advanced glycation end-products, a rapid marker of oxidative damage, induced by Sod1 gene-dependent reduction. The Sod1 deletion also caused tau phosphorylation and the lower levels of synaptophysin. Furthermore, the levels of SOD1 were significantly decreased in human AD patients rather than non-AD age-matched individuals, but mitochondrial SOD (Mn-SOD, SOD2) and extracellular SOD (CuZn-SOD, SOD3) were not. Conclusion : These findings suggest that cytoplasmic superoxide radical produced by SOD1 insufficiency plays a critical role in the pathogenesis of AD. Activation of SOD1 may be a therapeutic strategy for the inhibition of AD progression. Keywords : SOD1, Oxidative stress, Alzheimer's disease

PP25 B-069

MATHEMATICAL ANALYSIS OF INDIVIDUAL SENSITIVITY TO OXIDATIVE STRESS

Victor SEMENKOV¹, Anatoli MICHALSKI² (1. *Laboratory of Ageing Immunology, Centre of Gerontology of Medical University of Ministry of Health of Russian Federation, Russia*; 2. *Control on Incomplete Data, Institute of Control Sciences of Russian Academy of Science, Russia*)

Introduction : Active ageing may depend on individual sensitivity of human's organism to oxidative stress. Misbalance in favor of oxidants may result in pathophysiological responses, functional disorders and diseases. Individual sensitivity to oxidative stress is reflected in the ability of organism to reduce the surplus production of reactive oxygen species (ROS) under stress in order to prevent cells and organs from damage. Method : The study included 30 patients(6 male and 24 female) aged 35 to 95 years. The luminol-dependet

chemiluminescence of the neutrophils as phagocytizing cells isolated from the patient's peripheral blood was used to measure the level of ROS production. Neutrophils were exposed to heat shock at 42°C for 30 sec, 1 min. and 3 min. and then induced by zymosan A(Sigma,USA) chemiluminescence. Another part of neutrophils of the same patient was used as a control of chemiluminescence without stress reaction. Mathematical method used approximation of the experimental curves and calculation of the differences between ROS production after stress and control neutrophils for each patient. Results: The statistically significant difference in ROS production between control neutrophils and neutrophils after stress during 30 sec., 1 min. and 3 min. was observed in the first minutes after heat shock in the most patients (p<0.05). The degree of reduction in ROS production by neutrophils after stress was opposite to individual sensitivity to oxidative stress. Conclusion : These data testify that shortening of heat shock stress duration for neutrophils is suitable for determination of individual sensibility to oxidative stress. Keywords : stress, individual sensitivity

PP25 B-070

TELOMERE LENGTH OF HUMAN ADULT BRONCHIAL EPITHELIUM MEASURED BY TISSUE Q-FISH METHOD

Shinsuke AIDA¹, Junko AIDA², Toshio KUMASAKA³, Hideyuki SHIMAZAKI⁴, Seiichi TAMAI⁴, Kaiyo TAKUBO², Yoshiyuki R. OSAMURA¹ (1. *Department of Pathology, Mita Hospital, International University of Health and Welfare, Japan*; 2. *Research Team of Geriatric Diseases, Tokyo Metropolitan Institute of Gerontology, Japan*; 3. *Department of Pathology, Japanese Red Cross Medical Center, Japan*; 4. *Department of Laboratory Medicine, National Defense Medical College, Japan*)

Introduction : We investigated the telomere lengths of human adult bronchial epithelium using tissue Q-FISH method, and examined its correlation with aging and smoking. Method : Lung tissue obtained from 53 autopsy cases (range 51-100 years, average 82) and 20 surgically resected lung cancer cases (range 45-72 years, average 62) were examined. Telomere lengths of basal cells of bronchial epithelium were measured by tissue quantitative fluorescence in situ hybridization (Q-FISH) method, and were shown by normalized telomere to centromere ratios (NTCRs). Results : 53 autopsy cases include 20 nonsmokers (NoS), 14 ex-smokers (ExS), 10 current smokers (CuS), and 9 unknown cases. 20 surgical cases include 19 CuS and 1 unknown case. NTCRs of NoS, ExS and CuS of autopsy cases are 1.18, 1.17, 1.51, respectively. The telomeres of CuS are significantly longer than those of NoS and ExS. NTCRs of the bronchial epithelium of lung cancer cases and lung cancer tissue are 1.38 and 1.46, respectively. NTCRs of CuS tend to be reduced with age. NoS and ExS show no correlation between NTCRs and age. Conclusion : The significant elongation of telomeres of CuS suggests that smoking causes some mechanism to lengthen telomeres such as induction of telomerase. Most of lung cancer cases are CuS but their telomeres are shorter than those of CuS of non-cancer autopsy cases, which is considered to indicate reduction of telomere length in carcinogenic process. Keywords : telomere, Q-FISH, smoking

PP25 B-071

FUNCTIONAL, BALANCE AND HEALTH DETERMINANTS OF FALLS IN A FREE LIVING COMMUNITY AMAZON RIPARIAN ELDERLY

Edneia Aguiar Maia RIBEIRO¹, Euler Esteves RIBEIRO², Karin VIEGAS³, Fernanda TEIXEIRA⁴, Greice Franciele Feyh Dos Santos MONTAGNER⁵, Kennya Marcia MOTA⁶, Fernanda BARBISAN⁷, Ivana Beatrice Manica Da CRUZ⁷, ose Antonio DE PAZ⁸ (1. *Medicina,*

Universidade Estadual do Amazonas, Brazil; 2. Coordenador, Universidade Aberta da Terceira Idade - Universidade Estadual do Amazonas, Brazil; 3. Enfermagem, Universidade Federal de Ciências da Saúde de Porto Alegre, Brazil; 4. Educação Física, Universidade Federal de Pelotas, Brazil; 5. Programa de Pós Graduação em Bioquímica Toxicológica, Universidade Federal de Santa Maria, Brazil; 6. UNATI, Universidade Aberta da Terceira Idade - Universidade Estadual do Amazonas, Brazil; 7. Laboratório de Biogenômica, Universidade Federal de Santa Maria, Brazil; 8. Instituto de Biomedicina (IBIOMED), Universidad de Leon, Spain)

Introduction : This study was to investigate socio-economic, clinical, anthropometric, balance and functional fitness factors present in Amazon riparian older persons that can be associated with a risk of falling. **Method :** A cross sectional study was performed with 637 riverine elderly residents (≥ 60 years old) in Maues city Amazonas, Brazil. The elderly were grouped in two categories with and without a history of falls in the past six months. The following variables were compared between these groups: self-reported social and health conditions; biochemical and physiological variables related to the control of metabolic diseases; body composition; hand grip strength; functional fitness evaluation (Senior Fitness Test) and balance condition (Berg Balance Test). **Results :** The prevalence of at least one fall in the past six months was 24.6% ($n = 157$) and was similar between the sexes. The mean age between males and females with and without a history of falls was also similar (males with falls = 72.67 ± 8.86 ; males with no falls = 73.26 ± 7.58) female falls = 71.78 ± 8.18 , female with no falls = 71.48 ± 8.17). A history of falls was associated with hospitalization in the last year and to self-health perception to both sexes and presence of chronic morbidity and percentage of body fat (BF) to women. However, the other variables including balance and functional fitness, did not present differences between elderly with and without a history of falls. **Conclusion :** These falls experienced by the riparian elderly are strongly associated to accidents due to environmental conditions related to daily life. **Keywords :** Falls, riverine people, aging

PP25 B-072
AGE-DEPENDENT STEROID METABOLISM IN SERUM AFFECTED BY TOTAL BODY IRRADIATION OF C57BL/6 FEMALE MICE

Ju-Yeon MOON¹, Hee-June SHIN², Hyun-Hwa SON¹, Jeongae LEE¹, Uhee JUNG², Sung-Kee JO², Hyun Sik KIM³, Kyung-Hoon KWON³, Kyu Hwan PARK³, Bong Chul CHUNG¹, Man-Ho CHOI¹ (1. *Future Convergence Research Division, KIST, Korea*; 2. *Radiation Biotechnology Research Division, KAERI, Korea*; 3. *Division of Mass Spectrometry Research, KBSI, Korea*)

Introduction : Although radiation therapy is general in cancer treatment, it may accelerate aging and degenerative changes on steroidogenesis. The effects of gamma-radiation in steroid metabolism were therefore investigated. **Method :** Gas chromatography-mass spectrometry-based quantitative steroid signatures were introduced to 6-week-old C57BL/6 female mice ($n = 5$, each group) exposed to different dose (0, 1 and 4 Gy) with total body irradiation (TBI). The serum samples were collected at 1, 3, 6, and 9 months after the TBI. **Results :** Androgenic steroids including testosterone, epitestosterone, androstenedione and epiandrosterone were not significantly altered in the models, except for 4-Gy/9-month mice. In contrast, a metabolite of progesterone, 20 α -dihydroprogesterone, resulted in a significant decline during the modeling of both 2- and 4-Gy models. In case of stress hormones, the level of allo-tetrahydrodeoxycorticosterone (5 α -THDOC; $P < 0.01$) and allo-dihydrocorticosterone (5 α -DHB; $P <$

0.05) were significantly increased from 3-month after TBI. The P450scc (CYP11A1) activity, the metabolic ratio of pregnenolone to cholesterol, was slightly down-regulate according to the exposure, whereas 24-reductase (cholesterol/desmosterol) was significantly increased at 6-month after TBI. **Conclusion :** The cholesterol accumulation was observed in TBI. In addition, the increased 5 α -reductive metabolism of corticosterone may accelerate aging, while age-protective 20 α -dihydroprogesterone was decreased by radiation. **Keywords :** radiation, aging, steroid metabolism

PP25 B-073
EFFECT OF P38 MAPK INHIBITOR SB203580 ON GASTROINTESTINAL MOTILITY IN DIABETIC RAT

Bo Yun QIU, Hua Tian GAN (Department of Geriatrics, West China Hospital, Sichuan University, China)

Introduction : The pathogenesis of diabetic gastrointestinal motility disorder, a common chronic complication of diabetes, remains unknown. Oxidative stress is demonstrated to play an important role in its development, and oxidative stress has been shown to be closely related to P38 mitogen-activated protein kinase. The purpose of this study is to investigate the effect of selective P38MAPK inhibitor SB203580 on gastrointestinal motility in STZ-induced diabetic rat and elucidate the possible role of P38MAPK signal pathway on gastrointestinal motility in diabetic etiology and pathogenesis. **Method :** 32 SD rats were randomly divided into four groups, normal control group, STZ model group, STZ+saline group, STZ+SB203580 group. Diabetic rat gastrointestinal motility disorder model was induced by intraperitoneal injection of STZ. Gastric emptying and intestinal transit was measured using the geometric center. Small intestine iNOS protein expression was measured by Western blot. **Results :** 1. Gastric emptying and intestinal transit were significantly delayed in rats from STZ model group and STZ + saline group compared with the normal control group ($P < 0.05$), and delayed gastric emptying and intestinal transit in STZ+SB203580 model group were improved significantly after using SB203580. 2. iNOS expression was significantly increased in rats from STZ model group and STZ + saline group compared with the normal control group ($P < 0.05$), and iNOS expression was significantly decreased after treatment with SB203580. **Conclusion :** The blockade of P38 MAPK pathway with SB203580 ameliorates delayed gastric emptying and intestinal transit, at least in part, by inhibiting iNOS expression. p38 MAPK could represent a novel target for therapy of gut dysmotility in diabetes. **Keywords :** diabetes, P38 MAPK pathway, gastrointestinal motility disorder, iNOS

PP25 B-074
THE COMPARISON OF LIFE EXPECTANCY AT BIRTH (YRS) OF SHANGHAI IN RECENT YEARS WITH CHINA AND MORE DEVELOPED COUNTRIES POPULATION

Zhuowei YU, Zhijun BAO, Qingwei RUAN, Yongxing MA (Department of Aging, Antiaging and Cognitive Function, Shanghai Institute of Gerontology and Geriatrics, Affiliated Huadong Hospital, Shanghai Medical College, Fudan University, China)

Introduction : Compare the life expectancy at birth (yrs) of Shanghai in recent years with China and world Population. **Method :** Compare the life expectancy at birth (yrs) from the data in: ① Unit Nations Population Reference Bureau (PRB): 2000-2012, World Population Data Sheet. ② The State Statistics Bureau. SSB. ③ Shanghai Bureau of Civil Administration. **Results :** ① Shanghai: 2003-2005, 80 yrs; 2006-2008, 81 yrs; 2009-2010, 82 yrs; 2011-2012, 82.5 yrs. ② China: 2003, 71 yrs; 2005-2006, 72 yrs; 2007-2009, 73 yrs; 2010-2011, 74

75 yrs; 2012, 75 yrs. ③ More developed countries: 2003-2005, 76 yrs; 2006-2010, 77 yrs; 2011-2012, 78 yrs. Conclusion : ① The population life expectancy at birth (yrs) of Shanghai is 8-9 yrs higher than China. ② The population life expectancy at birth (yrs) of Shanghai is 4-5 yrs higher than more developed countries. ③ These suggested the results of active aging, healthy aging, and so aging well together: Regional perspectives. Keywords : life expectancy at birth, China, Shanghai, More developed countries

PP25 B-075

THE NATURAL HISTORY OF CHRONIC PAIN FROM AGE 70 TO 85

Jochanan STESSMAN, Jeremy M JACOBS (*Jerusalem Institute of Aging Research, Hadassah Hebrew University Hospital, Israel*)

Introduction : Although chronic pain is considered to be a major contributor to quality of life, nonetheless the natural history of chronic pain among older people is poorly documented. We present longitudinal data from age 70 to 85 concerning chronic musculoskeletal, joint, and abdominal pain and chronic headache. Method : Data was collected by the Jerusalem Longitudinal Study, which is an ongoing prospective study of a representative sample from the 1920-1921 birth-cohort living in West Jerusalem. Subjects underwent comprehensive assessment and examination at home in 1990, 1998, and 2005, at ages 70 (n=605), 78 (n=1023) and 85 (n=1222). Results : At ages 70, 78 and 85 chronic musculoskeletal pain was present among 41.5%, 59.2%, and 39.6% of subjects respectively; chronic joint pain was present among 42.9%, 60.6%, and 45.4% respectively. In contrast abdominal pain was less common, and among the oldest old was very infrequent: 14.7%, 13%, and 1.5%, with a similar pattern for chronic headache: 16.9%, 18.8%, and 1.9%. Clear consistent gender differences were observed, with pain being significantly more common (X1.5-2) among women. Kaplan-Meier survival curves adjusted for gender showed no significant differences in longevity according to either abdominal pain or headache. Conclusion : In contrast to musculoskeletal and joint pain which remains common at all ages, visceral pain is very infrequent among the oldest old. Keywords : Chronic pain, longitudinal study

PP25 C-001

CORONARY REVASCULARIZATION VERSUS OPTIMAL MEDICAL THERAPY IN ELDERLY PATIENTS WITH STABLE ANGINA

Aleksandr BOGACHEV, Kirill KOZLOV, Igor OLEKSYUK (*Cardiovascular Science, St. Petersburg Institute of Bioregulation and Gerontology, Russia*)

Introduction : Multivessel coronary disease is more common in elderly patients. The question is which primary strategy should be chosen for elderly patients with stable angina, i.e., revascularization (percutaneous coronary intervention or coronary artery bypass surgery) with intensive pharmacological therapy and lifestyle changes (optimal medical therapy) or optimal medical therapy alone. Method : Clinical trials that compare these two approaches showed that elderly patients benefit more from revascularization than younger patients. Results : There is no doubt that multivessel disease requires a heart team to select the optimal strategy. Age itself is not a criterion for selecting optimal treatment strategies. Conclusion : One must consider many other factors, including medical findings, angiography, the patients' wishes, social and cultural aspects, and other parameters. Patients should be given complete and objective information. Keywords : chd, elderly, multivessel disease

PP25 C-002

FRAGMENTED QRS IN ELDERLY PATIENTS WITH HIP FRACTURE : PRELIMINARY RESULTS

Alice BREINING¹, Nadjib HAMMOUDI², Veronique FAUCOUNAU¹, Judith COHEN-BITTAN¹, Helene VALLET¹, Marc VERNY¹, Jacques BODDAERT¹ (*1. Geriatric Department, Peri-Operative Unit, Pitie-Salpetriere Hospital, APHP, UPMC Paris 6, France; 2. Cardiology, Pitie-Salpetriere Hospital, APHP, UPMC Paris 6, France*)

Introduction : The fragmented QRS (fQRS) are due to terminal conduction delay after myocardial infarction. The fQRS is a marker of prior myocardial infarction. The main purpose of the study is to describe electrocardiograms (ECG) before and after hip fracture surgery in elderly patients and to evaluate fQRS pronostic value and arrhythmic events rate. Method : In this monocentric study, all consecutive patients > 75 years with a hip fracture were enrolled. Clinical and biological data and outcome were collected prospectively. Each 12-lead ECG was analysed by 2 independent readers. We present our preliminary results. Results : A total of 184 patients were enrolled. Before surgery, 91% of the patients were in sinus rhythm and 8% had atrial fibrillation. Twenty nine percent of the patients had a fQRS and 15% a Q wave. During their stay in the geriatric post operative unit, cardiac and arrhythmic events occurred in 56% of the patients: 28% presented premature atrial complexes, 21% premature ventricular complexes, 11% paroxysmic atrial fibrillation. New fQRS appeared in 9% of the patient, and acute coronary syndrome (with and without ST-elevation) were observed in 7%. Pre-operative fQRS was not associated with any post-operative ECG new event. Conclusion : Fragmented QRS is a frequent pattern of elderly's ECG, and cardiac and arrhythmics events are frequent in the post operative evolution of a hip surgery in elderly patients. However, our preliminary results suggest that fQRS are not predictive of post-operative ECG event in our population. Keywords : hip fracture, coronary artery disease

PP25 C-003

THE CASE OF THE STAGED HYBRID REVASCULARISATION OF AN ELDERLY PATIENT WITH THE GENERALIZED ATHROSCLEROSIS

Kirill Lenarovich KOZLOV¹, Gennadii Grigor'evich KHUBULAVA², Sergei Sergeevich MIKHAILOV¹, Ekaterina Viktorovna SEDOVA¹, Andrei Nikolaevich SHISHKEVICH², Alexandr Borisovich SMOLJANINOV³ (*1. Vascular Surgery Department, Saint-Petersburg Institute of Bioregulation and Gerontology, NWB of RAMS, Russia; 2. Kuprianov Cardio-Thoracic Surgery Clinic, Saint-Petersburg Military Medical Academy, Russia; 3. Vascular Department, Center of cellular and gene therapy "Pokrovsky stem cell bank", Russia*)

Introduction : Patient "E" is 73 years old. He complained of stenocardia, high blood pressure. The patient suffers from second type of diabetes (compensated form). The patient had an angiography, which showed the multivascular lesion of coronary streambed, nephric and carotid arteries and the arteries of pelvic limbs at all levels including the crus. SYNTAX Score 35 points. Method : Combined surgery was performed - aorta-coronary bypass surgery plus carotid endarterectomy with the preliminary stenting of nephric arteries on both sides with satisfactory angiographic and clinical results. In 4 months patient had two-sided stenting general iliac arteries, balloon angioplasty of the proximal part of the left superficial femoral artery and the stem cells therapy of both cruses according to the standard scheme. Results : In 6 months referenced angiography of pelvic limbs showed clear positive trend in terms of pelvis limbs' revascularization. After treatment the patient noted a significant improvement in health

and quality of life, which is showed in increasing the level of physical tolerance, normalization of blood pressure and in improvement in psycho-emotional background. Conclusion : Despite the growing number of such patients, the experience of treatment so far is limited. There aren't any specific algorithms for different combination of arterial streambed's lesions and there aren't any convincing facts of possible one-moment endovascular and open surgeries or making open surgeries against the background of double antimodular therapy. Keywords : generalized atherosclerosis, hybrid intervention, elderly patients.

PP25 C-004

TWO-YEAR INCIDENCE OF CORONARY EVENT IN TURKISH PEOPLE AGED 65-74 YEARS

Sinem DOGANAY, Reyhan UCKU (*Public Health, Dokuz Eylul University, Turkey*)

Introduction : Coronary heart disease(CHD) is the most important and also preventable cause of death in the world. The objectives of the study are to determine two-year CHD incidence in people aged 65-74 years and to evaluate the incidence of coronary event according to the level of CHD risk. Method : This is a population-based cohort study. The study population is 1382 people aged 65-74 years living in an urban area. The dependent variable of the study was coronary event. The main independent variable was Framingham risk level. Coronary event was defined as coronary heart disease or death from CHD. For analysis, Chi-square and Cox regression analysis were used. Results : Two-year incidence of coronary event was found as 3.8%. It was determined that the incidence of coronary event increases significantly as Framingham risk score increases. The relative risk was 3.18 for high versus low CHD risk level. Conclusion : The incidence of coronary event increases significantly as Framingham risk score increases. Keywords : conorary event, incidence, young elderly

PP25 C-005

ASSOCIATION BETWEEN TESTOSTERONE LEVEL AND CORONARY ARTERY CALCIUM SCORE IN MIDDLE AND ELDERLY MEN

Yon Chul PARK¹, Moon Jong KIM¹, Yong Sang KIM¹, Jong Koo KIM², Yong Jae LEE³ (*1. Department of Family Medicine, CHA University, Bundang CHA Hospital, Korea; 2. Department of Family Medicine, Yonsei University Wonju Severance Christianity Hospital, Korea; 3. Department of Family Medicine, Yonsei University Yongin Severance Hospital, Korea*)

Introduction : The number of elderly people in Korea is growing fast in past few years, and also mortality of coronary artery disease. Predictive value of coronary calcium score as a risk factor of ischemic heart disease is well known. Decreasing testosterone and increasing mortality due to ischemic heart disease accompanied by aging suggested testosterone as a risk factor of coronary artery disease. Method : A cross-sectional study with 292 health check-up subjects who checked coronary artery CT and serum testosterone level was conducted. Patients with ongoing testosterone replacement therapy were excluded. Three groups were organized on the basis of Agatston criteria(none, mild, moderate and severe). ANOVA and ANCOVA were used to verify association between testosterone and coronary artery calcium score. Results : Fasting glucose, drinking, hypertension, history of diabetes were associated with tertile coronary artery calcium score group after an analysis of variance. After analysis of covariance, with correcting those variables, no association was found between coronary artery calcium score and testosterone. (p=0.600). Conclusion: No association was found between coronary artery calcium score and

testosterone in middle and elderly men. Keywords : coronary artery calcium score, testosterone

PP25 C-006

FACTORS AFFECTING QUALITY OF LIFE AMONG THE PATIENTS WITH HEART FAILURE

Haejung LEE, Jihyoung YU, Yeonjung LIM, Sungmin KIM (*College of Nursing, Pusan National University, Korea*)

Introduction : This study was conducted to identify the factors related to the quality of life (QOL) in patients with heart failure (HF). Method: Data were collected from 102 patients diagnosed with HF in 3 hospitals in Korea from April 25 to November 2, 2012. The Kansas City Cardiomyopathy Questionnaire (KCCQ), Korean Activity Scale Index (KASI), Activities of Daily Living (ADL), European Heart Failure Self-care Behavior Scale (EHFScBS-9), Self-Efficacy for Exercise (SEE) were used to measure QOL, the levels of functional activities, self-care, and self-efficacy for exercise. Data were analyzed with descriptive statistics, Pearson correlation, and stepwise multiple regression analysis. Results : The mean age of the participants were 62 years old. The mean score of QOL was 83.73±14.51 (range: 31.77~100.0). Employment status, educational level, household income, ADL, functional activities, left ventricular ejection fraction (LVEF) and SEE were significantly related to the levels of QOL. The significant correlates of QOL identified from the multivariate approach, were the levels of functional activity ($\beta=.508$), ADL ($\beta=-.334$), and SEE ($\beta=.164$). These variables explained 54.8% of variance in QOL. The level of functional activities was the most important predictor of QOL among HF patients. Other demographical and disease related factors, regular exercise and self-care had no predictive value. Conclusion : Findings from this study provide a comprehensive understanding of QOL and related factors in patients with HF. Researchers and health care professionals need to develop effective strategies to enhance functional status of patients with HF to improve QOL. Further study with a larger sample and long-term design is necessary. Keywords : Quality of life, Heart Failure, Kansas City Cardiomyopathy Questionnaire

PP25 C-007

THE TECHNOLOGY FOR THE RESEARCH OF INTERACTION BETWEEN OPTIMAL BLOOD PRESSURE AND COGNITIVE FUNCTION IN ELDERLY

Anatoly ZHIRKOV¹, Subbota ALEKSANDR² (*1. Medical College, Saint Petersburg State University, Russia; 2. Physiology, Russian Medical Military Academy, Russia*)

Introduction : The cognitive disorders often revealed in the old and very old people. The hypertension is one of some the most discussed causes of cognitive decline in elderly. But till now the quantitative parameters of this connection is unclear. We had researched connection between blood pressure (BP) and cognitive function as a measure for optimal BP in old people. Method : We used original calculator based on ZhGS formulas for optimal BP (systolic, diastolic, mean, and pulse) determination to research interaction between cognitive functions and hemodynamic. MMSE and Luria tests were used for research cognition in more than 98 old and very old patients (mean 75 years old) compare with 221 middle age patients (mean 42 years). The follow up period was 6 month and include 67 patients with Hypertension. The Multilevel correlation analysis were used. Results : The results showed that the cognitive decline may be detected using as MMSE, as Luria test, but MMSE is more convenient for old patients. BP data revealed high correlation with cognitive function in elderly, but correlation between MMSE and BP was higher ($r=0.62$) than

between BP and Luria test . During 6 month of follow up period for patients with Hypertension correlation between BP and cognitive function rised in group where BP was optimal. The closest correlation revealed between MMSE and pulse BP. Conclusion : Optimal blood pressure model based on minimal energy consumption principle useful for research the role of BP in cognitive decline in elderly. The electronic calculator may helpful for this aim. Keywords : hypertension, cognition, optimization

PP25 C-008

QUALITATIVE ANALYSIS OF HYPERTENSION MEDICAL TREATMENT IN A FRENCH NURSING HOME

Caroline JOYAU¹, Florence DELAMARRE DAMIER², Gwenaëlle VEYRAC¹, Pascale JOLLIET¹ (1. *Clinical Pharmacology Institute of Biology, Nantes University Hospital, France*; 2. *Geriatric Cholet Hospital and Boussay Nursing Home, French Nursing Home Research Organization (Agree), France*)

Introduction : Several studies have shown that hypertension treatment in the elderly patient over 80 years of age could reduce stroke. In this population, the objective is a systolic blood pressure less than 150 mmHg. Hypertension treatment in the elderly population recommended by experts should not include more than three antihypertensive agents including thiazide diuretics at low doses. The main objective of this study is to describe hypertension medical treatment in nursing home. Method : We analyzed 76 prescriptions of patients in a nursing home of Loire-Atlantique. A descriptive analysis of the study population and their antihypertensive treatments was performed. Results : Among the 76 prescriptions, there were 55 women and 21 men with an average age of 86.84 (\pm 5.86) years. Forty-six patients had a documented history of hypertension and among them, the number of antihypertensive drugs prescribed per patient ranged from 0 to 4 with a median of 2. Thirty-nine of these patients received antihypertensive drugs: 15 were treated in monotherapy, 11 with dual therapy, 9 with triple therapy and 4 with quadruple therapy. Among these 39 patients, 27 had at least one diuretic associated or not with another treatment (13 received a thiazide diuretic) and 18 were treated with a calcium channel blocker. Conclusion : It is essential to treat hypertension in the elderly patients, in order to maintain their quality of life. A close monitoring of these treatments should be performed because of their hypotension risk and associated falls. This initial study should be extended to other nursing homes. Keywords : Hypertension nursing home

PP25 C-009

THE RELATIONSHIP BETWEEN CIRCADIAN AND POSTURAL VARIATION OF BLOOD PRESSURE IN THE HYPERTENSIVE ELDERLY- AUTHORS GEORGETA POPESCU, SILVIU DONTU, SANDRA NANIU

Georgeta Popescu Silviu Dontu SANDRA NANIU (*Geriatrics, The National Institute of Geriatrics and Gerontology "Ana Aslan", Romania*)

Introduction : It is a circadian variation of blood pressure (BP) with a nocturnal BP fall between 5-15% which defines the dipping status: dipper, non dipper, extreme dipper. It is also a postural BP values variation which defines two aspects: ortostatic hypertensive reaction and orthostatic hypotension. Both circadian and postural variation of BP values are associated with target-organ dammages, and could be predictors for the following-up. Method : We selected 68 asymptomatic patients, 46 females and 22 males, aged between 65-79 years old, with moderate BP values (systolic BP 165-180 mm Hg and diastolic BP 90-105 mm Hg), +/- diabetes mellitus type II, with stroke

(32) and heart attack (6) in their history; we determined serum total cholesterol, glicemia, creatinine, the rest EKG and BP-holter registration. Results : Orthostatic hypertensive reaction was found in 10 of the extreme dippers (71,4%), in 6 of dippers (14,3%) and in 1 of non dippers (8,3%). The ortostatic hypertensive reaction was more frequent in the diabetic patients. The orthostatic hypotension was found in 4 non dippers patients (33,3%). Conclusion : The abnormal circadian variation of BP in the elderly patients is in relationship with postural BP variation. The orthostatic hypertensive reaction is more obvious in the extreme dippers, and the orthostatic hypotension rather in the non dippers. The hypertensive elderlies with diabetes develop more frequent a hypertensive orthostatic reaction than non diabetics. We noticed that orthostatic hypertensive reaction is more associated with target-organ dammage. The cardiovascular events seems to be more frequent in non dippers than in dippers. Keywords : hypertension, holter examination

PP25 C-010

RELATIONSHIP BETWEEN TISSUE GLYCATION MEASURED BY AUTOFLUORESCENCE AND PULSE WAVE VELOCITY IN YOUNG AND ELDERLY NON DIABETIC POPULATIONS

Ghassan WATFA¹, Georges SOULIS¹, Elisa TARTAGNI², Anna KEARNEY-SCHWARTZ¹, Paolo SALVI³, Claudio BORGHI², Athanase BENETOS¹ (1. *Geriatrics, Nancy University Hospital - CHU de Nancy, France*; 2. *Internal Medicine, Aging and Kidney Disease, University of Bologna, Italy*; 3. *Cardiology, IRCCS Istituto Auxologico Italiano, Italy*)

Introduction : Advanced Glycation End Products (AGEs) and Pulse Wave Velocity (PWV) are pivotal indices of the processes of arterial ageing and damage accumulation. The aim of the present study was to investigate the impact of AGEs, as measured by a non invasive skin autofluorescence method, on arterial stiffness estimated by PWV in two different age groups of non-diabetic subjects. Method : 116 non-diabetic subjects were classified into two groups, 55 subjects in the (<65 years) group and 61 in the (\geq 65 years) group. AGEs were measured by skin autofluorescence while carotid-femoral PWV was assessed by tonometry. Results : A significant (positive) association was observed between PWV and AGE Skin autofluorescence in the younger age group ($r = 0.51$; $p < 0.0001$). This association was no longer significant after further adjustment for age and other factors upon multiple regression analyses. In contrast, this correlation was not found in the elderly group ($r = 0.098$; $p = 0.454$). Conclusion : Young non diabetic subjects exhibit a different correlation profile between AGEs accumulated in skin and cfPWV as an index of arterial stiffness comparatively to that observed in elderly subjects. AGEs were found to be significantly associated with cfPWV in younger individuals but not in the elderly. A further study with a larger number of subjects is proposed to confirm the contribution of AGEs, the formation of which is manageable, as a determinant of arterial stiffness in young subjects. Keywords : AGEs, PWV, non-diabetic

PP25 C-011

SEX DIFFERENCES IN THE RELATIONSHIP BETWEEN NORMAL AGING-RELATED ARTERIAL STIFFNESS AND CARDIAC DIASTOLIC DYSFUNCTION IN HEALTHY POPULATION WITHOUT OVERT DISEASE

Lulu HAN¹, Xiaojuan BAI¹, Hongli LIN², Xuefeng SUN³, Xiangmei CHEN³ (1. *Department of Gerontology and Geriatrics, The First Affiliated Hospital of China Medical University, China*; 2. *Department of Kidney, Dalian Medical University, China*; 3. *Department of Kidney, General Hospital of Chinese PLA, China*)

Introduction : To identify sex difference associations between CIMT and diastolic function in healthy Chinese individuals. **Method :** We examined 852 healthy participants in three north China cities by M-mode ultrasonography to analyze CIMT and cardiac structure and function. Cardiac function was measured by determining the ratio of early diastolic peak flow velocity (E) and late diastolic peak flow velocity (A) (E/A), as well as the deceleration time of the early mitral velocity (MV-DT). Cardiac dysfunction was defined as E/A values <25th percentile and MV-DT values >75th percentile (E/A < 0.778 for males and <0.792 for females; MV-DT > 210 ms for males and > 195 ms for females). **Results :** CIMT, E/A, and MV-DT significantly correlated with age in both males and females (P<0.01). CIMT was significantly associated with lower E/A in females with the odds ratio (95% CI) 3.298 (1.742-6.246) and 6.002 (3.202-11.251), respectively. The association was still significant after fully adjustments including age, blood pressure, blood lipid and inflammatory markers with the odds ratio (95% CI) 3.031 (1.228-7.48) and 3.224 (1.308-7.946), respectively. The association between higher CIMT with lower E/A in males and with MV-DT in both males and females were significant only in an unadjusted model and were lost upon age adjustment. **Conclusion :** Normal aging related increases in CIMT correlated with the decline in cardiac diastolic function only in females, which may contribute to the higher incidence of heart failure with preserved ejection fraction. **Keywords :** aging, carotid intima-media thickness, cardiac diastolic function

PP25 C-012

TREATMENT WITH BETA-BLOCKERS IS ASSOCIATED WITH LOWER LEVELS OF SERUM SEROTONIN AND THROMBOCYTES IN ELDERLY MEN - MR OS STUDY

Bodil LERNFELT¹, Asa TIVESTEN², Mattias LORENTZON², Claes OHSSON², Annika ROSENGREN¹, Osten LJUNGGREN³, Magnus KARLSSON⁴, Dan MELLSTROM² (1. Department of Internal Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden; 2. Center for Bone and Arthritis Research, Sahlgrenska Academy, University of Gothenburg, Sweden; 3. Department of Medical Sciences, University of Uppsala, Uppsala, Sweden; 4. Department of Clinical Sciences and Orthopaedics, Lund University, Sweden)

Introduction : Elderly patients are often treated with a combination of drugs including beta-blockers and anticoagulants. In circulating blood serotonin bind to platelets. Experimental studies indicate that beta-blockers may affect circulating serotonin. The aim of this study was to examine how beta-blockers affect the circulating levels of serotonin and thrombocytes in a population sample and to investigate this association in relation to metabolic parameters and body composition. **Method :** Serum serotonin, adiponectin, leptin and thrombocytes were analysed in a population sample of 1007 men aged 70-80 years recruited from a national population register. Hologic DXA was used to measure bone mineral density (BMD), total body fat and lean body mass. Anthropometric data, medical history and actual drug treatment was registered. **Results :** Treatment with beta-blockers was observed in 308 men (30.6%). The majority (83%) had selective beta-blockers. Serotonin and platelet count was lower in those taking beta-blockers compared with men without this treatment (138.6 versus 161.7 pg/L p=0.000 and 222 versus 239 p=0.002). Higher leptin levels were noted in men with selective beta-blockade (30 versus 20 ng/ml p=0.000). Men with selective beta-blockers had higher BMI, greater fat mass and lower levels of adiponectin. The relationship between beta-blockers, and serotonin and platelet count remained after correction for age, body composition and renal function. **Conclusion :** In conclusion we found that treatment with beta-blockers was associated with lower levels of circulating serotonin and platelets irrespective of age, body

composition and renal function. The clinical implication of low serum serotonin has to be further investigated. **Keywords :** beta-blockers, serotonin, platelets

PP25 C-013

THE RELATIONSHIP BETWEEN CHRONIC KIDNEY DISEASE AND ARTERIAL STIFFNESS IN AN ELDERLY POPULATION

I-Ting LIU, Jin-Shang WU, Yi-Ching YANG, Ying-Hsiang HUANG, Feng-Hwa LU, Chih-Jen CHANG (Department of Family Medicine, National Cheng Kung University Hospital, Taiwan)

Introduction : To assess the association of arterial stiffness with early and late chronic kidney disease (CKD), different blood pressure and glycemic status, independent of other risk factors in an elderly population. **Method :** A total of 1251 eligible subjects aged 60 years or more were enrolled from Health Examination Center, National Cheng Kung University Hospital between 2006 and 2009. Bilateral brachial-ankle pulse wave velocities (baPWV) were simultaneously measured in the supine position after at least 5-min rest. The average baPWVs from both sides ≥ 1400 cm/s were used as an atherosclerotic cardiovascular risk. Based on 2003 Clinical Practice Guidelines for Chronic Kidney Disease from the National Kidney Foundation, early and late CKD were defined as CKD stage 1-2 and stage 3-5, respectively. Other variables included prediabetes, diabetes, prehypertension, hypertension, lipid profile and life style factors. **Results :** Compared with subjects with baPWV <1400 cm/s (n=223), those with baPWV ≥ 1400 cm/s (n=1028) had a lower eGFR value, but a higher serum creatinine and higher prevalence of CKD stage 1,2, stage 3-5, diabetes, prediabetes, hypertension and prehypertension. In multivariate analysis, early and late stage CKD were positively with increased baPWV (≥ 1400 cm/s) after adjustment for age, sex, and BMI, lifestyle and other cardio-metabolic variables. Besides, age, prediabetes, diabetes, prehypertension and hypertension were independently associated with increased baPWV (≥ 1400 cm/s). **Conclusion :** Both early and late CKD increased the risk of higher arterial stiffness in elderly. Age, prediabetes, diabetes, prehypertension and hypertension were also independently associated with increased arterial stiffness. **Keywords :** chronic kidney disease, elderly, arterial stiffness

PP25 C-014

PREVALENCE OF METABOLIC SYNDROME AND CARDIOVASCULAR RISK FACTORS AMONG ADULTS IN A SOUTHERN CITY OF BRAZIL

Patricia G. PANNI, Laura Brenner MARIANO DA ROCHA, Angelo G. BOS, Yukio MORIGUCHI (Institute of Geriatrics and Gerontology, IGG-PUCRS, Brazil)

Introduction : Aging is a continuous process. The longer we live the greater the change of developing chronic diseases. Cardiovascular diseases (CVD) and Metabolic Syndrome (MS) are among the major causes of morbidity and mortality. It is crucial to study the risk factors of such diseases and prevent their occurrence. This study was conducted with adults in order to verify the possibility of preventing CVD and Metabolic Syndrome later in life. **Method :** The study comprised 100 individuals, 47 men and 53 women, between 30 and 57 years of age (average 45.56 SD 7.63). The individuals were invited to participate from all Primary Health Care Units in the city. Blood tests for HDL, triglycerides, glucose were performed; blood pressure and waist circumference were measured as well. The individuals were evaluated for MS. **Results :** Our preliminary results showed a high prevalence of metabolic syndrome (MS) (31%) in this population, less

common in men(29.8%), in whites(27.3%),in high schooling level individuals (28.6%). 35.6% of the individuals with hypertension had MS. The waist circumference was greater in women.Blood glucose levels were higher in men(29.8%) and HDL lower in women(62.3%). None of the results were significant. Conclusion : The early detection of Metabolic Syndrome and risk factors for cardiovascular diseases is a key point for promoting a successful aging. As such, it is advisable to engage in health programs to prevent such events earlier in life as a way to improve quality of life and longevity as free from disease as possible. Keywords : metabolic syndrome, cardiovascular risk factors, aging

PP25 C-015

WHY MIGRATION CAUSES A DECREASE IN CENTENARIANS ?

Laura Brenner MARIANO DA ROCHA, Nair Monica Ribascik NASCIMENTO, Yukio MORIGUCHI (*Institute of Geriatrics and Gerontology, IGG-PUCRS, Brazil*)

Introduction : The average life expectancy at birth of Japanese living in Japan has recently climbed to the top of the world rank, accompanied by a low mortality from cardiovascular diseases, the major causes of death in many Western countries. In addition to progress to medical treatment and management of both infectious and chronic diseases, improvements in nutrition, in addition to the cardioprotective properties of the Japanese diet, appear to have contributed greatly to longevity in Japan. Method : Population-based samples of 433 middle-aged Japanese men and women in Japan and 269 Japanese immigrants living in Brazil were recruited to the study. They underwent blood pressure measurement, 24-h urine collection, blood tests and electrocardiographic examination, and completed a dietary questionnaire. Results : There was a significant difference in the groups with respect to the prevalence of obesity, hypertension, increased glycohaemoglobin concentrations and ST-T segment change on the EKG, all greater in the immigrant group. The prevalence of hypercholesterolemia was greater in the group of immigrants. The fish intake was twice as high in Japanese living in Japan(3.6 X 0.5 times /week). Conclusion : Our study revealed a high prevalence of obesity, hypertension and ischemic ECG changes in the Japanese immigrants living in Brazil. No single diet-related factor was sufficient to explain these differences. These results suggested that coronary risk factors and cardiovascular health are regulated not only by genetic factors but that the impact of lifestyle can be large enough to modulate the expression of genes and lower life expectancy even in Japanese populations. Keywords : nutrition, cardiovascular diseases, longevity

PP25 C-016

COMPARISON OF TROUBLES AND QUALITY OF LIFE OF OLD AND YOUNG INDIVIDUALS EXPERIENCE OF CARDIAC ARRHYTHMIA

Betulay KILIC¹, Nuran TOSUN², Vesile UNVER², Birgul ARMUTCU³, Sedat KOSE³ (*1. School of Nursing, Gulhane Military Medical Academy, Turkey; 2. School of Nursing, Gulhane Military Medical School, Turkey; 3. Cardiology, Gulhane Military Medical Academy, Turkey*)

Introduction : In this study, comparison of troubles and quality of life of young and old individuals experiencing cardiac arrhythmia was intended. Method : The research was done GATA, Department of Cardiology between December 2009 and May 2010. The sample of the study is consisted of 80 individuals. The data were obtained from Sociodemographic Data Collection Form and SF-36 quality of life scale. Statistical analysis was done by using SPSS 15.0. Results :

Average age of young patients group is 25±4.54 and of 87% are men. Average age of old patients group is 72.9±7.05 and of 55% are men. 40% of young patients group have SVT, 57.5% of old patients group have AF. Young patients cited that they had troubles in daily physical activities, social/emotional relations, future planning and material issues, old patients cited that they had troubles mostly in daily physical activities. SF-36 scale total point average in young patients is (49.46±23.28) and in old patients is (41.87±22.19) but, statistically meaningful difference was not found between groups (p>0.05). While SF-36 physical component point average in young's (48.12±25.04) and in olds' (38.96±22.37) was found, but mental component point average in young's (50.80±23.15) and in olds' (44.78±24.44) was found (p<0.05). Physical function (41.62±31.65) and physical role (23.12±38.55) sub scale point average of old patients are lower than young's (57.50±30.90 and 41.25±37.78) and difference between groups is statistically meaningful (p<0.05). Conclusion : There was suggested that patient's age and educational level must be considered in evaluating patients quality of life individually, nursing care and patient education planning. Keywords : Arrhythmia, old patients, quality of life

PP25 C-017

AGE-DEPENDENT HOSPITALIZATION RISK ASSOCIATED WITH LOW BODY MASS INDEX IN PATIENTS WITH TYPE 2 DIABETES: TAIWAN DIABETES STUDY

Wei-Chun LIN¹, Tsai-Chung LP, Cheng-Chieh LIN³, Sing-Yu YANG⁴ (*1. Department of Digital Media Design, Asia University, Taiwan; 2. Graduate Institute of Biostatistics, College of Public Health, China Medical University, Taiwan; 3. Department of Family Medicine & Geriatric Medicine, China Medical University & Hospital, Taiwan; 4. Department of Medical Research, China Medical University Hospital, Taiwan*)

Introduction : The relationship between low body weight and adverse outcomes has seldom been evaluated in persons with type 2 diabetes. We explored the association between body mass index (BMI) and hospitalization risk in a Chinese population with type 2 diabetes, and further examined whether age modified this association. Method : We conducted a retrospective cohort study on 57,203 persons with type 2 diabetes, who participated in the Taiwan National Diabetes Case Management Program. BMI at baseline and hospitalization events over the subsequent 12 months were analyzed by Cox's proportional hazard models to adjust for traditional risk factors. Results : Patients were grouped in quintile of BMI. The one-year in-hospital mortality, and hospitalization rates for all causes, diabetes, respiratory failure, shock, renal failure, and pneumonia were 184.5, 37.7, 4.2, 3.5, 2.8 and 9.9 per 1,000 person-years for patients aged <65 years and were 319.4, 53.8, 15.7, 8.1, 6.5 and 30.9 per 1,000 person-years for patients age ≥65 years, respectively. After multivariate adjustment, we observed a U-shaped association between BMI and all-cause hospitalization. The hazard ratios of all-cause hospitalization, for 1st (<22.50) and 5th (≥28.33) quartiles versus 3rd quartile (24.35-26.08) of BMI were 1.16 (1.10-1.23) and 0.98 (0.87-1.10), respectively. We also observed patients aged 65 years and over were associated with higher risk in hospitalization risks for diabetes (p for interaction<0.05). Conclusion : BMI and all-cause hospitalization had a U-shaped association among patients with type 2 diabetes. Our finding shows that age-dependent hospitalization risk due to diabetes associated with low body mass index in patients with type 2 diabetes. Keywords : body mass index, hospitalization, type 2 diabetes

PP25 C-018

ANNUAL VARIATION IN FASTING PLASMA GLUCOSE

INCREASES RISK OF STROKE IN ELDERLY WITH TYPE 2 DIABETES: THE TAIWAN DIABETES STUDY

Chih-Hsueh LIN¹, Tsai-Chung LI², Cheng-Chieh LIN¹, Ming-May LAI¹ (1. Department of Family Medicine & Geriatric Medicine, China Medical University & Hospital, Taiwan; 2. Graduate Institute of Biostatistics, College of Public Health, China Medical University, Taiwan)

Introduction : Glucose stability is important to diabetes care and is one of the goals in the management of diabetes for complication prevention. A number of studies have examined the relation of glucose variation to microvascular complication such as diabetic nephropathy and retinopathy, no study has examined its relationship to macrovascular complication. **Method :** The present study examined whether annual variation in fasting plasma glucose (FPG), as represented by the coefficient of variation (CV), can predict stroke independent of mean FPG, HbA1C and other risk factors in elders with type 2 diabetes. A computerized database of elders with type 2 diabetes aged 65 years and above and free of stroke (n= 11,102) who were enrolled in the Taiwan National Diabetes Care Management Program before 2004 was used in a Cox's proportional hazards regression model. **Results :** The incidence of stroke were 32.33, 39.88, and 46.43 per 1000 person-years in groups of 1st, 2nd, and 3rd tertiles of baseline FPG -CV, respectively. After adjusting for FPG, HbA1C, and other risk factors, annual FPG -CV was independently associated with stroke, congestive and ischemic stroke. The hazard ratios of 3rd versus 1st tertile of annual FPG -CV for stroke, congestive and ischemic stroke were 1.41 (1.24, 1.59), 1.59 (1.04, 2.42) and 1.43 (1.20, 1.70), respectively. **Conclusion :** Annual variation in FPG is a strong predictor of stroke of all types in elders with type 2 diabetes, suggesting that glucose variation during outpatient visits may become a measure in clinical practice for the management of these patients. **Keywords :** diabetic nephropathy, fasting plasma glucose variation, elders with type 2 diabetes

PP25 C-019

ANNUAL VARIATION IN FASTING PLASMA GLUCOSE INCREASES RISK OF DIABETIC NEPHROPATHY IN ELDERLY WITH TYPE 2 DIABETES: THE TAICHUNG DIABETES STUDY

Cheng-Chieh LIN¹, Chih-Hsueh LIN¹, Tsai-Chung LI², Wen-Yuan LIN³, Sing-Yu YANG⁴ (1. Department of Family Medicine & Geriatric Medicine, China Medical University & Hospital, Taiwan; 2. Graduate Institute of Biostatistics, College of Public Health, China Medical University, Taiwan; 3. Department of Family Medicine, China Medical University & Hospital, Taiwan; 4. Department of Medical Research, China Medical University Hospital, Taiwan)

Introduction : Diabetic nephropathy is the most common cause of end-stage renal disease (ESRD) worldwide. Glucose stability is one of the many factors related to diabetes care and is one of the goals in the management of diabetes for complication prevention. The present study examined whether annual variation in fasting plasma glucose (FPG), as represented by the coefficient of variation (CV), can predict diabetic nephropathy independent of mean FPG, HbA1C and other risk factors in elders with type 2 diabetes. **Method :** A computerized database of all patients with type 2 diabetes aged 65 years and above and free of diabetic nephropathy (n=1,051) who were enrolled in the Diabetes Care Management Program of China Medical University Hospital before 2007 was used in a time-dependent Cox's proportional hazards regression model. **Results :** The incidence of diabetic nephropathy were 43.22, 69.19, and 100.51 per 1000 person-years in groups of 1st, 2nd, and 3rd tertiles of baseline FPG -CV, respectively.

After adjusting for FPG, HbA1C, and other risk factors, annual FPG -CV was independently associated with diabetic nephropathy. The corresponding hazard ratios for 2nd and 3rd versus 1st tertile of annual FPG -CV were 2.06 (1.39, 3.03) and 3.18 (2.21, 4.56), respectively. **Conclusion :** Annual variation in FPG is a strong predictor of diabetic nephropathy in elders with type 2 diabetes, suggesting that glucose variation during outpatient visits may become a measure in clinical practice for the management of these patients. **Keywords :** diabetic nephropathy, fasting plasma glucose variation, elders with type 2 diabetes

PP25 C-020

THE USEFULNESS OF HEART RATE VARIABILITY IN ELDERLY DIABETES

Hiroshi NAKANO (Division of Geriatric Medicine, Nippon Medical School, Japan)

Introduction : Heart rate variability (HRV) is one of the methods for evaluating the autonomic nervous system activity. However HRV is affected by age. In this study, we studied the usefulness of HRV in the elderly diabetic patients. **Method :** We studied 196 subjects (31-91 years) who have no arrhythmia. We divided subjects into four groups by age, young adult (<55 years), old adult (55-64 years), young-old (65-74 years) and old-old (75 years <). Besides, subjects were divided into two groups, with or without diabetes. Retinopathy group was defined as pre-proliferative and proliferative retinopathy. High frequency(HF) was used as the index of parasympathetic nervous system activity and low frequency(LF)/(LF+ HF) (%LF) was used as the index of sympathetic nervous system activity. **Results :** There was no difference of HF without diabetes between age groups and %LF without diabetes was significantly decreased with age. In regression analysis, age was significant predictor of %LF. There was no difference of HF and %LF between age groups in diabetes group irrespective of retinopathy. There was no difference of HF of young adult regardless of retinopathy and %LF was decreased in diabetes with retinopathy. There was no difference of HF of young adult with or without retinopathy and %LF decreased in diabetes with retinopathy. **Conclusion :** Autonomic nervous system activity was affected by both aging and diabetes. HRV was useful for diabetic complication under 55 years. However, HRV was not useful over 55 years, affected by ageing and diabetes. **Keywords :** Heart rate variability, Diabetes mellitus, Elderly

PP25 C-021

COMPARISON OF GLUCOSE CONTROL BETWEEN DIABETICS WITH AND WITHOUT DEMENTIA

Hiroshi YOSHINO, Takehiko WATANABE, Gen YOSHINO (Internal Medicine, Shinsuma Hospital, Japan)

Introduction : The diabetic patients with dementia have difficulty controlling their blood sugar and suffer from acute effects of hyperglycemia and hypoglycemia. In present study, we compared glucose control in subjects with diabetes without dementia versus diabetes with dementia for 3 months. **Method :** Twenty eight diabetic inpatients with similar baseline characteristics, using insulin therapy (mean age 75.4±8.1 years). The severity of dementia was evaluated using the Hasegawa Dementia Scale-Revised (HDSR). They were divided into 2 diabetic groups, i.e., with and without dementia groups (HDSR 13.4±6.7). (diabetics without n=15, diabetics with dementia n= 13). HbA1c (baseline, and 3 months later), duration of diabetes, duration of admission were investigated. Data were expressed as mean±SD. ANOVA was used for analysis between groups. **Results :**

At baseline, HbA1c (NGSP) of 2 groups (diabetics without dementia and diabetics with dementia) was 9.9 ± 1.1 and $9.9 \pm 2.3\%$, respectively. Both groups had similar change in HbA1c at 3rd month (7.9 ± 0.8 VS $8.3 \pm 2.1\%$) ($P=0.41$). Duration of diabetes was 14.3 ± 29.5 and 17.0 ± 11.2 years. Duration of admission were significantly longer in diabetics with dementia (19.8 ± 1.0 vs 88.2 ± 172 days) ($P < 0.05$). Conclusion : We conclude that insulin therapy provides similar benefits in glucose control for both diabetic inpatients group with and without dementia. Keywords : Diabetes Mellitus, Dementia, Insulin

PP25 C-022

ASSOCIATION BETWEEN INSULIN AND INFLAMMATORY MARKERS IN DIABETIC AND HYPERTENSIVE ELDERLY

Karin VIEGAS¹, Maria Gabriela Valle GOTTLIEB², Paula ENGROFF³, Luisa Scheer ELY³, Bruna Luz CORREA³, Irenio Gomes FILHO³ (1. *Enfermagem, Universidade Federal de Ciências da Saúde de Porto Alegre, Brazil*; 2. *Programa de Pós Graduação em Gerontologia Biomedica, Instituto de Geriatria e Gerontologia Pontifícia Universidade Católica do Rio Grande do Sul, Brazil*; 3. *Instituto de Geriatria e Gerontologia da PUCRS, Pontifícia Universidade Católica do Rio Grande do Sul, Brazil*)

Introduction : Inflammation is involved in the genesis of diabetes mellitus (DM) as hypertension (HTN). To investigate, in diabetic and hypertensive elderly, the relation between insulin levels, interleukin 6 (IL-6) and ultrasensitive C-reactive protein (CRP). Method : 549 elderly (346 [63%] and 203 women [37%] men aged > 60 years) from the Family Health Strategy of the Municipality of Porto Alegre, where investigated for clinical and biochemical markers for DM and inflammation. The variables investigated were age, sex, fasting insulin and inflammatory cytokines (IL-6 and CRP). Results : The mean age of the sample was 69.02 ± 7.21 years. There were 203 (45.8%) with hypertension only, 112 (25.3) presented DM and HTN, 11 (2.5%) of diabetes only and 117 (26.4) without disease manifestation. The ANOVA demonstrated a significant difference in the insulin dosage in the healthy group (14.95 ± 29.30) and the group with DM + HTN (22.72 ± 19.84) ($p = 0.09$). The mean CRP presented a significant difference between healthy (0.42 ± 0.70) group and DM group (1.16 ± 2.26) ($p = 0.02$), also found when comparing the HTN group (0.44 ± 0.64) and DM group ($p = 0.02$). There were no significant differences between groups related to IL-6 dosage ($p > 0.05$). Conclusion : Elderly with DM and HTN have a higher insulin level when comparing with healthy elderly or patients with DM or HTN, who presented higher levels of CRP only with one disease. Keywords : elderly; inflammatory markers; insulin

PP25 C-023

THE PREVALENCE, MANAGEMENT AND FOLLOW UP OF DIABETES MELLITUS AND ITS RELATIONSHIP TO HYPERTENSION AND OBESITY IN PERSONS AGED 60 YEARS AND OVER LIVING IN A PERI-URBAN AREA OF SOUTH AFRICA

Kuven NAIDU, Sophia RAUFF, Bilkish CASSIM (*Geriatrics, College of Health Sciences, University of Kwazulu-Natal, South Africa*)

Introduction : The increasing longevity is expected to increase the burden of NCDs, especially in sub-Saharan Africa where the number of older persons is rising rapidly. This study aims to determine the prevalence, management and follow-up of self-reported diabetes mellitus (DM) and hypertension, and obesity in community dwelling older persons. Method : In an observational cross-sectional survey a questionnaire was administered to 1007 participants aged 60 years and

over selected by random sampling. Results : The prevalence of self-reported hypertension was 64.8% and that of DM 20%. Of the latter 111 (55.2 %) were confirmed to be on treatment; 64 on a single agent and 47 on combination therapy. Of the 175 participants (87.1%) reporting DM and hypertension, 51.4% were prescribed an ACE inhibitor. The BMI was calculated in 988 participants with 475 (48.1%) being obese. Women were more likely to be obese than men (54.4% vs. 26.7%; $p = 0.000$). There was no association between DM and obesity. While participants who reported DM, when compared to those who did not, were more likely to have a blood sugar (73.6% vs. 45%; $p = 0.000$) and blood pressure measurement (76.6% vs. 60.2% $p = 0.000$;) in the last three months; 17.4% did not have a blood sugar and 15.5% a blood pressure measurement in the preceding 6 months. Participants reporting DM were more likely to report their quality of life as poor (22.9% vs. 13.9%; $p = 0.000$). Conclusion : Non-communicable diseases contribute significantly to the disease burden and measures to ensure optimal management need urgent implementation. Keywords : Diabetes, Hypertension, Obesity

PP25 C-024

POOR GLYCEMIC CONTROL INCREASES HOSPITALIZATION RISK FOR ADVERSE OUTCOMES WITHIN ONE YEAR IN OLDER PATIENTS WITH TYPE 2 DIABETES: TAIWAN DIABETES COHORT STUDY

Yi-Min HSU¹, Cheng-Chieh LIN², Tsai-Chung LI³, Sing-Yu YANG⁴ (1. *Department of Nursing, China Medical University Hospital, Taiwan*; 2. *Department of Family Medicine & Geriatric Medicine, China Medical University, Taiwan*; 3. *Graduate Institute of Biostatistics, College of Public Health, China Medical University, Taiwan*; 4. *Department of Medical Research, China Medical University Hospital, Taiwan*)

Introduction : The relationship between glycemic control and adverse outcomes found in the general population has seldom been evaluated in older persons with type 2 diabetes. Accordingly, we explored the association between hemoglobin A1c (HbA1c) and hospitalization risk within one year in this population. Method : We conducted a retrospective cohort study on 22,023 older persons with type 2 diabetes, who participated in the national Diabetes Case Management Program, Taiwan. HbA1c at baseline and hospitalization events over the subsequent 12 months were analyzed by Cox's proportional hazard models to adjust for age, gender, and traditional risk factors. Results : Patients were grouped in quintile of HbA1c. The rates for in-hospital mortality, and hospitalization rates for all causes, diabetes, respiratory failure, shock, renal failure, and pneumonia were 7.71, 319.24, 53.71, 15.74, 8.11, 6.56 and 30.99 per 1,000 person-years, respectively. After multivariate adjustment, higher level of HbA1c was independently associated with all-cause hospitalization, and hospitalization due to diabetes, respiratory failure, and pneumonia. The hazard ratios of all-cause hospitalization, and hospitalization due to diabetes, respiratory failure, and pneumonia for top quartile (>9.5%) versus 3rd quartile (7.2-8.1%) of HbA1c were 1.35 (1.25-1.47), 2.81 (2.31-3.42), 1.38 (1.00-1.90), and 1.54 (1.21-1.96) respectively. Although we observed lower level of HbA1c increased hospitalization risk due to respiratory failure, shock, and renal failure, these associations were at borderline significance. Conclusion : Significant linear trends were found across different HbA1c levels for all-cause, diabetes-related and pneumonia hospitalization. Our study findings suggest that meeting the recommended HbA1c targets could improve outcomes by avoiding the likelihood of hospitalization. Keywords : hospitalization, HbA1c, glucose control

PP25 C-025

FACTORS ASSOCIATED ANNUAL DECREASE IN ESTIMATED GLOMERULAR FILTRATION RATE IN PATIENTS WITH TYPE 2 DIABETES: TAICHUNG DIABETES STUDY

Tsai-Chung LI¹, Cheng-Chieh LIN², Ming-May LAI², Sing-Yu YANG³, Shu-Jung CHUANG⁴ (1. Graduate Institute of Biostatistics, College of Public Health, China Medical University, Taiwan; 2. Department of Family Medicine & Geriatric Medicine, China Medical University & Hospital, Taiwan; 3. Department of Medical Research, China Medical University Hospital, Taiwan; 4. Department of Family Medicine, China Medical University Hospital, Taiwan)

Introduction : Nephropathy in type 2 diabetes is the most common cause of end-stage renal disease. The decline in kidney function varies among individuals, however, factors associated with renal function loss has seldom been evaluated. We estimated the annual decrease in eGFR within subjects during more than 3 years of follow-up and identified determinants of the annual decrease in eGFR in a Chinese population with type 2 diabetes. **Method :** We conducted a retrospective cohort study on 1,154 patients with type 2 diabetes aged 65 and over, who enrolled in Diabetes Care Management Program (DCMP) of China Medical University Hospital, Taichung. Renal function was assessed with annual mean eGFR using the modified Modification of Diet in Renal Disease (MDRD) Study equation for Chinese. All individuals had been followed up at least 3 years. Two-stage analysis was applied. At first stage, a linear regression was used to estimate the slope (annual change) of repeated measurements eGFR over time within each subject. At second stage, a linear regression was used to evaluate the independent effects of each factor on annual changes in eGFR. **Results :** Over average 4.78 years of follow-up, the mean annual decrease in eGFR was 1.62 ml/min/1.73 m². After multivariate adjustment, we identified chronic kidney disease, hypertension medication, DM duration per year, and peripheral neuropathy were associated with greater annual decrease in eGFR by 1.15, 1.15, 0.06, 1.13 ml/min/1.73 m² (all p<0.05). **Conclusion :** Our study has revealed several factors enhanced decline in renal function in Chinese elders with type 2 diabetes. **Keywords :** body mass index, hospitalization, type 2 diabetes

PP25 C-026

VARIATION IN C-REACTIVE PROTEIN IN RESPONSE TO WEIGHT LOSS IN OVERWEIGHT AND OBESE POSTMENOPAUSAL WOMEN WITH IMPAIRED GLUCOSE DISPOSAL : IS THERE AN INDEPENDENT CONTRIBUTION OF LEAN BODY MASS?

Razieh BARSALANI¹, Eleonor RIESCO¹, Karine PERREAULT¹, Pascal IMBEAULT², Martin BROCHU¹, Isabelle J. DIONNE¹ (1. Research Centre on Aging, Faculty of Physical Education and Sports, University of Sherbrooke, Canada; 2. Behavioral and Metabolic Research Unit, Faculty of Health Sciences, University of Ottawa, Canada)

Introduction : We showed that insulin-resistant obese postmenopausal women are characterized by higher lean body mass (LBM) and elevated C-reactive protein (CRP). Although counterintuitive, we hypothesized that losses in LBM following caloric restriction will be associated with improvements in glucose homeostasis through decreases in CRP. **Objective:** To determine 1) whether insulin-resistant obese postmenopausal women improve CRP concentrations through losses in LBM following a caloric restriction program, and 2) if decreases in CRP levels contribute to improvements in insulin sensitivity. **Method :** Fifty postmenopausal women (BMI > 26 kg/m²) with impaired glucose disposal (<7.5 mg/kg/min) were studied after a

6-month caloric restriction. Outcome measures: Glucose disposal (by hyperinsulinemic-euglycemic clamp), body composition [total LBM and fat mass (FM) by DXA], LBM index [LBM (kg)/height (m²)], body fat distribution [visceral adipose tissue (VAT) and subcutaneous adipose tissue (SAT) by CT scan], plasma high-sensitive (hs) CRP and interleukin-6 (IL-6). **Results :** Positive correlations were observed between ΔCRP level and ΔIL-6 (0.332, p≤0.05), ΔLBM index (r=0.438, p≤0.01), Δtrunk LBM (r=0.383, p≤0.01) and ΔSAT (r=0.353, p≤0.05) and negative correlation was observed between ΔCRP and Δglucose disposal rate (r=-0.445, p≤0.01). Stepwise linear regression analyses revealed that ΔLBM index was the only independent predictor of the reduction in CRP levels (r²=0.202, p≤0.01) after including all the correlated values in the model. **Conclusion :** Losses in LBM are associated with improvements in inflammation state in obese postmenopausal women with impaired glucose disposal. **Keywords :** Inflammation, insulin resistance, caloric restriction, body composition

PP25 C-027

DISREGARDING AGE AS A RISK FACTORS FOR OSTEOPOROSIS

Stig ANDERSEN¹, Martin G. JØRGENSEN¹, Ib T. CHRISTENSEN¹, Ole Bf NIELSEN¹, Peter LAURBERG² (1. Dept. of Geriatric Medicine, Aalborg University Hospital, Denmark; 2. Dept. of Endocrinology, Aalborg University Hospital, Denmark)

Introduction : Osteoporosis is a debilitating condition that can be prevented by timely detection and treatment. Detection requires referral for dual energy X-ray absorptiometry (DXA) that depends on risk factors. **Method :** We estimated the importance of risk factors for a T-score of <-2.5 measured by spine and hip DXA in all men and women referred from general practice for a DXA scan at Aalborg University Hospital during a 30 months period. Risk factors were assessed by questionnaire and referral papers. **Results :** A total of 4,177 women and 782 men were referred: 2,822 aged 50-69 years/1,603 aged 70 years or above/ 441 aged 80 years or above. A low T-score was found in 33/41/46% respectively (p<0.001). No risk factors were identified in 13/15/18% (p=0.03) when age was excluded as a risk factor. Risk factor occurrence differed between the age groups 50-69/70-79/80+ years for family history (46/25/15%; p<0.001), predisposing disease (21/30/25%; p<0.001), steroid use (5.6/12.3/13.2%; p<0.001), low sun exposure (12.8/16.5/24%; p<0.001), smoking 25/19/10%; p<0.001), and high alcohol intake (5.8/5.1/2.0%; p=0.004), while not for premature menopause (21/20/15%; p=0.12), low intake of dairy products (4.3/4.4/2.5%; p=0.18), or low BMI (2.4/2.0/2.0%; p=0.69). Fragility fractures increased with age (22/38/46%, p<0.001). **Conclusion :** The decrease in subjects with family history, sun exposure, smoking, and alcohol intake was expected. Interestingly, the limited decrease in other risk factors than age with age indicate a limited influence of age on referral for DXA scanning even though age is a major determinant of fracture risk. **Keywords :** Osteoporosis, Risk factors, DXA scan

PP25 C-028

THE ASSOCIATION BETWEEN COGNITIVE FUNCTION AND OSTEOPOROTIC FRACTURE RISK IN THE ELDERLY

Shuo-Wei SU¹, Yih-Jing TANG², Wayne H.H. SHEU³ (1. Division of Endocrinology & Metabolism, Department of Internal Medicine, Taichung Veterans General Hospital, Taiwan; 2. Center for Geriatrics and Gerontology, Taichung Veterans General Hospital, Taiwan; 3. Deputy Superintendent, Taichung Veterans General Hospital, Taiwan)

Introduction : The prevalence of osteoporosis and cognitive

impairment are high in the elderly. However, the relationship between cognitive function, osteoporosis and fracture risk remains unclear. The aim of our study is to investigate the association among cognitive function, low bone mineral density and estimated fracture risks in the elderly inpatients. Method : Patients aged more than 65 years old were enrolled from 2008 to 2010 if they were hospitalized with osteoporosis or osteopenia, detected by dual-energy x-ray absorptiometry. The medication, history of fracture and frequency of fall in past one year were also collected. We did comprehensive geriatric assessment, in which cognitive function was assessed by Mini-Mental State Examination, 10-year major osteoporotic fracture risks were calculated by an international fracture risk assessment tool (FRAX). Results : In totally 117 subjects (70 male, age 81 ± 6 years), mean MMSE score was 22 ± 6 points, and the average FRAX for 10-year hip fracture risk was $9.4 \pm 8.5\%$, the mean bone mineral density (BMD) of femoral neck was 0.693 ± 0.146 Kg/m². There was a significantly negative correlation between MMSE score and osteoporotic fracture risk ($r = -0.343$, $p = 0.001$). By using multivariate regression analysis, MMSE score was negatively correlated with major osteoporotic fracture risk ($p = 0.041$) and hip fracture risk ($p = 0.04$) after adjustment of age, sex, body mass index (Kg/m²), previous fracture, fall episode, activity of daily living, nutrition and associated chronic diseases. Moreover, the association was more significant in female than in male. Conclusion : In geriatric inpatients with low BMD, cognitive function is negatively correlated with 10-year fracture risk and this relationship is more significant among the female. Keywords : elderly, cognition, osteoporosis, osteopenia, fracture risk, BMD

PP25 C-029

CORRELATION OF DAILY URINARY CALCIUM EXCRETION WITH SPOT URINARY CALCIUM TO CREATININE RATIO: A POSSIBLE INSIGHT FOR RAPID EVALUATION

Gulistan BAHAT¹, Sevilay NADIR¹, Asli TUFAN¹, Timur Selcuk AKPINAR¹, Ilker BAY¹, Ozlem SOYLUK², Nilgun ERTEN¹, Mehmet Akif KARAN¹ (1. Department of Internal Medicine, Division of Geriatrics, Istanbul University Istanbul Medical School, Turkey; 2. Department of Internal Medicine, Bakirkoy Education and Research Hospital, Turkey)

Introduction : It is difficult to collect 24 h urine for the patients from all ages. Elderly usually have more difficulty in collecting daily urine due to possible urinary incontinence, cognitive impairment, functional impairments and comorbidities. However, calcium and vitamin D supplementation is essential part of management of osteoporosis and related fractures which requires serial follow-up of daily urinary calcium excretion. We aimed to study whether spot urinary calcium/creatinine ratio could be used as a predictor of 24-h urinary calcium excretion in patients having difficulty in collecting 24 h urine sample. Method : The community dwelling elderly ≥ 60 years of age admitted to our geriatrics outpatient clinics were included into the study. All patients were given written information to learn how to collect 24 h urine. After collection of daily urine, patients are asked to give a portion of urine after their breakfast. From each sample urinary calcium and creatinine concentrations were calculated and 24 h urine volume were noted. The correlation between spot urinary calcium/creatinine ratio and 24-h daily calcium excretion was studied. Results : 70 elderly were included into the study. 15.7% were male, 84.3% were females. Mean age was 73.5 ± 6.9 . The mean 24-h urinary calcium excretion was 110 ± 95 mg. There was a strong and significant correlation between spot urinary calcium/creatinine ratio and 24-h daily calcium excretion ($p < 0.05$, $r = 0.67$, $r^2 = 0.48$). Conclusion : We suggest that in elderly having difficulty in collecting 24 h urine

sample, the spot urinary calcium/creatinine ratio yielded from morning urine following breakfast can be used to predict 24 h urinary calcium excretion. Keywords : Calciuria, daily

PP25 C-030

DECLINE OF VITAMIN D STATUS IN OLDER MEN IN BEIJING AND IT'S ASSOCIATION WITH BONE TURNOVER MARKERS

Ping MENG¹, Yixin HU¹, Shuhong FU² (1. Health Care Department, PLA General Hospital, China; 2. Clinical Laboratory, PLA General Hospital, China)

Introduction : Vitamin D deficiency is common among older people and can cause mineralization defects, bone loss. The aim of this study was to investigate the serum Vitamin D status and relationships between serum 25OHD concentration and parathyroid hormone (PTH) of old men in Beijing region. Method : This was a cross-sectional analysis of baseline data in 564 elderly Chinese men, mean age 73.7 ± 8.5 yr. The participants were divided into 3 age groups, old group1 (≥ 60 -70 years group), old group2 (≥ 70 -80 years group), old group3 (≥ 80 years group). The level of serum 25(OH)D₃, PTH, BGP, β -CTX, PINP was measured by direct competitive electroluminescent immunoassay from May to June in 2010. The relationship between 25OHD, PTH, and serum BGP And serum β -CTX was evaluated. Results : 1. The 25(OH)D₃ of total old men was 14.57 ± 5.95 ng/ml, which indicated to be vitamin D deficiency. The level of PTH, BGP, β -CTX, PINP were 34.85 ± 12.23 pg/ml, 13.49 ± 4.81 ng/ml, 0.30 ± 0.15 ng/ml, 39.13 ± 16.51 ng/ml, individually. 2. The prevalence of vitamin D severe deficiency, deficiency, insufficiency and sufficiency were 23.4% (132/564), 56.6% (319/564), 18.4% (104/564), 1.6% (9/564) for the total people. 3. Serum 25(OH)D₃ was inversely correlated with Serum PTH ($r = -0.240$, $p = 0.000$), threshold as defined by suppression of serum PTH was found within the serum 25(OH)D₃ range 9.8-15.6 ng/ml. Serum 25(OH)D₃ was weakly inversely correlated with Serum BGP ($r = -0.080$, $p = 0.034$). Conclusion : Vitamin D deficiency is highly prevalent among healthy Beijing old men. Bone turnover markers were not useful biomarkers of vitamin D status. Keywords : serum 25hydroxyvitamin D; bone turnover markers

PP25 C-031

A HOSPITAL-BASED MULTIDISCIPLINARY APPROACH REDUCES ALL-CAUSE MORTALITY IN THE ELDERLY LIVING IN LONG-TERM CARE FACILITIES IN TAIWAN

Wen-Yuan LIN¹, Chih-Hsueh LIN¹, Hua-Shui HSU¹, Chia-Ing LI², Chiu-Shong LIU¹, Tsai-Chung LI³, Chih-Te HO¹, Cheng-Chieh LIN¹ (1. Department of Family Medicine, China Medical University and China Medical University Hospital, Taiwan; 2. Department of Medical Research, China Medical University Hospital, Taiwan; 3. Graduate Institute of Biostatistics, China Medical University, Taiwan)

Introduction : To find effective care model for mortality reduce in the elderly is important. In this study, we aimed to assess the effect of a hospital-based multidisciplinary approach on the all-cause mortality in the elderly. Method : A baseline cohort of 374 elderly people (mean \pm S.D. age = 78.8 ± 7.2 years) living in eight long-term care facilities in Taiwan were recruited from 2002-2003. The subjects were divided into two groups using randomized block design; a hospital-based multidisciplinary team was responsible for the care of the intervention group, and the control group received usual care for 6 months. Cox proportional hazard regression analyses were adopted to evaluate the relative risks (RRs) of all-cause death. Taiwan's Department of Health provided the mortality data. Results : After 6 months of intervention,

83 subjects in the intervention group and 182 subjects in the control group had completed the study. There were 151 deaths during a 5-year follow-up period. After adjustment for age, gender, body mass index, albumin, total cholesterol, high-density lipoprotein cholesterol, triglycerides, and glucose level, compared to subjects in the control group, the adjusted relative risk (95% CI) of all-cause mortality among subjects in the intervention group subjects were 0.64 (0.42-0.97). For those subjects completed 6 months intervention, the adjusted RR was 0.52(0.32-0.86). The result did not differ when excluding those who died within 6 months. Conclusion : A hospital-based multidisciplinary care effectively reduced all-cause mortality in the elderly living in long-term care facilities in Taiwan. Keywords : hospital-based, multidisciplinary care, mortality

PP25 C-032

GENERAL OBESITY ASSOCIATED WITH INCREASED RISK OF GASTRIC HELICOBACTER PYLORI INFECTION IN A CHINESE ELDERLY POPULATION

Gi-Hua YANG¹, Jin-Shang WU², Yi-Ching YANG², Ying-Hsiang HUANG², Feng-Hwa LU², Chih-Jen CHANG² (1. Department of Family Medicine, National Cheng Kung University Hospital, Taiwan; 2. Department of Family Medicine, National Cheng Kung University Hospital College of Medicine, National Cheng Kung University, Taiwan)

Introduction : Obesity and Helicobacter pylori (H. pylori) infection are prevalent and play a role in diseases of several systems. Previous studies demonstrated inconsistent results on the relationship between obesity and gastric H. pylori infection. However, there was no study on their relationship in the elderly. Therefore, the aim of this study was to investigate the association between obesity and gastric H. pylori infection in a Chinese elderly population. Method : We enrolled 3,664 elderly subjects who received physical check-up in the National Cheng Kung University Hospital from 2000 to 2009. Biopsy was performed in 496 out of subjects who underwent esophagogastroduodenoscopy. Finally, 324 subjects were available for analysis after exclusion criteria consisting of gastric cancer, prior upper gastrointestinal tract surgery, prior H. pylori eradication therapy and use of non-steroidal anti-inflammatory drugs. H. pylori infection was defined as H. pylori present in samples of gastric biopsy. Obesity was defined as body mass index ≥ 27 Kg/m². Results : The prevalence of obesity was 28.6 and 19.0% in subjects with and without gastric H. pylori infection ($p=0.047$). Subjects with H. pylori infection had lower estimated glomerular filtration rate (eGFR) and higher prevalence of current smoking and alcohol use than subjects without H. pylori infection. Multivariate analysis showed that obesity was positively associated with H. pylori infection (odds ratio 1.89, $p=0.037$), in addition to current smoking while reversely associated with age ≥ 65 years and eGFR. Conclusion : Obesity was associated with increased risk of gastric H. pylori infection in the elderly. Keywords : Obesity, Helicobacter pylori

PP25 C-033

USEFULNESS OF TRANSNASAL ESOPHAGOGASTRO-DUODENOSCOPY FOR THE ELDERLY OVER 65 YEARS OLD

Jong Og SEO (Internal Medicine, Dr SEO's Clinic, Korea)

Background: To expand their lives it is a trend amongst the elderly to take regular medical check ups. The gastroscopy for seniors is not different from the one used for middle aged people, but the conscious sedative gastroscopy is taken very carefully considering their age and the lack of anaesthetics. So the transoral endoscopy or upper GI series

is recommended. As a result, we recently surveyed the satisfaction and preference for the future use of the endoscopy on elders aged above 65 who took transnasal EGD without the use of sedatives. Subjects: 185 seniors (Men: 75, woman: 110) out of 187 over 65 who have been examined by use of transnasal EGD with gastroenteric symptoms and health check ups in the clinic for the period from January 1 ~ September 11, 2008. Methods: We researched the ratio of satisfaction and the preferred method of endoscopy for future choice by use of a telephone questionnaire from 114 patients responding to it. Results: Very satisfied (20.2%), satisfied (65.8%), neutral (11.4%), dissatisfied (2.6%). With regards to preference for the conscious sedative gastroscopy (0.9%), transoral gastroscopy (2.6%) and, transnasal EGD(96.5%). Failure by use of this examination was 2 out of 187. This gives a ratio of success of 99.0%. Conclusions: The diagnostic transnasal EGD practiced safely and without the use of sedatives, is the preferred choice over the more conventional ways. Especially taking into consideration the increase of the elderly population and promotion of it by nursing care hospital. Keywords : Transnasal endoscopy, Over 65 Years Old, Patients' satisfaction

PP25 C-034

FACTORS RELATED TO SHORTENING OF TELOMERES IN ESOPHAGEAL EPITHELIUM

Junko AIDA¹, Naotaka SHIMOMURA¹, Ken-Ichi NAKAMURA¹, Naoshi ISHIKAWA¹, Tomio ARAI², Mutsunori FUJIWARA³, Kaiyo TAKUBO¹ (1. Research Team for Geriatric Pathology, Tokyo Metropolitan Institute of Gerontology, Japan; 2. Department of Pathology, Tokyo Metropolitan Geriatric Hospital, Japan; 3. Department of Pathology, Japan Red Cross Medical Center, Japan)

Introduction : Telomeres are repetitive G-rich DNA sequences found at the ends of chromosomes. They generally shorten with each normal somatic cell division due to incomplete replication of telomere repeats during DNA synthesis, the so-called end-replication problem. Telomere shortening occurs with human aging in many organs and tissues, and is accelerated by exposure to various stressors. It may also promote genetic instability and increase the risk of malignancy. Chromosomal and genomic instability due to telomere dysfunction plays an important role in carcinogenesis. We have developed the Q-FISH method using tissue sections to determine the telomere to centromere ratio (NTPCR), in order to measure telomere lengths in distinct cells or cell-groups. We have also determined telomere length in many human organs. Method : In the present study, we compared the telomeres in normal esophageal epithelia (10 younger individuals, average age 2.4 yr; 24 age-matched individuals, average age 73.3 yr), epithelia adjacent to CIS (17 individuals, average age 68.3 yr) and biopsied epithelia from 26 alcoholic patients with distinct iodine-unstained lesions (DIULs; frequent site of esophageal carcinoma)(average age 61.2 yr). Results : In all groups, we found that basal cells had longer telomeres than parabasal cells. Among normal individuals, those who were younger had significantly longer telomeres than the age-matched subgroup. Telomeres in esophageal epithelium adjacent to CIS and those in alcoholics showed no significant difference in length, but both were significantly shorter than in age-matched controls. Conclusion : Therefore, aging shortens telomeres in esophageal epithelium, and precancerous conditions and/or alcohol intake accelerate telomere shortening and cause chromosomal instability. Keywords : telomere, Q-FISH, chromosomal instability

PP25 C-035

THE RELATIONSHIP BETWEEN TEA DRINKING AND EROSIIVE ESOPHAGITIS IN AN ELDERLY TAIWANESE

POPULATION

Pei-Chi CHIH¹, Yi-Ching YANG¹, Jin-Shang WU², Yin-Fan CHANG¹, Feng-Hwa LU¹, Chih-Jen CHANG¹ (1. Family Medicine, National Cheng Kung University Hospital, Taiwan; 2. Family Medicine, Hospital, Taiwan)

Introduction : Certain lifestyle factors, such as consumption of tobacco, alcohol, and tea are believed to stimulate gastric acid secretion, but findings of previous cross-sectional epidemiological studies have been inconsistent. The study on the relationship between tea consumption and erosive esophagitis (EE) was scarce. Therefore, the aim of this study was to investigate the association between tea drinking and erosive esophagitis in an elderly population. Method : A total of 1349 subjects more than 60 years were enrolled from National Cheng Kung university medical center after excluding those with esophageal or gastric cancer, current medication for gastrointestinal disease, heart disease, arrhythmia, asthma and arthritis. Lifestyle habits (cigarette smoking, alcohol use, tea drinking habits and details of physical exercise) were obtained by a structured questionnaire. Tea drinking habit was dichotomized into none and current tea drinking, which was defined as at least once per week for more than half-a-year. The Los Angeles classification was adopted to determine the presence of EE. Results : The prevalence of EE was 17.9%. Compared with subjects without EE, those with EE had higher waist circumference and plasma triglyceride levels, and higher prevalence of male gender, hiatus hernia, current tea drinking, smoking and alcohol use. Multivariate analyses revealed a significantly positive association of EE with current tea drinking, hiatus hernia and male gender after adjusting for age, overweight/obesity, hypertriglyceridemia, Low HDL cholesterol, current smoking, alcohol use and regular exercise. Conclusion : Tea drinking was associated with increased risk of EE in the elderly population. Keywords : Tea drinking, erosive esophagitis

PP25 C-036

ASSOCIATION BETWEEN BONE FRACTURE AND HELICOBACTER PYLORI INFECTION IN TAIWANESE ELDERLY WOMEN WITH UPPER GASTROINTESTINAL DISEASES

Shih-Chun LIN¹, Kun-Wei TSAI¹, Malcolm KOO² (1. Department of Geriatrics, Buddhist Dalin Tzu Chi General Hospital, Taiwan; 2. Department of Medical Research, Buddhist Dalin Tzu Chi General Hospital, Taiwan)

Introduction : Helicobacter pylori (H. pylori) infection is a common chronic bacterial infection of the upper digestive tract. Because of its chronicity, it is often associated with adverse conditions such as chronic ulcers or gastric lymphoma in the elderly. The present study aimed to investigate the factors associated with H. pylori infection in Taiwanese elderly patients with upper gastrointestinal diseases. Method : A retrospective patient record review study was conducted in a regional teaching hospital in southern Taiwan. Patients diagnosed with diseases of esophagus, gastric ulcer or duodenal ulcer during January 1, 2008 to Dec 31, 2010 were identified (n=3058). Patients aged 65 years and over and had tested for the presence of H. pylori were included. Patients diagnosed with cancer or renal failure was excluded from the study. The presence of H. pylori infection was determined by histological examination or rapid urease test. Factors associated with H. pylori infection was evaluated using multiple logistic regression analysis. Results : Of the 1072 patients (657 males and 415 females) included in the analysis, 250 (23.3) had H. pylori infection. H. pylori infection was significantly associated with alcohol drinking (OR=1.73, 95% CI=1.20-2.50, p=0.003) in male patients while it was associated with bone fracture (OR=1.89, 95% CI=1.02-3.49,

p=0.043) and coronary artery disease (OR=0.45, 95% CI=0.23-0.90, p=0.023) in female patients. Conclusion : In elderly Taiwanese men, H. pylori infection was associated with alcohol consumption. In elderly Taiwanese women, while H. pylori infection was associated with bone fracture, it was inversely associated with coronary artery disease. Future studies should investigate whether the association in bone fracture is related to the use of analgesics. Keywords : Helicobacter pylori, bone fracture, alcohol use

PP25 C-037

EDENTULISM ASSOCIATED WITH DIABETES: A STUDY OF FOUR NATIONAL SURVEYS OF ELDERLY SWEDES

Ake RUNDGREN, Valter SUNDH, Tor OSTERBERG (Dept. of Geriatrics, University of Gothenburg, Sweden)

Introduction : Dental health is related to nutrition, health and lifestyle factors. Diabetes is a global health problem associated with many diseases. Studies have shown increasing secular trends for diabetes. The aim of this study was to investigate the association between edentulism and diabetes in four national samples investigated over a period of 22 years. Method : Subjects aged 55-84 years (in total n = 15 875) were randomly sampled from the Swedish population by Statistics Sweden on four occasions (1980/81, 1988/89, 1996/97 and 2002). Trained interviewers collected information about dental status, diseases and living condition factors. The participation rate varied between 75% and 86%. Statistical analyses were based on logistic regression models. Results : Edentulism decreased from 43% to 12% between 1980 - 2002. In dentate participants diabetes increased from 3.7 % to 6.4% and in edentulous participants from 7.9 % to 14.1 % (p< 0.001, age adjusted). Significant background factors for diabetes were found for cardiovascular disease (OR 2.62; 95% CI=2.23 - 3.06), BMI >30 (OR 1.78; 95 % CI=1.45 - 2.19), edentulism (OR 1.69; 95 % CI=1.42 - 2.01) and physical activity (OR 0.74; 95 % CI= 0.61 - 0.90) in logistic regression. Conclusion : This study indicated an obvious and strong association between edentulism and diabetes in the age groups 55-84 years. Keywords : Edentulism, diabetes, elderly

PP25 C-038

APPLICATION OF ORAL DIADOCHOKINESIS FOR ORAL FUNCTION EVALUATION AMONG THE ELDERLY

Hiroko MIURA¹, Shuichi HARA², Kiyoko YAMASAKI³, Naoko MORISAKI⁴ (1. Area on Community Healthcare, National Institute of Public Health, Japan; 2. Faculty of Health Science, Kyushu University of Health and Welfare, Japan; 3. Faculty of Social Welfare, Kyushu University of Health and Welfare, Japan; 4. Faculty of Nursing, University of KinDai Himeji, Japan)

Introduction : Articulation is a very important oral function for elderly individuals. The purpose of the present study was to examine the relationship between objective evaluation on articulation and level of independence in the elderly, and to discuss the capability of oral diadochokinesis as an indicator of elderly oral function. Method : We included 250 elderly patients from the Miyazaki prefecture (southern Japan) of which 183 were healthy, 44 were frail, and 23 were disabled. Oral diadochokinesis by testing alternating (/pa/, /ta/, and /ka/) and sequential motion rates (/pataka/) were examined as an indicator of articulation among the elderly. We conducted ANOVA to examine the relationships among each oral diadochokinesis, age, and the 3 groups according to different levels of physical independence. Furthermore, we determined the relationship-adjusted age using ANCOVA between evaluation of oral diadochokinesis and physical independence groups. Results : The results obtained by ANOVA revealed that each diadochokinesis had significant differences with respect to age and

these 3 groups of independence ($p < 0.01$); subsequently, age was determined to be a confounding variable. After adjustment for age using ANCOVA, the each oral diadochokinesis had a significant relationship corresponding to the level of physical independence ($p < 0.01$). Conclusion : The evaluation of each oral diadochokinesis had a significant relationship with the level of physical independence. Thus, these findings suggest that the articulation assessment using oral diadochokinesis will be useful as a subjective evaluation of oral function among the elderly. Keywords : oral function, assessment, oral diadochokinesis

PP25 C-039

ACCIDENTAL INGESTION OF REMOVABLE DENTURES IN JAPAN

Kazuhiro SHIMOYAMA¹, Tsuneto OHWATARI², Miho MATSUO³
(1. Faculty of Dentistry, Tokyo Medical and Dental University, Japan; 2. Gerodontology, Graduate School, Tokyo Medical and Dental University, Japan; 3. Cleanliness & Sanitation Planning & Development, Kao Professional Services Co., Ltd, Japan)

Introduction : Ingested removable dentures have been identified as a cause of local perforation or obstruction at many sites in the gastrointestinal tract. This study was conducted in 58 patients to assess characteristics of patients, ingested removable dentures and methods of treatment. Method : A total of 58 patients with removable dentures in the gastrointestinal tract were selected from case reports published in the Japanese literature between 1997 and 2011. Age, sex, classification of dentures, location of dentures and medical intervention were analyzed. Results : Thirty-nine (67%) and 19 (33%) were males and females, respectively, with a male:female ratio of 2.1:1. The patients ranged in age from 21 to 93 years. Ingested dentures were 3 complete dentures (5%) and 55 partial dentures (95%) which mainly consisted of unilateral posterior partial dentures. Sixty percent of the patients ingested dentures while eating meal. The location of the ingested dentures was in the esophagus in 38 % of cases, in the small intestine in 26%, in the colon in 22%. The perforation was in 22 (38%) before and after extraction. The surgical treatment was used in 38 patients (66%) of the patients as a method for removal of dentures. Conclusion : A removable denture in the gastrointestinal tract is a serious condition. It is important to recognize that ill-fitting and damaged dentures constitute a risk factor for accidental ingestion. The patients should be advised on the wearing and care of their dentures and the need to return for maintenance. Keywords : accidental ingestion, foreign body, removable denture

PP25 C-040

NUMBER OF REMAINING TEETH, MASTICATION AND SPEECH DISTURBANCES IN INDONESIAN PRE ELDERLY AND ELDERLY

Lindawati Soetanto KUSDHANY¹, Vita Priantina DEWI², Dinni AGUSTIN², Sri Lasmidjah DIPONEGORO², Rodiyah SOEKARDI³, Yeny SULISTYOWATI³, Jennifer STOCK⁴, Eef HOGERVORST⁴, Tri Budi RAHARDJO²
(1. Prosthodontic Department Faculty of Dentistry UI, Center for Ageing Studies Universitas Indonesia, Indonesia; 2. Center for Ageing Studies, Universitas Indonesia, Indonesia; 3. Faculty of Public Health, Universitas Respati Yogyakarta, Indonesia 4. SSEHS, Loughborough University, United Kingdom)

Introduction : To investigate the association between the socio-demographic status (age, education, and area of residence), number of remaining teeth and mastication and speech disturbances in Indonesian pre elderly and elderly living in Yogyakarta Province, Indonesia. This research benefits is to gather a data base for the development of oral

dental health promotion program and to raise awareness of the pre elderly and elderly population in Indonesia about the importance of oral health and denture treatment. Method : The design of this study was cross-sectional with 60 pre elderly and elderly subjects taken by consecutive sampling from 4 district in Yogyakarta Province, Indonesia. Age of the subjects ranges from 47-83 years. Subjects consisted of 30 women and 30 men. All subjects undergone oral examination, and a structured interview on the socio-economic status, also the complaints for mastication and speech. Results : 44 (73,3%) subjects had more than 20 remaining teeth and only 13 subjects (21.7%) were using denture. 19 subjects (31.7%) had mastication disturbances and only 4 subjects (6.7%) had speech disturbances. Data was analyzed using Pearson chi-square test and Fisher exact test. The result showed that number of remaining teeth was significantly related to mastication disturbances ($p < 0.014$) and speech disturbances ($p = 0.004$). Although the number of remaining natural teeth was not related significantly to socio-economic status such as age, education and areas of residence. ($p > 0.05$) but there was a tendency that older and less educated subjects had less remaining teeth. Conclusion : Number of remaining teeth was most closely related to mastication and speech disturbances. Keywords : remaining teeth, mastication and speech disturbances

PP25 C-041

THE RELATIONSHIP BETWEEN THE MODERATE ALCOHOL DRINKING AND GALLSTONE DISEASE IN A TAIWANESE ELDERLY POPULATION

Yen-Chun LEE, Jin-Shang WU, Yi-Ching YANG, Chin-Sung CHANG, Feng-Hwa LU, Chih-Jen CHANG
(National Cheng Kung University Hospital, Department of Family Medicine, Taiwan)

Introduction : The relationship between alcohol drinking and gallstone disease (GSD) were inconsistent. Excessive alcohol consumption has been perceived as one of the mechanisms for the risk of GSD, while moderate amounts of alcohol drinking was protective effect in general population. However, there is no study on the association between alcohol drinking and GSD in the elderly. The purpose of this study was to determine the relationship between moderate alcohol drinking and GSD in an elderly population. Method : Totally, 2694 subjects receiving health checkup at National Cheng Kung University Hospital between 2000 and 2009 were enrolled after excluding subjects with cancer, cholecystectomy, major liver surgery, hypothyroidism, leukocytosis, severe anemia, medication for dyslipidemia, alcohol consumption more than 30 gm/day for men and 20 gm/day for women. The diagnosis of GSD was based on the finding of abdominal ultrasonography. Moderate alcohol drinking was defined by the average amount of the alcohol consumption was < 30 gm/day for men, < 20 gm/day for women at least once drink per week for six months. Results : Compared with non-GSD group, the GSD group was older and had a higher diastolic blood pressures, higher prevalence of diabetes, liver cirrhosis, hepatitis B but a lower estimated glomerular filtration rate (eGFR) level and lower prevalence of moderate alcohol drinking. Based on binary logistic regression, age, female gender, diabetes mellitus, liver cirrhosis and hepatitis B were positively associated factors of GSD, but moderate alcohol drinking was negatively related to GSD. Conclusion : Moderate alcohol drinking showed a lower risk of GSD in the elderly. Keywords : gallstone, alcohol drinking

PP25 C-042

THE METABOLIC EQUIVALENT OF TASK IS AN INDEPENDENT PREDICTOR OF POST-CHOLECYSTECTOMY COMPLICATIONS IN THE ELDERLY

Ioannis Emmanouil PETRAKIS, Konstantinos LASITHIOTAKIS, Maria VENIANAKI, Alexandros ANDREOU, George CHALKIADAKIS (*General Surgery, University Hospital of Heraklion Crete Greece, Greece*)

Introduction : The Metabolic Equivalent of Task (MET) is a physiological measure expressing the rate of energy consumption during a specific physical activity. Herein we analyzed, for first time, the association between preoperative MET assessment and the occurrence of postoperative complications in elderly patients undergoing cholecystectomy for biliary stone disease. **Method :** 92 patients, 46 (50%) were women older than 65 years undergoing cholecystectomy for biliary stone disease were prospectively examined. Preoperative assessment of the activity with the highest MET was assessed and detailed perioperative data and patients' comorbidity was registered with the use of a standardized questionnaire. The main outcome of the study was the rate of any postoperative complication within 30 days of surgery. **Results :** The median (IQR) age of the collective was 73(10) years and the median(IQR) MET was 4(1.5). 26 (29.3%) of the patients experienced at least one postoperative complication. Patients experiencing postoperative complications reported significantly lower MET scores (3.5 vs. 4.3, $p=0.031$). In the multivariate logistic regression analysis adjusted for age, gender, body weight, type of operation (laparotomy/laparoscopy, elective/emergency), ASA score, Charlson comorbidity index and duration of operation, MET score retained its significance as an independent predictor of postoperative complications. For every unit of increase of the value of MET score a corresponding decrease of 40% (95%CI, 40%-90%) of the probability of postoperative complication was calculated on the basis of the logistic regression model ($P=0.006$). **Conclusion :** Preoperative assessment of the physical activity with the use of MET may predict the occurrence of postoperative complications of elderly patients undergoing cholecystectomy for bile stones. **Keywords :** Frailty, Comprehensive Geriatric Assessment, MET, Cholecystectomy, Postoperative Complications

PP25 C-043

SERUM LOW-DENSITY LIPOPROTEIN CHOLESTEROL PREDICTS FUTURE ALBUMINURIA IN THE ELDER TAIWANESE-TAICHUNG COMMUNITY HEALTH STUDY (3 YEARS FOLLOW-UP)

Wen-Yuan LIN¹, Chih-Hsueh LIN¹, Hua-Shui HSU¹, Chia-Ing LI², Chiu-Shong LIU¹, Tsai-Chung LI³, Chih-Te HO¹, Cheng-Chieh LIN¹ (*1. Department of Family Medicine, China Medical University and China Medical University Hospital, Taiwan; 2. Department of Medical Research, China Medical University Hospital, Taiwan; 3. Graduate Institute of Biostatistics, China Medical University, Taiwan*)

Introduction : Serum low-density lipoprotein cholesterol (LDL-C) and urine albuminuria have been reported to increase the risk of cardiovascular disease and all-cause mortality. In this study, we investigated the association between LDL-C change and future albuminuria in the elder Taiwanese. **Method :** A total of 832 subjects, aged 60 years and above, were recruited from Taichung city in Taiwan in 2004. Among these, 533 subjects were followed up with a mean 2.8 years. 427 baseline normoalbuminuria subjects were kept for final analyses, 32 of whom exhibited incident albuminuria. Albuminuria was defined as urinary albumin-to-creatinine ratio (ACR) ≥ 30 mg/g creatinine. The relationships between serum LDL-C and urine ACR change were analyzed. LDL-C change was categorized as LDL-C increase and decrease. Multiple logistic regression analyses were used to evaluate the relationship between LDL-C increase/decrease and

incidence of albuminuria after adjustment for age, gender, body mass index, blood pressure, glucose, smoking, betel nut chewing, alcohol drinking, and physical activity. Multiple linear regression analyses were also done for the association between Δ LDL-C and Δ urine ACR. **Results :** The mean follow-up duration is 2.8 years. After adjustment for potential confounder, using linear regression, Δ LDL-C was positively associated with Δ urine ACR. In multivariable models, participants with LDL-C increase had a 122% increase in risk of incident albuminuria (adjusted incidence rate ratio (95% CI): 2.22(1.003-4.93)) compared with participants with LDL-C decrease. **Conclusion :** Serum LDL-C change predicts future albuminuria in the elder Taiwanese. Further study is necessary to clarify the linking mechanism between LDL-C and albuminuria. **Keywords :** albuminuria, LDL, elderly

PP25 C-044

ACUTE CONFUSIONAL STATE (DELIRIUM) IN ELDERLY PATIENTS ADMITTED TO AN ACUTE GERIATRIC UNIT

Rolando Olegario ALTAMIRANO¹, Marcela Andrea BARRENECHEA², Ricardo Roger VILLALBA², Sandra Elizabeth BERNACHEA², Silvia Elisa RAMIREZ³ (*1. Servicio de Psicogeriatría, Hospital Geriátrico de Agudos Juana Francisca Cabral, Argentina; 2. Hospital Geriátrico de Agudos Juana Francisca Cabral, Argentina; 3. Hospital Geriátrico de Agudos Juana Francisca Cabral, Asociación de Gerontología y Geriatria Del Nea, Argentina*)

Introduction : Objectives: Know the prevalence of Acute Confusional State in this population of patients. Identify the risk factors for the clinical manifestation. **Method :** This prospective study included 190 patients. They were evaluated when they had been admitted using a registration tab with a complete geriatric assessment for 8 month in the year 2010 It was used for the diagnosis of ACS Confusion assessment method, the cognitive status was evaluated with the Pfeiffer test, the functional status with Katz index, the emotional status with Yesavage Scale, and Social assessment, nutritional status and other clinical variables. It was used SPSS program for statistical analysis. **Results :** The average age of the population admitted was 79,81 years old (SD+9,6), with regard to the sex was 68,9% F (131 p) and 31,1% M (59 p). The average age of the females was 79, 85 years old (SD +/- 9). Among 190 patients hospitalized the 51, 6% (98 p) was diagnosed of ACS when they were admitted. The ACS increases its prevalence with increasing age with an statistically significant relationship ($p<0,05$). It was comparing groups divided into decades and when they were divided in young elderly (< 74 years) and elderly (>75 years).The variables related with with high risk of ACS were functional dependence. **Conclusion :** The Prevalence of ACS was 51, 6% in patients hospitalized. The ACS was more frequent with the increasing age. The Risk Factors for the clinical manifestation were the previous cognitive impairment and functional dependence and previous cognitive impairment. **Keywords :** Delirium, Acute, Elderly

PP25 C-045

DEVELOPMENT OF A PREDICTION SCALE FOR POSTOPERATIVE DELIRIUM IN PATIENTS UNDERGOING CEREBROVASCULAR SURGERY

Nozomi HARASAWA, Toshiko MIZUNO (*School of Nursing, Tokyo Women's Medical University, Japan*)

Introduction : The purpose of this study was to develop a scale for predicting postoperative delirium (POD) in patients undergoing cerebrovascular surgery. **Method :** The predictive scale for POD is composed of 27 items selected from the drafted risk factors based on literature reviews, providing weightage to selected items. In this study,

the onset and severity of POD were determined by reference to the Japanese version of the NEECHAM Confusion Scale. The study was approved by the Ethics Committee of the relevant university. Results : Delirium developed in 38 of the 122 patients (31.1%) in our cohort. Analysis using a logistic regression model revealed the following risk factors: age, impairment of consciousness, underlying illness, depression, dehydration, and anxiety. The final scale was weighted by referring to the odds ratios. The area under the curve was 0.849 (95% CI : 0.773-0.926). The possible total score on this scale is 25 points, and a cutoff score of 14 was selected for determining the risk of postoperative delirium, with patients having scores of >15 being at a higher risk. The average score was 8.2 ± 4.4 in the non-delirium group, and 15.0 ± 4.7 points in the delirium group, with a significant difference between the two groups ($t = -7.575$, $p < 0.001$). The scores on this scale tended to be higher with increasing severity of delirium. Conclusion : This scale is able to predict postoperative delirium, and allow measures to be taken for prevention and early recovery focusing on patients with a high risk of delirium. Keywords : postoperative delirium, predictive scale, cerebrovascular surgery

PP25 C-046

DELIRIUM OR ACUTE CONFUSIONAL SYNDROME (ACS) IN HOSPITALIZED PATIENTS AT THE INTENSIVE CARE UNIT (ICU)

Rolando Olegario ALTAMIRANO¹, Marcela Andrea BARRENECHEA², Ricardo Roger VILLALBA², Sandra Elizabeth BERNACHEA², Guillermo Dionisio CANETE³ (1. *Unidad de Terapia Intensiva, Hospital Geriatrico de Agudos Juana Francisca Cabral Aggenea, Argentina*; 2. *Corrientes Capital, Hospital Geriatrico de Agudos Juana Francisca Cabral, Argentina*; 3. *Residencia Medica en Geriatria, Hospital Geriatrico de Agudos Juana Francisca Cabral, Argentina*)

Introduction : Delirium is a clinic syndrome with a multiple-factor origin. It is characterized by disorganized thinking, difficulty as regards awareness and attention. It occurs mainly in the elderly, prevalent over 75 years old. Objectives: Determine the frequency of delirium in hospitalized patients at the intensive care unit. Method : We made an observational and longitudinal study in ICU's rooms, in which 87 patients were included and evaluated by comprehensive geriatric assessment sheets during six months. The confusion Assessment method was employed for establishing diagnosis. These patients were statistically analyzed with the SPSS program. Results : The average age was 77, 47 years old (SD \pm 10); regarding gender 55,2 (48p) were female and 44,8 (39p) were male. 86, 2 % (74p) has ACS, which 82,75% from admission and 3,45% during hospitalization. The most common form was the hypoactive (60p). Regarding risk factors, the statistically significant predisposition was ($p < 0,5$) of dehydration, depression and previous ACS. The precipitating were: polypharmacy, local cathetering, iatrogenic, physical restraint, nasogastric tube and albumin $< 3g/l$. The complications were: pressure ulcers, functional impairment, urinary incontinence, nosocomial infection and excessive sedation. The diagnoses were: CAP (Community-acquired pneumonia) 32, 2 %; CHF (congestive heart failure) of 13,8%; COPD (Chronic obstructive pulmonary disease) of 10,3%; Stroke and severe sepsis of 6,9%. Mortality was 27,6%. Conclusion : Delirium in ICU was common in the actual population study, being the most common form the hypoactive, and concerning risk factors, it was observed that these components favored the ACS emergency. The complications and mortality were higher in this group of patients. Keywords : Delirium, elderly, hospitalized

PP25 C-047

REDUCING POST-SURGICAL DELIRIUM IN ELDERLY HIP FRACTURE PATIENTS BY IDENTIFYING AT-RISK PATIENTS

Sheda HEIDARIAN (*Internal Medicine/Geriatrics, Eisenhower Medical Center, USA*)

Introduction : Post-surgical delirium (PSD) is common among the elderly and has serious short- and long-term consequences. Method : Patients admitted through the Emergency Department (ED) for hip fracture between January and April of 2012 (n: 25) were identified as high risk for PSD using the following criteria: Age > 70 , BUN/creatinine > 20 and albumin < 2.5 . Patients meeting criteria were evaluated by a geriatric team for underlying causes including polypharmacy-related issues. Interventions emphasized medication management, orientation to the environment, sleep hygiene, early mobility, and pain management. The intervention group was compared with all patients meeting the same criteria admitted through the ED January-April, 2009 (n: 34). Variables compared included length of stay, use of restraints, falls, and use of personal attendants. Charts were also reviewed for notes indicating the emergence of confusion or agitation no present on admission. Results : A change in cognition was noted in 12% of the intervention group vs. 34% in the comparison group. Restraints were used in 7.7% of the intervention group vs. 14.7% of the comparison group. Personal attendants were not necessary in the intervention group vs. 2.9% of the comparison group. Length of stay of similar in both groups: 6.5 vs. 6.6 in patients with a change in cognitive status compared with 4.6 vs. 4.9 in those without. There were no falls in either group. Conclusion : Identifying patients at high risk for PSD and implementing a package of interventions based on current evidence shows promise for reducing the incidence of PSD. Keywords : Delirium, risk-factor identification

PP25 C-048

THE SYNDROMES AT THE TIME OF ADMISSION AND THE CONTENTS OF HOME CARE FOR THE ELDERLY AT HOME

Hiroko OHSHIMA¹, Mitsuyo OZAKI², Akemi MATSUMOTO², Takao SUZUKI³ (1. *Nursing and Care, National Center for Geriatrics and Gerontology, Japan*; 2. *Home-medical Support Ward, National Center for Geriatrics and Gerontology, Japan*; 3. *Research Institute, National Center for Geriatrics and Gerontology, Japan*)

Introduction : The purpose of this study was to examine the syndromes at the time of admission and the contents of home care for the elderly who were registered in on the Home-Medical-Support ward. Method : Observation study was conducted. 188 elderly people aged 65 and over were included in this study. Dates were collected by the ward nurses. Collected items were demographics, syndromes at the time of admission, the contents of home care, the number of admission, length of stay, family caregiving, medical procedure at-home, and so on. Results : The prevalence of geriatric syndromes in the community-dwelling elderly was over fifty percent as follows: pneumonia, urinary-tract infection, dysphasia, falls, pressure ulcer, and frail. Conclusion : The results suggested that the care and management of geriatric syndromes is important for geriatric nursing both hospital and home-care. Keywords : geriatric syndromes, nursing management, home care

PP25 C-049

A MEMANTIN OVERUSE CASE WITHOUT DEMENTIA

Umut SAFER, Huseyin DORUK, Ilker TASCI, Ilkin NAHARCI, Ergun BOZOGLU (*Geriatrics, Gulhane School of Medicine, Turkey*)

Introduction : Memantin HCL (Ebixa) is a drug which antagonizes the effects of N-methyl-D-aspartat receptors and which is used for the treatment of dementia. Several forms consisting tablet (5-10 mg), solution (2mg/ml) and pump actuation oral solution (5mg/ml) are available. **Method :** Female patient at the age of 88 was admitted to our geriatric department with complaints of dyspepsia. Her history consist of hypertension (for 40 years), hiatal hernia(for 40 years), Alzheimer disease(since 2007), Parkinson disease (since 2007), Panic disorder(since 2007). She was on Ebixa pump actuation oral solution 40-50 mg/day. Ebixa was first prescribed in year 2007 as solution form in dose of 8-10 drop/day by a neurologist and patient continued to use until November 2012. Unfortunately Ebixa solution form was changed with pump actuation oral solution in year June 2011 in Turkey. After this form change patient continued to use Ebixa as usual (8-10 pump/day) which cause 40-50 mg/day memantin use. **Results :** Our geriatric assessment showed that patient had dysarthria and Parkinsonism but no dementia. Patient's upper gastrointestinal endoscopic assessment showed that she had pan gastritis, hiatus hernia and alkali reflux gastritis. **Conclusion :** Assessment of geriatric patient is difficult particularly if the patient has dysarthria. Communication deficit in these patients may cause overdose medication use and drug addiction. Dysarthric patient must be more carefully assessed to avoid misdiagnosis and inappropriate medication. Also change medical forms of dementia drugs could cause crucial results as in this case. **Keywords :** memantin, missdiagnosis, dementia

PP25 C-050

MINIMIZING THE RISK OF BLOOD CLOTS WITH THE USE OF ELECTRONIC MEDICAL RECORDS

Joshana K. GOGA¹, Robert ROCA², Abhilash DESAI³, James K. WALTERS⁴, Anita POLOWAY⁵ (1. Geriatric, Sheppard Pratt Health System, USA; 2. Vice President of Medical Affairs, Sheppard Pratt Health System, USA; 3. Geriatric Psychiatry, Sheppard Pratt Health System, USA; 4. Pharmacy, Sheppard Pratt Health System, USA; 5. Geriatrics, Sheppard Pratt Health System, USA)

Introduction : The CDC recognizes hospitalization as a major risk factor for venous thromboembolism (VTE). Appropriate VTE prophylaxis is under-utilized in geropsychiatric patients admitted to psychiatric facilities eventhough the risk of a VTE event significantly impacts morbidity and mortality rates. **Method :** 1.Our Anticoagulation team developed a 2 step VTE risk screening tool with specific psychiatric risk factors incorporated. 2.Our Information Technology team translated the screening tool into the existing hospital history and physical assessment template on the electronic medical record. 3.Our Ambulation program was developed by geriatric physical therapist, occupational therapist, music therapist, pharmacist and nursing staff. **Results :** Since the implementation of the VTE prophylaxis program in 2009 the number of enoxaparin orders have increased by nearly 90%, only 4 VTE events have been documented which is significantly lower than the national average and no gastrointestinal bleeds have been reported with the initiation of enoxaparin. **Conclusion :** The geropsychiatric population should be screened for VTE risks in both an inpatient setting and outpatient long-term setting. Patient risks can compound as they transition from one environment to another. In an acute care setting increased levels of cortisol, decompensation of psychiatric symptoms, and addition of psychotropics along with immobilization can impact VTE risk. In the long-term setting extended immobilization in patients with medical co-morbidities can significantly increase the risk of an event with an acute hospital admission. The combined efforts from both the outpatient medical team and inpatient medical team to reduce risks would have a much greater impact in reducing the overall VTE burden. **Keywords :** blood

clots, electronic medical record, multidisciplinary team

PP25 C-051

A 12 WEEK YOGA PROGRAM IMPROVED BALANCE AND MOBILITY IN OLDER COMMUNITY-DWELLING PEOPLE: A RANDOMISED CONTROLLED TRIAL

Anne TIEDEMANN¹, Sandra O'ROURKE², Romina SESTO³, Catherine SHERRINGTON² (1. Musculoskeletal Division, The George Institute for Global Health, University of Sydney, Australia; 2. Musculoskeletal Division, The George Institute for Global Health, The University of Sydney, Australia; 3. Yoga Instructor, Yoga To Go, Australia)

Introduction : Yoga is a popular form of exercise among older people, but its effectiveness in improving balance and preventing falls has not been adequately explored. This study evaluated the feasibility and effect of a 12 week yoga program on balance and mobility in community-dwelling older people. **Method :** We conducted an assessor-blinded randomised controlled trial with intention-to-treat analysis. Participants were 54 community-dwelling people aged 59+ (mean 68, SD7.1) not currently participating in yoga or Tai Chi. Twenty seven people allocated to the intervention group participated in a 12 week twice-weekly yoga program, focussing on standing balance postures. Twenty seven controls received a booklet containing general information about falls risk factors/prevention. Primary outcome measure was the standing balance component of the Short Physical Performance Battery with the addition of one-legged stance time (SPPB+OLS). Secondary outcome measures included the timed sit to stand test (STS), timed four metre walk (T4MW), one-legged stance with eyes closed (OLSEC) and the Short Falls Efficacy Scale-International (SFES-I). **Results :** Linear regression analysis revealed significant improvements in the intervention group compared to control group for the SPPB+OLS (mean difference =1.53, 95% CI 0.10 to 2.96), STS (-2.99, -4.84 to -1.15), T4MW (-0.56, -0.80 to -0.32) and OLSEC (1.94, 0.40 to 3.49). Mean class attendance was 20 out of 24 classes (83%). **Conclusion :** This trial demonstrates the popularity and beneficial effects on balance and mobility of 12 weeks of yoga for older people. Further research is needed to determine the effect of yoga on risk and rate of falling in older people. **Keywords :** yoga, falls, balance

PP25 C-052

PSYCHOLOGICAL IMPACTS OF FALL AMONG SENIOR CITIZENS IN MACAU

Christopher LUM (Medical & Geriatrics, Shatin Hospital, Hong Kong)

Introduction : About one third older persons have a fall over 12 months. Besides physical injury, fallers may lose confidence in mobility, resulting in restricted activity range. Primary objective of current study was to estimate prevalence of fall among community living senior citizens in Macau. Secondary objective was to evaluate psychological impact of having had fall(s). **Method :** This was a cross sectional survey using a structured questionnaire. Subjects were recruited using structured sampling method. Fall history in preceding one year and potential psychological impacts of falls were captured using the Chinese Activities ?Specific Balance Confidence Scale (ABC-C). **Results :** 199 valid questionnaires were analyzed. They had a means age of 72.3 (SD 5.2). 117 (58.8%) were female. Total of 155 (77.9%) had at least one fall in past 12 months. Although fallers and non-fallers did not differ in total ABC-C scores [990.0 (SD 121.8) in non-fallers versus 993.1 (SD 150) in fallers], fallers had significantly lower confidence in each of the nine questions relating to outdoor

activities, and on sum of scores of these nine questions [512.8 (SD 77.7) in non-fallers versus 462.9 (SD 86.9) in fallers, $p=0.001$]. Conclusion : The sample had a high fall rate at about 78% over past one year. Though they did not differ much in confidence of balance in indoor activities, fallers had significantly lower confidence in outdoor mobility. This potentially may limit their activity range and resulted in reduced psycho-social interactions. Keywords : falls, ABC-C, psychological impact

PP25 C-053

LONG-TERM PARTICIPATION IN OTAGO PEER-LED FALLS PREVENTION CLASSES PREDICTS LOWER FALLS INCIDENCE

Birgit WURZER¹, Debra L. WATERS², Leigh HALE¹, Sophia LEON DE LA BARRA² (1. School of Physiotherapy, University of Otago, New Zealand; 2. Preventive and Social Medicine, University of Otago, New Zealand)

Introduction : Falls prevention programs are typically short-term interventions. Whether continued participation predicts falls incidence, is unknown. Steady As You Go (SAYGO) are community-based, peer-led, falls-prevention exercise classes adapted from the home-based Otago Exercise Programme. Classes began forming in 2003, and currently >40 are operating in the Otago region. We investigated whether long-term SAYGO participation predicted falls incidence over 24 months. Method : Two hundred and ten participants were recruited from the peer-led groups. Previous 12-months falls incidence was obtained by questionnaire, followed by 12-monthly falls calendars. Fall details were obtained by phone-administered questionnaires. Negative binomial regression was used to examine falls incidence over 24-months and correlation with years of attending SAYGO. Age, sex, number of medications, and total months of follow-up were in the model. Results : Mean age was 77.7 ± 6.6 years. Mean SAYGO was participation 4.3 ± 2.5 years. Falls incidence at 24 and 12-months were highly correlated ($r=.897$, $p<0.001$). Longer years of SAYGO participation predicted lower 24-month falls incidence (IRR 0.91, 95%CI: 0.84 to 0.98, $p=0.02$). Higher number of medications correlated with more falls (IRR 1.29, 95%CI 1.04 to 1.61, $p=0.019$). Out of 158 total falls, 81 (51%) were reported as not injurious. Medical attention following a fall was sought 29 times. Seven fractures were reported and none were femoral. Conclusion : These data suggest sustained participation in SAYGO may reduce falls incidence. Research on community translation of falls prevention exercise programs into peer-led models, using monthly falls calendars, data on injuries, and cost effectiveness, are needed to confirm and extend these findings. Keywords : Falls Community Interventions

PP25 C-054

FALLS AND FRACTURES CLINICS: A PROGRAM COMPARISON BETWEEN AUSTRALIA AND COLOMBIA

Fernando GOMEZ¹, Carmen Lucia CURCIO¹, Pushpa SURIYAARACHCHI², Oddom DEMONTIERO², Gustavo DUQUE² (1. Research Group on Geriatrics and Gerontology, University of Caldas, Colombia; 2. Ageing Bone Research Program, Sydney Medical School Nepean, The University of Sydney, Australia)

Introduction : Falls and fractures are major causes of morbidity and mortality in older people. More importantly, previous falls and/or fractures are the most important predictors of further events. Therefore, secondary prevention programs for falls and fractures are highly needed. However, the question is whether the model should integrate falls prevention alone or in combination with fracture prevention. Method : By comparing a Falls Prevention Clinic in

Manizales (Colombia) vs. a Falls and Fracture Prevention Clinic in Sydney (Australia), our objective was to identify similarities and differences between these two programs and to propose an integrated model of care for secondary prevention of fall and fractures. Results : We performed a comparative study of services using an internationally agreed taxonomy. Service provision was compared against benchmarks set by the National Institute for Health and Clinical Excellence (NICE) and with previous reports in the literature. Comparison included organization, administration, client characteristics and interventions. We report several similarities and an amount of differences that could be easily unified into a single model. Conclusion : Similarities included population, a multi-disciplinary team and a multi-factorial assessment and intervention. Differences were eligibility criteria, a bone health assessment component, and the most common therapeutic interventions. In Australia, bone health assessment is reinforced whereas in Colombia dizziness assessment and management is pivotal. We propose that falls clinic services should be operationally linked to osteoporosis services as a "Falls and Fracture Prevention Clinic", which would facilitate a comprehensive intervention to prevent falls and fractures in older persons. Keywords : Outpatient clinics; falls and fracture services; geriatric health services; secondary prevention.

PP25 C-055

VIRTUAL REALITY COMPUTER SIMULATED HOME VISIT: TEACHING HOME SAFETY

Irene HAMRICK (Family Medicine, University of Wisconsin, USA)

Introduction : To improve home safety instruction for health professionals, students and patients. Most health professional students are required to do home visits but may be limited in their experience by driving distance and differences in home visit environments. Method : Health professional students, resident physicians (combined as learners) and patients ($n=300$) will be recruited to go through the Virtual Reality Computer Simulated Home Visit (VRCSHV) to learn home safety. Participants will take a pre- and post-test to evaluate learning and assess the software. The VRCSHV is a 3D computer interactive home environment, similar to a video game. Participants look for safety hazards and click on objects to 'fix' them. Throughout, the simulation informational boxes explain the hazards (62) and a summary at the end provides feedback on number of fixes. The control group will be family medicine residents going on a home visit, who will have the list of hazards read to them and complete the pre- and post-test. After three months, participants will take another follow up post-test. Statistical analysis will be by Chi-square and t-test. Results : We hypothesize: The VRCSHV will improve Health professionals', learners' and patients' knowledge about home safety. Teaching home safety is more comprehensive with the VRCSHV. Evaluation of home visits will be more uniform and objective with the VRCSHV. The VRCSHV is accepted and well received by learners and patients. Conclusion : The VRCSHV will teach health professionals, learners and patients to identify and correct safety hazards, more comprehensive and fun, and evaluations more uniform. Keywords : home, safety, falls

PP25 C-056

PREDICTIVE VALIDITY AND CUT-OFF SCORES IN FOUR DIAGNOSTIC TESTS FOR FALLS - A STUDY IN FRAIL OLDER PEOPLE AT HOME

Ulrika OLSSON MOLLER, Jimmie KRISTENSSON, Patrik MIDLOV, Charlotte EKDAHL, Ulf JAKOBSSON (Department of Health Sciences, Lund University, Sweden)

Introduction : Today frail older people to a greater extent receive healthcare at home. Various diagnostic tests to identify the risk of falls in older people should be used in different clinical settings. However, no study has investigated the predictive validity and cut-off scores in diagnostic tests for falls used in in-home assessment in frail older people. The objective was to investigate the predictive validity for falls in the Downton Fall Risk Index (DFRI), Timed Up and Go (TUG) and Romberg test (RT) used in this setting. **Method :** Data on the diagnostic tests were collected in in-home assessments at baseline (N=153) and fall frequency and at six- and twelve month follow-ups. The inclusion criteria were: 65 years or older; living in the municipality where the study was conducted; needing help with at least two activities of daily living (ADL); admitted to hospital at least twice or with at least four contacts with outpatient or primary healthcare during the previous 12 months. At baseline (N = 153) 67% were women and the mean age was 81.5 years (SD 6.3, range 66-94 years). **Results :** The optimal cut-offs were 3 p in DFRI with 79% sensitivity and 24% specificity and 12 s with 78% sensitivity and 37% specificity in TUG. The validity indexes were generally low and only 40-50% were correctly classified. The RT showed low sensitivity; 6-22%. **Conclusion :** To increase the predictive validity for falls in this context, the use of DFRI and/or TUG as a part of a comprehensive fall-risk assessment tool, should be investigated in future studies. **Keywords :** falls, frail, predictive validity

PP25 C-057

EFFECT OF A THREE-MONTH THERAPY OF ALFACALCIDOL ON FUNCTIONAL MOBILITY IN INDONESIAN COMMUNITY-DWELLING ELDERLY WOMEN: RANDOMIZED CONTROLLED TRIAL

Siti SETIATI (*Department of Internal Medicine, Faculty of Medicine Universitas Indonesia, Indonesia*)

Introduction : Previous studies reported the D-analog alfalcidol, increases muscle power and balance and lead to a highly significant decreases in the number of fallers and falls in Caucasian elderly community-dwelling population. **Objective** To determine the effect of alfalcidol on functional mobility in Indonesian elderly women community-dwelling population. **Method :** A randomized, double-blind controlled trial was conducted in elderly women subjects geriatric clinic of Cipto Mangunkusumo National Hospital Jakarta Indonesia on April-Agustus 2012. Intervention group was given 0,5 mcg alfalcidol and 500 mg calcium daily for 90 days and another group was given placebo and 500 mg calcium. Balance test, Timed-up and Go Test (TUG) was measured at the beginning and after 3 months. Per protocol analysis to functional mobility after intervention between the two groups was performed. **Results :** Of 122 patients, 95 subjects were fulfilling study criteria and randomized into 2 groups, containing 47 subjects in alfalcidol group and 48 subjects in placebo group. Both groups were comparable in all important prognostic factors including age, BMI, nutritional status, muscle strength. After three months the mean time in alfalcidol group used for the TUG was decrease significantly by 2,32 s ($p < .0001$). There were significant improvement of the mean time for TUG in the group that received alfalcidol compared to placebo (10.65 vs.12.37, $p = 0.025$). **Conclusion :** Treatment with 0.5 mg alfalcidol with calcium effectively improved functional mobility in Indonesian elderly women. **Keywords :** alfalcidol, functional mobility, Indonesian elderly women

PP25 C-058

ENGLISH VERSION OF THE NEWLY-DEVELOPED CGA INITIATIVE "DR. SUPERMAN" FOR ELDERLY

OUTPATIENTS

Toshihiko IWAMOTO (*Geriatric Medicine, Tokyo Medical University, Japan*)

Introduction : The CGA is necessary to improve the QOL in elderly patients. However, CGA with multiple components and with time-consuming consultation can lead difficulty to be performed in primary care. Recently, we developed a concise screening test for CGA, named "Dr. SUPERMAN" to elucidate its usefulness. **Method :** The "Dr. SUPERMAN" is based on mnemonics connecting the first letters of each item. Briefly, the letters "Dr" indicate physical examination; the letter "S" denotes the item of sensation; the letter "U" refers to the item of understanding of speech; the letters "PER" relate to the items of pharmacy and key person; the letter "M" signifies the term "3 M's", which indicates the geriatric syndrome of disturbances of mentality, mobility and micturition; the letter "A" symbolizes the item of ADL; and the letter "N" designates the item of nutrition. It was performed in 110 outpatients with various diseases. **Results :** It took 5-15 minutes. The prevalence of specific geriatric problems in each item showed visual or auditory difficulty in 18-30%, communication difficulty in 13%, poor medication adherence in 25%, cognitive decline in 55%, depressive status in 38%, functional disturbance of the upper and lower extremities in 11% and 79%, respectively, eating and swallowing difficulty in 19%, urination disturbance in 52%, any disability of ADL in 51%, and nutritional problems in 23%. **Conclusion :** It is useful to gain a fuller understanding of the patients complex needs and should serve to improve and maintain the QOL in elderly patients. **Keywords :** Comprehensive Geriatric Assessment, screening test, mnemonics

PP25 C-059

USE NEW TOOL TO ASSESS WALKING IN THE OLD PATIENTS: CLINICAL PROTOCOL

Cecile CRIDELICH¹, Guillaume SACCO², Claire VUAGNOUX³, Laure BOSHER³, Bernard TEBOUL³, Julie PIANO⁴, Jean-Pierre MERLET⁵, Patrick MALLEA⁶, Olivier GUERIN⁷ (1. *Plateforme Partenariale d'Innovation, Universite Nice Sophia-Antipolis, France*; 2. *Hopital de Cimiez, Centre Hospitalier Universitaire de Nice, France*; 3. *Plateforme Patient, Centre Hospitalier Universitaire de Nice, France*; 4. *Centre Memoire de Ressources et de Recherche, Centre Hospitalier Universitaire de Nice, France*; 5. *COPRIN, Institut National de Recherche en Informatique et Automatique, France*; 6. *Centre National de Reference Sante a domicile et Autonomie, Centre National de Reference Sante a domicile et Autonomie, France*; 7. *Plateforme Partenariale d'Innovation, Universite de Nice Sophia-Antipolis, France*)

Introduction : With aging, the ability to walk is modified by the combined effect of physiological and pathological aging. It is therefore important to recognize gait modifications and prevent falls. Currently, tools exist to assess the risk of falling. Some are comprehensive but time-consuming and are generally discarded in favour of other simpler but less sensitive tests. This pilot study was the first step for the development of a simple, sensitive assessment tool. **Method :** In this study, we will use the smart rollator walker developed by INRIA (National Institute for Research in Computer Science and Control), entitled ANG (for Assisted Navigation Guide), to obtain more reliable and accurate measurements of walk parameters. The main objective of this study is to compare a standard evaluation of walking and our technology assessment for people between 65 and 90 years old. Secondary objectives are to evaluate use's tolerance of ANG walker in the elderly and test the feasibility of detecting subtle alterations of the musculoskeletal system, which are not felt by the

patient. Results : Currently, 11 volunteers were included in this protocol and 35 will be finally assessed at the end of inclusion in December 2012. Conclusion : It's not possible to conclude now. The results of this study should be available in March 2013. Keywords : Walking, smart walker, risk of falling

PP25 C-060

EFFECTS OF FALL INJURY TYPE AND DISCHARGE PLACEMENT ON MORTALITY, HOSPITALIZATION, FALLS, AND ADL CHANGES AMONG OLDER PEOPLE IN TAIWAN

Mau-Roung LIN¹, Hei-Fen HWANG² (1. Institute of Injury Prevention and Control, Taipei Medical University, Taiwan; 2. Department of Nursing, National Taipei University of Nursing and Health Sciences, Taiwan)

Introduction : Falls are the most-common cause of injuries and hospital admissions in persons aged 65 years and older, and falls account for 90% of hip fractures, 33% of vertebral fractures, 96% of distal-forearm fractures, and 61% of traumatic brain injuries (TBIs). Method : A longitudinal study was conducted. Results : Compared to patients with a soft-tissue injury, those with TBI had significantly higher risks of dying (rate ratio (RR) = 3.59) and hospital admissions (RR = 3.23) and better improvement in activities of daily living (ADLs) (1.51 points) at 6 months post-injury, and those who sustained a hip fracture (4.26 and 4.41 points), a vertebral fracture (3.81 and 3.83 points), or a distal-forearm fracture (2.80 and 2.80 points) had significantly better improvement in ADLs at 6 and 12 months post-injury. Patients discharged to a nursing home had a significantly increased risk of death (RR = 2.08) and hospital admission (RR = 2.05) than those returning to their usual residence during the first year post-injury. No significant differences in the occurrence of falls during the first post-injury year were found among patients with different injury types or between those with different discharge placements. Conclusion : Among the five major fall injury types in older people, TBIs result in the highest risk of death and hospital admissions, while hip and vertebral fractures exhibited the largest improvement during the first year after injury. Additionally, nursing home care may be associated with increased risks of death and hospital admissions than home care. Keywords : falls; older people; discharge placement;

PP25 C-061

SARCOPENIA PREVALENCE AND ITS ASSOCIATED FACTORS IN AN ELDERLY TAIWANESE METROPOLITAN POPULATION

Cheng-Chieh LIN¹, Tsai-Chung LI², Chiu-Shong LIU³, Chih-Hsueh LIN¹, Chin-Kai CHANG⁴, Nai-Hsin MENG⁵, Wen-Yuan LIN³, Chuan-Wei YANG⁶ (1. Department of Family Medicine & Geriatric Medicine, China Medical University & Hospital, Taiwan; 2. Graduate Institute of Biostatistics, College of Public Health, China Medical University, Taiwan; 3. Department of Family Medicine, China Medical University & Hospital, Taiwan; 4. Department of Rehabilitation & Geriatric Medicine, China Medical University & Hospital, Taiwan; 5. Department of Rehabilitation, China Medical University & Hospital, Taiwan; 6. Ph.D. Program for Aging, College of Medicine, China Medical University, Taiwan)

Introduction : Sarcopenia has been defined as the loss of skeletal muscle mass and strength that occurs with advancing age. The aim of our study was to determine the sarcopenia prevalence using the European Working Group on Sarcopenia in Older People algorithm in a general elderly population in Taiwan. Method : We did a cross-sectional survey of 761 ethnic Taiwanese elders aged 65 years and

over who lived in Taichung City, Taiwan in 2009. Elders with low muscle mass plus presence of either low muscle strength or low physical performance were defined as sarcopenia. Low muscle mass is determined by skeletal muscle mass index, which was measured by dual energy X-ray absorptiometry. Low muscle function was defined as grip strength in the lowest quintile measured by handgrip dynamometer. Low physical performance was based on walking time to 15 feet. Results : The age- and gender-weighted prevalence of sarcopenia was 14.4% (95% CI: 13.0%-15.7%). The sarcopenia prevalence was 6.8%, 14.6% and 41.7% in men aged 65-74, 75-84 years and 85 years and over, and the corresponding prevalence was 8.1%, 21.4% and 26.7% in women, respectively. Older age (odds ratio, OR: 2.43, 95% confidence interval, CI: 1.42-4.15 for 75-84 years old; and 6.26, 2.75-14.25 for >85 years old), no regular exercise (2.62, 1.61-4.26), and fall history (1.72, 1.03-2.90) were associated with an increased prevalence of sarcopenia. Conclusion : Sarcopenia was present in 14.4% of the elderly Taiwanese population aged 65 years and over in a metropolitan area; there were substantial variations by age, regular exercise status, and fall history. Keywords : sarcopenia, prevalence, population-based study

PP25 C-062

INFLAMMATION MODULATES THE ASSOCIATION BETWEEN LOW MUSCLE MASS AND PHYSICAL PERFORMANCE

Chia-Ing LI¹, Nai-Hsin MENG², Cheng-Chieh LIN³, Tsai-Chung LI⁴, Chin-Kai CHANG⁵, Tsang-Mu LEE¹ (1. Department of Medical Research, China Medical University Hospital, Taiwan; 2. Department of Rehabilitation, China Medical University & Hospital, Taiwan; 3. School of Medicine, College of Medicine, China Medical University, Taiwan; 4. Graduate Institute of Biostatistics, College of Public Health, China Medical University, Taiwan; 5. Department of Rehabilitation & Geriatric Medicine, China Medical University & Hospital, Taiwan)

Introduction : Low muscle mass and inflammation may play essential roles in the decline of physical performance though recent studies. This study aimed to explore the effect of inflammation on the association between low muscle mass and physical performance in Taiwanese. Method : A cross-sectional survey of a sample of 844 older adults with complete information of dual energy X-ray absorptiometry examination, physical performance tests and inflammatory markers were included. Low muscle mass was defined as low appendicular skeletal muscle mass. High inflammation level was defined as the highest tertile of inflammatory markers by genders. Physical performance was assessed according to grip strength, time-up and go, walking speed, one-leg balance, test for squat, and flexibility. Results : Older adults with low muscle mass had worse scores than those without low muscle mass in all measurements of physical performance tests. The effects of low muscle mass on time-up and go, grip strength, six-minute walk, and physical performance score were different according to TNF- α levels ($p=0.04$, 0.02 , 0.01 , and <0.01 for interaction of low muscle mass and TNF- α); and the effects of low muscle mass on six minute walk and physical performance score depended upon CRP level ($p=0.01$ and 0.01 for interaction of low muscle mass and CRP). For older persons with high level of inflammation, we observed decreased scores in physical performance tests for older persons with low muscle mass compared with those without low muscle mass. Conclusion : Inflammation potentially play a modulate role with low muscle mass on the physical performance of elders. Keywords : low muscle mass, inflammation, physical performance

PP25 C-063

EFFECTS OF A MODIFIED HOSPITAL ELDER LIFE PROGRAM ON FRAILITY

Cheryl Chia-Hui CHEN (*School of Nursing, National Taiwan University, Taiwan*)

Introduction : Frailty is highly prevalent in older hospitalized patients, but no intervention program has proved to be effective. A Modified Hospital Elder Life Program is successful to reduce geriatric syndromes such as delirium and functional decline, but its effects against frailty has not been tested. **Method :** The effects of a modified HELP intervention targeting three shared risk factors (cognitive, functional, and nutritional status) was evaluated in a pre-and post-intervention pilot trial. The end point at this evaluation was rate and level of frailty upon hospital discharge and 3 months afterward, using Fried's 5 phenotype criteria. Participants were 179 patients enrolled as the control (n = 77) and intervention (n = 102) groups. To evaluate a modified HELP intervention for older patients undergoing elective, major abdominal surgery. **Results :** By hospital discharge, patients in the intervention group experienced significantly less risk for frailty (14.7% vs. 67.5% for controls; adjusted OR = .07; p < .001). These results were independent of patients' education, periampullary diagnosis, duration of surgery, and baseline frailty. At 3 months after discharge, a lower rate of frailty for intervention group than controls (15.2 vs. 30.1%, respectively; p = .03) was found, but results did not reach significant levels after multiple adjustments (adjusted OR = .47; p = .14). **Conclusion :** The modified HELP is effective to reduce frailty by hospital discharge but benefit faded out at 3 months after discharge. This modified HELP provides a constructive solution to manage in-hospital frailty for older patients undergoing major abdominal surgery. **Keywords :** Frailty; Hospital Elder Life Program; Acute Care for the Elderly

PP25 C-064

DO PSYCHOSOCIAL FACTORS MODIFY THE EFFECTS OF FRAILITY ON FUNCTIONAL DECLINE AND MORTALITY?

Emiel O. HOOGENDIJK¹, Hein P.J. VAN HOUT¹, Henriette E. VAN DER HORST¹, Dinnus H.M. FRUITERS¹, Dorly J.H. DEEG², Martijn HUISMAN² (*1. Department of General Practice & Elderly Care Medicine, EMGO Institute for Health and Care Research, VU University Medical Center, Netherlands; 2. Department of Epidemiology & Biostatistics, EMGO Institute for Health and Care Research, VU University Medical Center, Netherlands*)

Introduction : The aim of this study was to investigate whether psychosocial factors modify associations between frailty and adverse outcomes. **Method :** The study sample consisted of 1188 men and women aged 65 and over participating in the two most recent waves of the Longitudinal Aging Study Amsterdam (LASA). Frailty and psychosocial factors were assessed at T1 (2005/2006). The frailty indicator was based on the frailty definition of Strawbridge. Psychosocial factors included mastery, self-efficacy, personal network size and received emotional support. Adverse outcomes included functional decline and mortality assessed at T2 (2008/2009). **Results :** Results of logistic regression analyses demonstrated that frail older adults had higher odds of both functional decline and mortality. Mastery was associated with mortality and self-efficacy was associated with functional decline. No statistically significant interaction effects between frailty and psychosocial factors were found. **Conclusion :** The results of this study showed that frailty and psychosocial factors are associated with functional decline and mortality. However, it seems that psychosocial resources do not buffer against adverse outcomes in frail older adults. **Keywords :** Frailty, Psychosocial factors, Adverse

outcomes

PP25 C-065

THE IDENTIFICATION OF FRAIL OLDER ADULTS IN PRIMARY CARE: COMPARING THE ACCURACY OF 5 SIMPLE INSTRUMENTS

Emiel HOOGENDIJK, Danielle JANSEN, Giel NIJPELS, Hein VAN HOUT (*General Practice and Elderly Care Medicine, VU University Medical Center, Netherlands*)

Background: Many instruments are available to identify frail older adults who may benefit from geriatric interventions. Most of those instruments are time-consuming and difficult to use in primary care. In order to select a valid instrument to identify frail older adults in primary care, five simple instruments were compared. **Method :** Instruments included clinical judgement of the general practitioner, prescription of multiple medications, the Groningen Frailty Indicator (GFI), PRISMA-7, and the self-rated health of the older adult. Fried's frailty criteria and a clinical judgement by a multidisciplinary expert panel were used as reference standards. Data were used from the cross-sectional Dutch Identification of Frail Elderly Study consisting of 102 people aged 65 and over from a primary care practice in Amsterdam. In this study, frail older adults were oversampled. We estimated the accuracy of each instrument by calculating the area under the ROC curve. The agreement between the instruments and the reference standards was determined by kappa. **Results :** Frailty prevalence rates in this sample ranged from 11.6% to 36.4%. The accuracy of the instruments ranged from poor (AUC = 0.64) to good (AUC = 0.85). **Conclusion :** PRISMA-7 was the best of the five instruments with good accuracy. Further research is needed to establish the predictive validity and clinical utility of the simple instruments used in this study. **Keywords :** frailty, screeners, accuracy

PP25 C-066

STANDARD GERIATRIC ASSESSMENT IN A GERIATRIC WARD DEBRECEN, HUNGARY PROF. DR. GYULA BAKO; DR. ADRIENN SZABO, DR. FRANCISKA TIZEDES, DR. ILONA TARKANYI DIVISION OD GERIATRIC MEDICINE, INSTITUTE OF MEDI

Gyula BAKO, Adrienne SZABO, Franciska TIZEDES, Ilona TARKANYI (*Institute of Int. Med., Division of Geriatric Medicine, University of Debrecen, Hungary Medical and Health Science Centre, Hungary*)

Introduction : The population of Hungary is getting older similarly to the world. The majority of them suffers from multimorbidity and need hospitalization. **Method :** We made a geriatric assessment among our randomly selected patients over 65 years. We processed the data of 368 patients (249 female and 119 male) accepted from their home to our ward as acute cases hospitalized between 2009 ? 2011. We used the standard geriatric assessment questionnaires. **Results :** Over the age of 65 almost all of the patients are still able for independent daily living, Elderly patients tend to use less instruments, they could learn fewer new things. Tinetti's balance and gait examination shows that advancing in age the risk of falling increases gradually, the chance of falling reached 100 % at the age of 95+. Fractures happened over the age of 65 was increased gradually and reached 100 % at the age of 95+. The nutritional status showed, that 60-70% of them has a high risk of malnutrition. Nearly 40-50% of the patients suffer from moderate depression. We assessed the degree of dementia. In the age between 75 and 80 ages in 2% we noticed serious, in 5% medium, and in 23% moderate dementia. We also examined 60 elderly patients with multimorbidity to see their effect(s) on quality of life. We found that it

increases the chance of falling, depression and undernutrition. Conclusion : We conclude that, our elder patients are in need of more help, care, solicitude. Furthermore all of these examinations helped us in proper diagnosis, careful treatment. Keywords : geriatric, standard, assessment

PP25 C-067

SARCOPENIA PREVALENCE IN OCTOGENARIANS AND NONAGENARIANS IN A DEVELOPING COUNTRY: ADVANCES, SANTIAGO AGING STUDY (SAS)

Martin MEDRANO, Sergio DIAZ, Carolina MEDRANO, Manuel RAMOS, Lissette OTERO, Juanly RODRIGUEZ (*School of Medicine, Pontificia Universidad Catolica Madre y Maestra, Dominican Rep.*)

Introduction : Sarcopenia is characterized by degenerative loss of skeletal muscle mass and strength associated with aging. A risk factor is frailty syndrome, causing physical disability and mortality in the elderly. Given all this, it is highly important to identify patients in the pre-sarcopenia state in order to develop therapeutic strategies. The Dominican Republic is a developing country and there is no statistical data available of sarcopenia's prevalence in our elderly population. We are reporting data from our Santiago Aging Study (SAS), a longitudinal study of a population-based cohort, wherein we study the profile of aging and its determinants. Method : From SAS's cohort, we analyzed a group of Dominican elders whose ages ranged from 80 years and older. Of 203 participants, 164 qualified for the protocol for sarcopenia evaluation. We based our study on the European Working Group on Sarcopenia in Older People (EWGSOP) criteria, which includes measurement of the muscle mass by bioimpedance, muscle strength by JAMAR's dynamometer, and physical performance by the speed to travel up to 6 meters. Results : 30.5% had sarcopenia. The conceptual stages of sarcopenia was as follows: 12.2% pre-sarcopenia, 28.6% high-grade sarcopenia and 59.2% sarcopenia. Conclusion : In developing countries, sarcopenia prevalence in elders 80 years old or older is high, with rates similar to those of developed countries. Keywords : sarcopenia, developing country

PP25 C-068

FRAILTY, ANTHROPOMETRIC PARAMETER AND DIABETES IN COMMUNITY-DWELLING OLD MALES

Meng-Tzu HOU¹, Pei-Ying WU², Chih-Hsing WU³, Jin-Jon CHEN⁴ (*1. Physical Therapy and Assistive Technology, National Yang-Ming University, Taiwan; 2. Center for Geriatrics and Gerontology, Taichung Veterans General Hospital, Taiwan; 3. Department of Family Medicine, National Cheng Kung University Hospital, Taiwan; 4. Exercise and Health Science Research Center, National Yang-Ming University, Taiwan*)

Introduction : Diabetes mellitus (DM) is a common condition in older persons and has been linked to a lot of healthy problems. Method : The participants are 404 old males (age > 65) living in the rural community. People who are bed-ridden, walking-disability, or poor communication were excluded. All Subject received anthropometric assessment, including measurement of sitting-height, knee-height, arm span, waist circumference, body mass index, and percent body fat. We also collect basic characteristics, such as age, socioeconomic status, and behaviors of lifestyle. We used the modified frailty definition proposed by Fried in 2001. Subjects were reclassified either non-frailty, or pre-frailty or frailty. People has either self-reported DM, or HbA1c? 6.5%, or fasting plasma glucose? 126 mg/dl are defined as DM. Results : The average age is 74.55 ± 6.14 y/o. Of the 404 subjects, 100 (24.8%) subjects are DM. The prevalence of pre-frailty/ frailty in total, NDM and DM group are 41.6%/ 8.7%, 38.6%/ 7.2%, and 50%/ 13%, respectively

($p=0.009$). The prevalence of frailty doubles along with age by every 10-year of age increment. The univariate analysis revealed height, weight, sitting-height, knee-height, arm-span are risk factors and BMI, body fat percentage, habitual drinker, socio-economic status (SES) are negative correlation in NDM. Only age and SES are significant differences in DM group. Multiple-logistic-regression analysis showed that age, HbA1c, and SES are independent risk factors for frailty in total population, but only age is independent factor in DM. Conclusion: The prevalence of frailty is higher in DM than NDM. Frailty is associated with age and DM, but is not associated with anthropometric parameter. Keywords : Anthropometric Parameter, Fasting plasma glucose, Frailty

PP25 C-069

RELATIONSHIP BETWEEN SERUM BRAIN-DERIVED NEUROTROPHIC FACTOR AND PHYSICAL ACTIVITY PATTERNS IN FRAIL ELDERLY WOMEN: A PRELIMINARY STUDY

Miji KIM, Hunkyung KIM, Narumi KOJIMA, Kyoko SAITO, Erika HOSOI (*Research Team for Promoting Independence of the Elderly, Tokyo Metropolitan Institute of Gerontology, Japan*)

Introduction : Physical activity (PA) has been shown to increase circulating brain-derived neurotrophic factor (BDNF) levels in animals. This study investigated the relationship between serum BDNF levels and PA patterns in frail elderly. Method : A cross-sectional analysis was conducted on 109 community-dwelling frail elderly women according to Fried's frailty phenotype (mean age = 80.3 years [SD = 2.7; range = 75-88 years]). Serum BDNF levels were analyzed using the enzyme-linked immunosorbent assay, and Body composition measurements were assessed by dual energy X-ray absorptiometry. Objective PA assessments were obtained over a 1-week period by using a triaxial accelerometer. PA was classified as sedentary time (1.0-1.5 metabolic equivalent units [METs]), light PA (1.6-2.9 METs), moderate PA (3.0-5.9 METs), and vigorous PA (≥ 6 METs); the average time spent on each PA daily was recorded. Results: Univariate correlation analysis showed that serum BDNF levels were associated with percentage of time sedentary ($r = -0.21$, $p = 0.032$), but no significant relationship was observed between serum BDNF levels and light PA ($r = 0.18$, $p = 0.060$) and moderate to vigorous PA ($r = 0.41$, $p = 0.142$). Stepwise multiple regression analysis with serum BDNF levels as the dependent variable and with PA patterns and potential confounding factors as explanatory variables revealed that sedentary time was significantly and independently associated with serum BDNF levels ($\beta = -0.29$, $p = 0.021$). Conclusion: This preliminary study suggests that the proportion of sedentary time is associated with serum BDNF levels, independent of PA, in frail elderly women. Keywords : Brain-derived neurotrophic factor, Physical activity, Frailty

PP25 C-070

NUTRITIONAL SUPPLEMENTATION DURING RESISTANCE TRAINING IMPROVED SKELETAL MUSCLE MASS IN COMMUNITY-DWELLING JAPANESE FRAIL OLDER ADULTS

Minoru YAMADA, Shu NISHIGUCHI, Takanori TANIGAWA, Hiroki KAYAMA, Taiki YUKUTAKE, Tomoki AOYAMA, Hidenori ARAI (*Human Health Sciences, Kyoto University, Japan*)

Introduction : Sarcopenia, the age-related loss of skeletal muscle mass, is highly prevalent in older adults. The aim of this study was to investigate the effects of the combination of resistance training and multinutrients supplementation (including vitamin D and protein) on

muscle mass and physical performance in frail older adults. Method : This trial was conducted in Japanese frail older adults (n=77), which underwent a standardized protocol of a 3-month resistance training intervention. The participants were divided into two groups; exercise + nutritional supplementation group (S/Ex: n = 38) and exercise only group (Ex: n = 39). The outcome measures were the skeletal muscle mass index (SMI) and physical performance. Results : Participants in S/Ex group had significant improvements in SMI and maximum walking time (P<0.05), compared to those in Ex group. The prevalence of sarcopenia decreased from 65.7% to 42.9% in S/Ex group, while that in Ex group remained unchanged (68.6% to 68.6%) (relative risk = 1.60, 95% CI: 1.03-2.49). Conclusion : The results of this study suggest that the combination of resistance training and multinutritional supplementation may be more effective to improve muscle mass and walking speed than resistance training only. Keywords : Sarcopenia, Nutritional supplementation, resistance training

PP25 C-071

FRAILTY SYNDROME AND CARDIOVASCULAR RISK

Larissa Barradas CALADO, Fernanda Pinheiro Amador Dos Santos PESSANHA, Eduardo FERRIOLLI, Julio Cesar MORIGUTI, Nereida Kilza Da Costa LIMA (Clinical Medicine, University of Sao Paulo, Brazil)

Introduction : Older population grows worldwide and geriatric syndromes become more frequent, including frailty syndrome. More recent studies have found relationship between frailty and high blood pressure (BP) and obesity. Method : This was a cross-sectional population study, with the objective to evaluate associations between frailty syndrome and cardiovascular risk factors among older individuals (≥ 65 y) in Ribeirao Preto, Brazil. The sample was randomly by clusters area. This study adopted frailty and pre-frailty criteria according to the definition of Fried et al. and body mass index (BMI), waist circumference (WC) and BP were obtained at home. Results : Were selected 385 volunteers, mean age of 73.9 ± 6.5 years, with prevalence of women. Hypertension was the more prevalent self-reported disease. No difference was observed in systolic or diastolic BP between genders. Men had higher WC, however, 74.3% of women had WC above of the normal level. BMI was 26.6 ± 4.5 Kg/m² for men and 27.7 ± 5.3 Kg/m² for women (p = 0.03). Frail individuals were 9.1% of the sample. WC and BMI was similar in all levels of fragility. There was no difference in systolic and diastolic BP among the 3 groups of frailty. It was observed that there was a strong correlation between BMI and WC in all three levels of frailty, suggesting that WC can be used instead of BMI, when it is difficult to measure height and weight at home. Conclusion : This study found 9.1% of frailty and no association of frailty and higher BMI, WC or BP. Keywords : frailty, cardiovascular risk, older individuals

PP25 C-072

EVALUATION OF FRAILTY, ACCORDING TO THE CRITERIA OF FRIED, IN PATIENTS OVER 75 YEARS IN PRIMARY CARE. COMPARISON OF SUBJECTIVE AND OBJECTIVE SCALES

Flavie GLEIZE, Jadwiga ZMUDKA, Yoann LE FRESNE, Jean-Marie SEROT, Pierre JOUANNY (Geriatrics, CHU Amiens, France)

Introduction : Frailty is a geriatric syndrome, characterizes by a dynamic process of increasing vulnerability favoured by age. Frailty is associated with high risk for falls, disability, hospitalization, and mortality. Our aim was to compare the objective assessment of the frailty to Fried's criteria with subjective assessment perceived by the physician and the patient to identify a screening tool easier. Method :

We performed a descriptive prospective study in patients over 75 years coming consult three general practitioners (GP) during 1 year. Frailty was defined by the presence of three criteria including weight loss, weakness (grip strength), self-reported exhaustion, low physical activity and slow walking speed. Present one or two criteria defined pre-frail patients. GP and patient must evaluate the frailty with a numerical scale ranging from 0 to 10. Results : 64 patients were included: 38 female and 26 male, men age 81.2 ± 5.0 years-old. According to Fried criteria, 10 (15.6%) were frail and 34 (53.1%) were pre-frail. The number of medications, ADL and IADL, CES-D total, energy expenditure, age and grip strength were significantly correlated with frailty. Frailty estimated by GP was correlated with nutritional status, but not with objective frailty. Patient estimated frailty was the most correlated criterion (p = 0.0313). Conclusion : Fried tool is difficult to implement in primary care. Subjective fatigue of the patient seems to constitute an interesting approach for simple screening tool in general practice to allow early treatment and delay progression to dependence. Keywords : frailty, assessment, primary care, elderly, fatigue

PP25 C-074

PREVALENCE OF SARCOPENIA AND ITS RELATION TO BODY COMPOSITION, PHYSIOLOGICAL FUNCTION, AND NUTRITIONAL STATUS IN COMMUNITY-DWELLING FRAIL ELDERLY PEOPLE

Tomohiko KAMO, Yuusuke NISHIDA (Rehabilitation Sciences, Seirei Christopher University, Japan)

Introduction : Patients with sarcopenia experience an impaired state of health with various comorbidities, including mobility disorders, increased risk of falls and fractures, impaired ability to perform activities of daily living, and other disabilities. The prevalence of sarcopenia differs with population, age, and gender. The aim of this study was to assess the prevalence of sarcopenia and its association with functional and nutritional status in community-dwelling frail elderly people. Method : Seventy-two community-dwelling frail elderly individuals (55 women) above the age of 75 years were included in the study. The European Working Group on Sarcopenia in Older People (EWGSOP) criteria were adopted. Accordingly, sarcopenia was diagnosed in cases with documented low muscle mass and either low muscle strength (grip strength) or low physical performance (short physical performance battery [SPPB]). We also assessed the participants' nutritional status (MNA), mental state (MMSE), and daily activities (Barthel Index [BI]). Results : Sarcopenia was diagnosed in 26 participants (36.6%). MNA score in elderly people with sarcopenia was significantly lower than that in those without sarcopenia (19.8 ± 2.9 vs. 24.6 ± 2.4 , p < 0.0001); similarly, BI score in participants with sarcopenia was significantly lower than that in those without sarcopenia (74.8 ± 24.8 vs. 87.8 ± 17.7 , p < 0.05). SPPB score and MMSE score were not significantly different between the participants with sarcopenia and those without sarcopenia. Conclusion : The prevalence of sarcopenia was high in community-dwelling frail elderly people. Sarcopenia was associated with low nutritional status but not with functional status and cognitive status. Keywords : sarcopenia, nutritional status, functional status

PP25 C-075

CHALLENGES AND STRATEGIES TO IMPROVE RECRUITMENT AND RETENTION OF THE FRAIL ELDERLY IN RESEARCH STUDIES: A SYSTEMATIC REVIEW

Veronique PROVENCHER¹, Ben MORTENSON², Marion DAGENAIS³ (1. Rehabilitation Department, Universite Laval,

Canada; 2. Gerontology Research Centre, Simon Fraser University, Canada; 3. School of Rehabilitation, Université de Montréal, Canada)

Introduction : More research is needed to address the complex needs of a growing number of frail older adults. However, recruitment and retention of these individuals in research studies remains a challenge. Our objective was to identify the challenges and strategies to improve recruitment and retention of the frail elderly in research studies. **Method :** A systematic review was conducted. Four databases (MEDLINE, CINAHL, AgeLine and Embase) were searched from 1992 to March 2012. Empirical studies were included if they explored barriers or strategies for recruitment or retention of adults aged 65 and older who were identified as frail, vulnerable or housebound. Two researchers independently determined eligibility of each abstract reviewed, and assessed the methodological quality of the included studies. Data about challenges (type and impact) and strategies used (type and effectiveness) were abstracted. **Results :** Of 805 articles retrieved from the searches, 13 met study inclusion criteria. Most studies reviewed had poor to fair methodological quality. Lack of perceived benefit, distrust of research staff as well as transportation problems were identified as common challenges. The most frequently reported strategy used was to establish partnership with community staff that participants known and trusted. However, few studies measured the impact of specific strategies' on recruitment or retention rates. **Conclusion :** The review highlights the need to develop innovative recruitment and retention strategies that target frail older adults. The use of incentives, proven as an effective means to increase the participation, may improve the generalizability of the research findings for this population. **Keywords :** Frailty, recruitment, systematic review

PP25 C-076 COMMON CAUSES OF HOSPITALIZATION OF OLDER PEOPLE WITH FRAILITY

Wei-Ju LEE¹, Liang-Kung CHEN², Ya-Fang ZENG³, Chiu-Jung YUAN³, Tzuo-Yun LAN³ (1. Division of Geriatrics and Gerontology, Taipei Veterans General Hospital Yuashan Branch National Yang-Ming University, Taiwan; 2. Center for Geriatrics and Gerontology, Taipei Veterans General Hospital, Taiwan; 3. Institute of Hospital and Health Care Administration, National Yang-Ming University, Taiwan)

Introduction : Frailty is defined as an at-risk condition that increases the vulnerability of older people to falls, disability, institutionalization, hospitalization and mortality. However, little was known regarding to the medical utilization of frailty among older adults. **Method :** Data of a random cohort of 1 million people from Taiwan's National Health Insurance in 2005-2006 were obtained for this study. Data of people aged over 65 years were retrieved for this study, and frailty was defined according to the Johns Hopkins Adjusted Clinic Groups (ACG) system. Main diagnoses of frailty-related hospital admissions were categorized by using of the Clinical Classification Software of the Agency for Healthcare Research and Quality. **Results :** Overall, 2,102 old adults (mean age: 79.4±7.4 years, 55.5% female) with frailty were identified by ACG from the dataset. During the study period, 821 subjects (mean age: 80.8±7.1 years, 48.9% women) with 1791 episodes of hospitalizations occurred, and the mean hospital length of stay was 16.7±54.5 days with the mean hospital expenses of 74,484±98,914 NTD. The leading causes of hospitalizations were 'Diseases of the respiratory system' (32%), 'Diseases of the genitourinary system' (12%), and 'Diseases of the circulatory system' (11%). In terms of disease entities, pneumonia, respiratory failure, cerebral infarct and hip fracture all common diagnoses. **Conclusion :** Results of this study showed that older people with frailty were at a higher risk of

hospitalizations with longer hospital length of stay, and pneumonia was the leading cause of hospitalizations. Further investigation is needed to explore the impact of frailty on health care outcomes and medical utilization. **Keywords :** frailty, hospitalization, discharge diagnosis

PP25 C-077 FITNESS AND FRAILITY IN OLD PREVENTIVE HEALTH SERVICE USERS IN TAIWAN

Yaw-Wen CHANG, Tung-Wei KAO, Wen-Hui FANG (Family Medicine and Community Health, Tri-Service General Hospital, National Defense Medical Center, Taiwan)

Introduction : The study aimed to investigate the prevalence and frailty status and the functional fitness performance in old preventive health service users in Taiwan. **Method :** It was a cross-sectional study and people aged 65+ years who visited a medical center in Taipei City from March to August in 2011 for an annual routine check-up were eligible. Frailty status was determined according to the Fried frailty criteria. Functional fitness was assessed with Senior Fitness Tests including chair stand, sit reach, arm curl, back scratch and up-and-go. The fitness score was generated from sum of individual performance which was scored as -1 (below average), 0 (normal range) and +1 (above average) according to the normative data provided by Rikli and Jones. **Results :** A total of 322 eligible elderly adults with a mean age of 74.7±6.3 years were enrolled. The prevalence of prefrailty and frailty was 40.7% and 4% (3.6% in men, 4.3% in women). The mean fitness score in men and women were -0.26±1.98 and 0±1.90. The fitness score is higher in robust group (0.35±1.83) than in prefrail group (-0.46±1.79, p<0.001). **Conclusion :** The prevalence of frailty was relatively low in old preventive health service users. The performance of functional fitness in frail group is significant worse than robust group. Deterioration of fitness in old people might be an early sign of transition between frailty states. **Keywords :** frailty, fitness, preventive health service

PP25 C-078 VITAMIN D STATUS AMONG BELGIAN GERIATRICIANS

Hilde BAEYENS¹, Jean-Pierre BAEYENS², Julien DEKONINCK³, Peter DESMET⁴ (1. Geriatrics, General Hospital, Az Alma, Belgium; 2. Geriatrics, University of Luxembourg, Luxembourg; 3. Geriatrics, University Hospital Ugent, Belgium; 4. Geriatrics, General Hospital, az alma, Belgium)

Introduction : Geriatricians are aware of the low vitamin D status of their patients and their negative impact on quality of life. Too often, they fail to implement this guideline. On behalf of the council of the Belgian Society of Geriatrics and Gerontology (=BVG), we decided to measure the vitamin D status of attending geriatricians of the 34 th Wintermeeting BVGG, Ostend on 24 feb 2011. A second measurement took place in 2012. **Method :** 80 (2011) and 46 (2012) geriatricians participated voluntarily. The results were blinded and pooled. After the meeting the results were individually sent to the participants. **Results :** In 2011, 68,75 % of the participating geriatricians demonstrated vit D level below of 20 ng/ml (= <50 nmol/l). Only 13,75 % of the geriatricians had a vit D level > 30 ng/ml (=75 nmol/l), 30 % of them taking a vit D supplement. In 2012 22% of geriatricians had a vit D level > 30 ng/ml (=75 nmol/l). Only 43 % had a level below 20 ng/ml (= <50 nmol/l). 43 % of geriatricians were taking a vitamin D supplement. **Conclusion :** Vit D level status in 2011 among active geriatricians was unexpectedly low. This shocking results were presented at the Wintermeeting 2011. In 2012, geriatricians take more vit D supplements and their vit D level is

higher, suggesting that they were awakened by their individual vit D level. Since 2011, more vit D has been prescribed to elder person in Belgium, according to the organization of pharmacists. We hope that the sensitisation of Belgium geriatricians led to higher supplementation ratio for the elder people. Keywords : vitD belgian geriatricians

PP25 C-079

VITAMIN D SUPPLEMENTATION IN NURSING HOME RESIDENTS : MISSION IMPOSSIBLE ?

Hilde BAEYENS¹, Jean-Pierre BAEYENS², Julien DEKONINCK³, Peter DESMET⁴ (1. Geriatrics, General Hospital, Az Alma, Belgium; 2. Geriatrics, University of Luxemburg, Belgium; 3. Geriatrics, UZ Gent, Belgium; 4. Geriatrics, Az Alma, Belgium)

Introduction : It is generally accepted that nursing home residents in Northern-Europe have a poor vitD (=vitamin D) status. Emerging evidence reveals that vitD has multiple end-organ receptors. In this way, it influences quality of life. As VitD status can be used as a marker of quality of care, we evaluated the adherence to treatment guidelines for vitD inadequacy in our region. Method : We asked for voluntary participation of CRA (=coordinating GP) of collaborating nursing homes with our regional hospital az alma. Each CRA had to ask the pharmacist the number of nursing home residents who got a supplement of vitD at a given moment. These results were blinded and related to the total number of residents in each nursing home. A supplementation ratio could be calculated. This ratio was calculated three times : the first time on 01/02/2010, the second time on 01/12/2010 and the third time on 1/1/2012. Results : On the first measurement (01/02/2010, N=12 nursing homes, 1183 nursing home residents) the global supplementation ratio was low : 24,3 %. Variation between nursing homes was high : 8,6% and 61,3 % (median 23,50 %). On the second measurement, (01/12/2010, N=11 nursing homes, 1085 nursing home residents) the global supplementation ratio augmented significantly to : 42,8 %. The lowest ratio 21,4% and the highest ratio 70,3 % (median 39,9 %). On 01/09/2012 at the third measurement, 15 nursing homes participated (n=1532 residents). The supplementation ratio rose to 57,6%, with median of 58,1 %. Conclusion : Improving vitD status among nursing home residents is possible, but needs urgent and continued action by CRA and nursing homes. Keywords : Improving vitD status

PP25 C-080

THE MOTOR UNIT NUMBER INDEX (MUNIX) IN SARCOPEMIC PATIENTS

Michael DREY¹, Clara GROSCH¹, Christoph NEUWIRTH², Jurgen BAUER³, Cornel Christian SIEBER¹ (1. Institute for Biomedicine of Aging, University of Erlangen-Nurnberg, Germany; 2. Neuromuscular Diseases Unit / ALS clinic, Cantonal Hospital St.Gallen, Germany; 3. Geriatric Centre Oldenburg, Klinikum Oldenburg, Germany)

Introduction : The cause of sarcopenia is still not fully understood. A multifactorial aetiology is discussed. Neurodegenerative aspects in the genesis of sarcopenia, such as loss of motoneurons, have not yet been explored to a sufficient extent. Method : The Motor Unit Number Index (MUNIX) is a method for assessing the number and size (Motor Unit Size Index - MUSIX) of Motor Units (MUs) using the Compound Muscle Action Potential (CMAP) and the Surface electromyographic Interference Pattern (SIP). This method was used to study the hypothenar muscle in the right hand of 27 sarcopenic patients. Results: The mean MUNIX (111) of all investigated sarcopenic patients lies between the mean MUNIX of healthy persons and the mean MUNIX of ALS patients. 25% of sarcopenic patients exhibit pathologic values

for both MUNIX (<80) and MUSIX (>100µV). A strong correlation (r=0.75, p<0.001) between MUSIX and the reciprocal value of MUNIX was identified. Conclusion : It was demonstrated for the first time by applying the MUNIX technique that loss of motoneurons plays a pathogenic role in the onset of sarcopenia. This was shown in 25% of sarcopenic participants who exhibited pathologic values for both MUNIX and MUSIX. Nerve sprouting seems to be an important mechanism of compensation for loss of motoneurons, reflected by the strong correlation between MUNIX and MUSIX. Use of MUNIX leads to the identification of a distinct subgroup of sarcopenic patients, which might have a major impact on future therapeutic concepts. Keywords : Sarcopenia, Motoneuron, MUNIX

PP25 C-081

THE EFFECTIVENESS OF MAINTAINING A BLADDER DIARY FOR ELDERLY VASCULAR DEMENTIA PATIENTS: A CASE STUDY

Manami KAMIYAMA¹, Mitsuko USHIKUBO¹, Yoko UCHIDA¹, Kazuhisa SARUKI², Midori SHIMIZU³, Yukari TAKAI¹, Misako KOIZUMI⁴ (1. Health Science, Gunma University Graduate School, Japan; 2. Urology, Saruki clinic, Japan; 3. Nursing, Mihara Memorial Hospital, Japan; 4. Nursing, Niigata College of Nursing, Japan)

Introduction : The purpose of this study was to report the clinical potential and relevance of maintaining a bladder diary for elderly vascular dementia patients with urine retention. Method : A short-term urethral catheter was inserted in a 76-year-old vascular dementia patient who was admitted to hospital for pneumonia. The catheter was removed 7 days later, but urine retention was observed. The Mini-Mental State Examination and Functional Independence Measure scores were 0 and 18, respectively. This case study was approved by the hospital's ethics committee and consents from the patients' family members were obtained before the intervention. Results : A bladder diary, which comprises information on urine volume, urinary incontinence volume, and post-void residual volume, was maintained after catheter removal. For accurate urine volume measurement, sensor diapers were used for patients who could not communicate the urge to urinate, and a post-void residual volume of approximately 400 ml was observed. Clean intermittent catheterization (CIC) was also initiated, after which post-void residual volumes were found to be >300 ml. A cystometric examination revealed detrusor underactivity and a bladder capacity of approximately 350 ml. The patient was discharged after post-void residual volume was found to be <100 ml. Conclusion : A bladder diary can provide important information regarding urine retention and micturition that would aid in performing CIC effectively, especially in elderly patients with dementia; therefore, its effectiveness must be studied further. Keywords : bladder diary, post void residual, CIC

PP25 C-082

POSITIVE INFLUENCE OF OVERACTIVE BLADDER THERAPY ON GERIATRIC DEPRESSION

Ece ESIN¹, Ali ERGEN², Mustafa CANKURTARAN¹, Burcu YAVUZ³, Meltem HALIL¹, Zekeriya ULGER¹, Yusuf YESIL¹, Mehmetemin KUYUMCU¹, Eylem CANKURTARAN⁴, Servet ARIOGUL¹ (1. Geriatric Medicine, Hacettepe University Faculty of Medicine Department of Internal Medicine Division of Geriatric Medic, Turkey; 2. Urology, Hacettepe University Faculty of Medicine Department of Urology, Turkey; 3. Geriatric Medicine, Hacettepe University, Turkey; 4. Psychiatry, Ankara Oncology Training and Research Hospital, Psychiatry Clinic, Turkey)

Introduction : Overactive bladder (OAB), a frequent debilitating

condition in older adults, is defined as urgency, with or without urge incontinence, usually with frequency and nocturia. It causes morbidity in older adults including an increase in geriatric syndromes such as falls and depression. The aim of this study is to evaluate the effect of treating OAB on depression in geriatric. Method : 168 patients aged 65 years and over admitted to our Geriatric Medicine outpatient clinic with OAB were followed for 6 months. Overactive bladder was diagnosed according to International Continence Society definition criteria. Exclusion criteria were to be on any anticholinergic medication before enrollment, genitourinary operation, history of frequent urinary tract infection. All patients had negative urine cultures. Patients were evaluated in 5 groups which were the group receiving only Kegel exercises and life style changes, and the groups receiving one of 4 anticholinergic agents (Darifenasin, Oxybutynin, Tolterodine, and Trospium) in addition to exercise and life style modification. Patients were followed-up in a standardized protocol including routine visits at 2nd, 3rd and 6th months. Yesevage Geriatric Depression Scale (short form) was performed at initial evaluation and on follow-up visits. Results : Within 168 patients with OAB 56.1% had depression. When geriatric depression scale scores were compared, there was significant reduction in the post-treatment scores in all groups. Pre-treatment geriatric depression scale score of the total population was 4.44 ± 2.86 , and post-treatment score was 2.20 ± 2.16 ($p < 0.001$). Conclusion : OAB is an important geriatric syndrome which often coexists with depression. Treating OAB can have a positive effect on geriatric depression. Keywords : depression, incontinence, treatment

PP25 C-083

BLADDER SCAN HELPS IN SCREENING THE DIABETIC CYSTOPATHY OF THE FRAIL ELDERLY LIVING IN THE COMMUNITY SUFFERING FROM CHRONIC DIABETIC MELLITUS

Mei Yee Bonnie WONG, Chee Ping WONG, Po Chi Candice LI
(Integrated Elderly Care Services, Christian Family Service Centre, Hong Kong)

Introduction : Diabetes Mellitus (DM) is a common chronic metabolic disease in the elderly population. Long term high blood sugar damages the blood vessels and can cause serious health complications which can lead to blindness, stroke, chronic skin ulcers or even foot amputation. Therefore, routine screenings such as annual eye check up, ECG, Treadmill, blood taking for renal function test and daily foot inspection were strongly recommended to detect the early signs of complications. However, diabetic cystopathy is also a well recognized complication of diabetes mellitus (DM) but always being neglected. Without interventions, urinary incontinence, retention and repeated urinary tract infection may lead to serious psychological and social problems such as depression, embarrassment, low self-esteem and social isolation. Overall it is associated with significant poor quality of life for the elderly. Method : 20 frail elderly patients living in the community with chronic diabetic mellitus over 10 years ($n=20$) were included in this study, others causes such as Parkinsonism, BPH, etc were excluded in this study. Using non-invasive ultrasound equipment: bladder scan to measure the post void residue urine (PVRU) of the participants at least two times and obtain the basic informations of the participants by using simple questionnaires, including gender, age, blood sugar level, urinary symptoms complaints, etc. Results : This study demonstrated that the patients with long standing diabetic mellitus and poorly controlled disease easily prone to have diabetic cystopathy. Conclusion : Bladder scan can help in screening out the diabetic cystopathy for patients living in the community with long standing and poorly controlled diabetic mellitus.

Keywords : diabetic cystopathy, diabetes mellitus, DM, Bladder scan, post void residue urine, PVRU

PP25 C-084

ASSESSMENT OF PRESSURE ULCER - BASED ON NANDA-I

Steve STRUPEIT¹, Gonda BAUERNFEIND², Brigitte NINK-GREBE³
(1. Life Sciences, HAW Hamburg - University of Applied Science, Germany; 2. Nursing, Health Center Hamm, Germany; 3. Wound Healing, DGfW, Germany)

Introduction : In every nursing care setting people are at risk and/or suffering from pressure ulcers. In order to avoid pressure ulcers it is necessary that responsible nurses identify the individual pressure ulcer risk and provide appropriate prevention interventions based on current evidence-based nursing and medicine knowledge. Method : Based on NANDA I-nursing diagnoses relevant diagnoses and influencing and determinant attributes were exposed falling under individual pressure ulcer risk factors. Results : An assessment instrument was developed able to gather relevant risk factors and to support nurses in assessing pressure ulcer risk. A sum score was intentionally not applied. Conclusion : The current assessment instrument provides an individual risk assessment. Items can be used to plan and evaluate interventions. Keywords : Prussure Ulcer, Nursing diagnosis, Risk factors

PP25 C-085

SLEEP QUALITY IS ASSOCIATED WITH METABOLIC SYNDROME IN THE ELDERLY

Hao-Chang HUNG¹, Yi-Ching YANG², Horng-Yih OU¹, Jin-Shang WU², Feng-Hwa LU², Chih-Jen CHANG²
(1. Division of Endocrinology and Metabolism, Department of Internal Medicine, National Cheng Kung University Hospital, Taiwan; 2. Department of Family Medicine, National Cheng Kung University Hospital, Taiwan)

Introduction : The prevalence of metabolic syndrome (MS) increases with age, and aging results in the deterioration of sleep quality. Previous studies found self-reported global sleep quality is significantly related to the MS in adults. However, there is no study on the association between sleep quality and MS in the elderly. The aim of this study is to investigate their relationship in the Chinese elderly. Method : A total of 435 elderly (≥ 60 years) subjects were selected from the decoded database of the Prevention Health Center of National Cheng Kung University Hospital. The diagnosis of MS was according to the statement of the American Heart Association/National Heart, Lung, and Blood Institute. Sleep quality was assessed using the Pittsburgh Sleep Quality Index (PSQI). Results : Of the 435 subjects, 205 (47.1%) had MS. Subjects with MS had a significant higher global PSQI score than those without (7.0 ± 3.6 vs. 6.0 ± 2.5 , $p=0.001$). In the individual domains of PSQI, subjects with MS had higher scores of "subjective sleep quality" ($p=0.006$) and "the use of sleep medication" ($p < 0.001$). The multivariate logistic regression analysis showed significant association between female gender (OR=2.029, 95%CI=1.306~3.152, $p < 0.01$), global PSQI score (OR=1.095, 95%CI=1.026~1.168, $p < 0.01$), snoring (OR=1.916, 95%CI=1.223~3.002, $p < 0.01$) and MS. Of the individual domains of PSQI, "sleep latency" (OR=0.75, 95%CI=0.568~0.991, $p < 0.05$) and "use of sleep medication" (OR=1.751, 95%CI=1.233~2.487, $p < 0.01$) were independently related to MS. Conclusion : Higher sleep quality score is associated with MS in the elderly. In clinical practice, the elder subjects with sleep disturbance may be suggested to screen for MS. Keywords : Metabolic syndrome, Elderly, Sleep quality

PP25 C-086

FACTORS INFLUENCING THE DECISION TO START

CHEMOTHERAPY IN ELDERLY PATIENTS SUFFERING OF LUNG CANCER

Francoise ESCOUROLLE-PELTIER, Wassila KORRIBI-MERIBAI, Zakya FATHI, Yves WOLMARK (*Geriatric, Hospital Bretonneau, France*)

Introduction : The decision to start the chemotherapy is complex in elderly patients presenting cancer because they have comorbidities and cognitive deficiency. This decision should be taken after a global geriatric evaluation. The objective of this study is to determine factors influencing decision to start chemotherapy in elderly patients presenting a lung cancer. **Method :** It is a retrospective study of 50 patients (28 women and 22 men), mean age 89 years +/- 6,4 admitted in a geriatric palliative care unit between 2005 and 2011. We compared patients who underwent chemotherapy (group1) and patients without chemotherapy (group2). **Results :** Group 1 patients were younger, mean age 78,4 years +/-3,4 versus 85, 5 years +/-6,6 (p<0,01). No patient with dementia was present in group1, versus 7 patients in group 2 (p<0,01). No statistical difference appears between groups for comorbidities evaluated by age stratified Charlson index, depression, social support. The multivariate analysis using logistic regression confirmed the statistical effect of age and dementia in decision of chemotherapy. The analysis of the Kaplan Meier survival curve after the diagnostic shows a benefit of chemotherapy : group1 survival 11,7 months versus group 2 6,1 months (Log-Rank p=0,03). The difference of survival is more important in men but independent of age. **Conclusion :** New chemotherapies agents and the development of geriatric evaluation in oncology will probably improve the prognostic of patients suffering of lung cancer. **Keywords :** chemotherapy lung cancer

PP25 C-087 THE TREND OF INCIDENCE OF PROSTATE CANCER IN TAIWAN, 1979-2009

Yin-Ming LI (*Family Medicine, Buddhist Tzu Chi General hospital, Tzu Chi university, Taiwan*)

Introduction : As the aging population rises dramatically, cancer is a major health concern globally. Prostate cancer was historically low risk of development in Asians, but noted on the rise. Our object is to interpret the trend for prostate cancer incidence in Taiwan between 1979 and 2009. **Method :** Age standardized incidence of prostate cancer for the period 1979-2009 were obtained from the Taiwan National Cancer Registry. Joinpoint regression analysis was used to describe time trend of its incidence. **Results :** The average age-standardized incidence rate for prostate cancer was 2.6/100000 in year 1979-1983 and increased to 23.8/100000 in 2005-2009. The average annual percentage change was 8.7 (95% CI 7.9, 9.6) in 1979-2009. Joinpoint analysis of trend incidence of prostate cancer identified one joinpoint (year 1999). The estimated annual percent of change was 10.8% (95% confidence interval [CI 10.0, 11.6] in 1979-1999 and was 4.8% (95% CI 2.7, 6.9) in 1999-2008. The annual percent change and the average annual percentage change between two periods were significant different. More than 3000 prostate cancers were diagnosed yearly since 2006. **Conclusion :** The incidence of prostate cancer has increased by nine- folds in the last decades in Taiwan. The average annual percent change of prostate cancer incidence was about 5% increasing in the past five years. The burden of medical care and life quality of patients should be concerns. Primary prevention of prostate cancer is crucial for aging population. **Keywords :** incidence, prostate cancer, trend

PP25 C-088

CLINICAL AND ECONOMIC BURDEN OF HIP FRACTURE

Claire TAKIZAWA (*Health Economics, Nestle Health Science, Switzerland*)

Introduction : Hip Fracture is associated with a high mortality rate, need for long-term medical care, and prolonged disability. This study aimed to identify the reported burden of hip fracture. **Method :** Epidemiological data were collected from publications and included incidence of hip fractures. Economical data mainly included hospital costs. **Results :** About 1/3 of elderly individuals fall annually and 1% will suffer a hip fracture. The later were estimated to account for 54% of the costs of all osteoporotic fractures and quality of life in the subsequent years after hip fracture was assumed to be 80% of that of a healthy individual. Based on an annual hip fracture incidence of 8.1/10,000 population, there is an estimated 5.5 million hip fractures worldwide in 2009, of which almost 1.8 million occur in East Asia & Pacific (EAP), almost 300,000 occur in North America (NA) and more than 400,000 in the European Union (EU). Hospital costs were estimated at USD11,943/hip fracture, thus leading to a cost of more than USD65.5 billion worldwide, including more than USD21 billion in EAP, more than USD3 billion in NA and almost USD5 billion in the EU. These estimates do not take into account other costs, such as excess primary care and outpatient visits or work days lost by relatives while caring for persons with hip fracture. **Conclusion :** Hip fractures are associated with substantial healthcare consumptions. Specific nutritional interventions have shown clinical benefit and a potential economic benefit among elderly persons recovering from hip fracture. However, more research needs to be undertaken. **Keywords :** Hip fracture, Cost

PP25 C-089 TOTAL HIP ARTHROPLASTY OUTCOMES IN INDEPENDENT ELDERLY PATIENTS (>80) WITH HIP FRACTURE. MINIMUM 5 YEARS FOLLOW UP

Jose Ricardo JAUREGUI¹, Francisco PICCALUGA², Martin BUTTARO³, Daniel GODOY MONZON³, Carlos Guido MUSSO¹, Kenneth ISERSON⁴ (*1. Geriatric Medicine Unit, Hospital Italiano de Buenos Aires, Argentina; 2. Hip Unit, Orthopedic and Traumatology Service, Hospital Italiano de Buenos Aires, Argentina; 3. Orthopedic and Traumatology Service, Hospital Italiano de Buenos Aires, Argentina; 4. Emergency Medicine, Universidad de Arizona, USA*)

Introduction : Treatment for hip fracture in independent old people remains controversial. **Method :** January 2000 to August 2006, 93 patients assisted. Inclusion criteria : +80 years, range 80-95, average 83.2 able to walk for up to 0.5 km normal abbreviated Mini Mental Test Score hip without or minimal arthrosis. Clinicoradiological evaluation conducted at 90 days, 1 year and subsequent years. **Results:** Female/male ratio 65-28 Delay admission/surgery 1.67 days. Mean operative time 72 minutes. Average stay at hospital 14 days. Follow up 5-11 years, average 6.2. Postoperative walking distance ranged 0.5-5,7 km, average 1.7 Mini mental score 27-35, average 31,79 points. No patient died during surgery. 3 patients died during immediate postoperative period. 3 months 1 patient died due to pneumonia, 2 patients had stroke. One year 6 patients died due to causes unrelated to THA, with well working prosthesis. 86 patients evaluated, no modifications detected from initial radiographs, self walking ability report in 70.9 % normal, 23.2 % using a walking aid and 5.9% intradomiciliary activities. None reported pain. Mini mental test decreased to 28 points average, range 25-31. final evaluation 27 died at 5 years. total mortality 29.1%. 8 patients evaluated telephonically with a well functioning prosthesis. 58 evaluated patients, no radiographic changes were detected. No pain reported. Self reported

walking ability 46.5% maintained distance walking ability, 37.9 % using walking aid, 15 % performed intradomiciliary deambulation. Mini mental test decreased to 25 points, range 23-29. Conclusion : Total Hip Replacement is reliable, durable and safe, with years functional recovery to preinjury status. Keywords : hip fracture rehabilitation

PP25 C-090

USE OF PIRIFORMIS PRESERVATION IN POSTERIOR APPROACH AFTER HIP FRACTURE. LOWERING DISLOCATION RATE

Daniel GODOY MONZON¹, Francisco PICCALUGA², Martin BUTTARO², Alberto CID CASTEULANI³, Jose Ricardo JAUREGUI⁴, Carlos MUSSO⁴ (1. *Orthopedic and Traumatology Service, Hospital Italiano de Buenos Aires, Argentina*; 2. *Hip Unit, Orthopedic and Traumatology Service, Hospital Italiano de Buenos Aires, Argentina*; 3. *Orthopedic and Trauma Service, Centro Medico Fitz Roy, Argentina*; 4. *Geriatric Medicine Unit, Hospital Italiano de Buenos Aires, Argentina*)

Introduction : Dislocation is a feared complication following total hip replacement (THR) after fracture. We analyze in this study the effect of piriformis tendon preservation on reducing the dislocation rate. Method : 93 THRs were done using posterior approach and by the surgical team. All patients received the samiliar prosthetic design. After reaching the external rotators, the piriformis muscle wa identified and dissected on its inferior border from the gemellus superior and elevated by a retractor. Further stages were performed in the usual manner. Patients were followed up for a mean of 5 years. Results : 93 THRs were done for 93 patients, 65 females and 28 were males with a mean age of 83.2. Mean operative time 72 minutes. Average stay at hospital 14 days. Follow up 5-11 years, average 6.2. No intraoperative or long-term complications were found while preserving the piriformis. Postoperative hip X-rays showed good positioning of both the femoral and acetabular components. No patient died during surgery or in hospital stay. No cases of dislocation were identified after a mean follow-up of 5 years. Conclusion : Preservation of the piriformis tendon during the postero-lateral approach in THR is a possible surgical technique and reproducible position of components. It follows an anatomical intermuscular plan and permits full exposure of both the proximal femur and the acetabulum. Compared to the literature, preserving the piriformis tendon seems to be superior to repairing it in terms of dislocation of THR. Keywords : hip fracture dislocation

PP25 C-091

PREDICTORS OF EARLY POST-OPERATIVE COMPLICATIONS IN ELDERLY HIP FRACTURE PATIENTS IN SINGAPORE

Rani RAMASON¹, Mei Sian CHONG¹, Joanne KUA¹, Noor Hafizah ISMAIL¹, Wei Chin WONG¹, Natesan SELVAGANAPATHI¹, Ganesan NAIDU² (1. *Geriatric Medicine, Tan Tock Seng Hospital, Singapore*; 2. *Orthopaedic Surgery, Tan Tock Seng Hospital, Singapore*)

Introduction : The objective of the study was to assess if the conventional American Society of Anaesthesiologists (ASA) assessment predicted early post-operative complications in hip fracture elderly patients in Singapore. Method : We prospectively collected data on hip fracture patients admitted to the Orthogeriatric Service (1st September 2009 - 31st August 2010). We excluded those with non-fragility fractures and conservatively managed hip fractures. Data on demographics, co-morbidities, pre-fracture functional status (defined

as assistance required in instrumental and basic activities of daily living before fracture) and early post-operative complications (defined as post-operative complications during in-patient stay) were collected. Results : 358 patients were included. The mean age was 78 years (SD 8.8), of whom 69.9% (n=249) were women. 98% (n=351) were ASA III-IV. The early post-operative complication rate was 32.7% with urinary tract infection (13.1%), delirium (5.6%) and acute retention of urine (5.6%) being the most common. Univariate analyses showed that functional dependence (P<0.05) significantly predicted early post-operative complications. However, Charlson Co-morbidity Index Score and functional dependence were the only significant predictors of early post-operative complications in the multivariate model (P<0.05). Interestingly, ASA score did not significantly predict early post-operative complications. Conclusion : The ASA class once thought to be strongly associated with complications after hip fracture surgery was not a good predictor of early post-operative complications. This initial work warrants further study into a predictive model which encompasses function and co-morbidities potentially through a frailty measure to allow more accurate prediction of post-operative complications for this group of elderly hip fracture patients. Keywords : Hip fracture, post-operative, complications

PP25 C-092

THE ASSOCIATION BETWEEN SPECIFIC TYPES OF HABITUAL EXERCISE AND BONE MINERAL DENSITY AMONG COMMUNITY DWELLING ADULTS IN TAIWAN

Kang Ting TSAI¹, Wan Ting HSIEH¹, Fang Chi WANG¹, Jan Nan WANG² (1. *Geriatrics/Family Medicine, Chi Mei Medical Center, Taiwan*; 2. *Family Medicine, Chi Mei Medical Center, Taiwan*)

Introduction : We aim to explore the association between specific types of common habitual exercise and bone mineral density (BMD). Method : We analyzed data in a group of subjects receiving health exam in a tertiary medical center in Tainan, Taiwan. The participants were relatively well fit and high functioning. Exercise habits were collected through questionnaire, including the types, frequency and duration. Types of exercise were further classified into eight categories, including jogging, walking, climbing, swimming, ball games, biking, gymnastics or others. BMD were assessed by Dual-Energy X-ray absorptiometry (DXA). Results : There were 1024 subjects included in our study, the mean age was 50.34 (20~85) years, and 646 male participants represented 63.1% of the study population. Among the study participants, 597 (58.3%) subjects had a habitual exercise more than once a week, and 571 (55.8%) subjects had their exercise duration more than 30 minutes each time. After adjusting with age, gender, and body mass index, we found a significantly lower risk of osteopenia or osteoporosis in subjects who had habitual exercise more than once a week (Odds ratio (OR): 0.369, 95% confidence interval (CI): 0.148~0.920) and who exercise more than 30 minutes each time (OR: 0.420, 95%CI: 0.180~0.982). Among the eight categories of exercise, subjects with normal BMD preferred higher impact exercise (such as jogging or ball games) and subjects with osteopenia or osteoporosis reported higher rate of walking. Conclusion: Higher frequency, longer duration and specific higher impact common types of exercise were associated with lower risk of osteopenia or osteoporosis. Keywords : exercise, bone mineral density, osteoporosis

PP25 C-093

ARTHRITIS, DEPRESSION, AND FALLS AMONG COMMUNITY DWELLING OLDER ADULTS: EVIDENCE FROM THE HEALTH AND RETIREMENT STUDY

Lien QUACH, Jeffrey A BURR (*Gerontology, University of*

Massachusetts, USA)

Introduction : Little is known about how arthritis and major depression are associated with falls among older persons. The objectives of this study are to investigate the association of different types of arthritis and falls and to determine whether major depression conditions the association between arthritis and fall risk. **Method :** The study used data from the 2008 Health and Retirement Study, a nationally representative sample in the United States (n=7222, mean age 75, 63% female). Falls were measured by self-report (yes/no). Arthritis was measured through self-report as physician-diagnosed. Major depression was measured with the Center for Epidemiologic Studies Depression Scale (CES-D-8) (3 or more). Main effect and interaction logistic regression models were estimated to determine fall risk. **Results :** Descriptive analyses showed 42% of the sample experienced at least one fall in the two years prior to interview. The prevalence of osteoarthritis (OA) was 21.9%; 4.6% had rheumatoid arthritis (RA); 2.3% had both OA and RA, and 7.8% reported other forms of arthritis. More than one-fifth of respondents had major depression. OA increased the odds of falling by 17%, adjusting for age, gender, race, education, height, alcohol use, pain, vision impairment, functional limitation, physical activities, major depression, cognition, psychiatric medications, and health conditions. Major depression increased the odds of falling by 29%. **Conclusion :** OA and major depression were independently associated with falls. No evidence was found for the interaction between type of arthritis and fall risk. The results suggested that fall prevention programs should include attention to managing OA and major depression among older adults. **Keywords :** Arthritis, Depression, and Falls

PP25 C-094

ASSOCIATION BETWEEN BONE DENSITY, ANTHROPOMETRIC MEASUREMENTS AND PHYSICAL PERFORMANCE IN THE COMMUNITY-DWELLING OLDEST OLD IN JAPAN

Michiyo TAKAYAMA¹, Yasumichi ARAI², Yukiko ABE², Yuko OGUMA³, Nobuyoshi HIROSE² (1. Geriatric Medicine, Center for Preventive Medicine, Keio University School of Medicine, Japan; 2. Geriatric Medicine, Keio University School of Medicine, Japan; 3. Sports Medicine Research Center and Graduate School of Health Management, Keio University, Japan)

Introduction : As population of the aged has been expanding rapidly, one of the major concerns is how to maintain the health and function in late life. It is well-known that fracture is main cause for bed-ridden elderly. It is important to prevent fracture not only for individual level but also for social level. The objective of this study was to examine the association of calcaneal osteo-sono index (OSI), anthropometric measurements and physical performance in the community-dwelling oldest old who are at a high risk for physical disability. **Method :** This study is a part of the Tokyo Oldest Old Survey on Total Health, which is a community-based study among the oldest old living in Japan. Two hundred-seventy five individuals (122 men and 153 women) aged 85 years or older were assessed for OSI, anthropometric measurements, and physical performance including grip power (GP), timed up & go (TUG), and chair standing. Cross sectional relationship of OSI with measured parameters was assessed by Spearman's correlation coefficient. **Results :** For both men and women, OSI was significantly correlated with mid-arm circumference (MAC) and calf circumference (CC), (r=0.38 and r=0.39 for men, r=0.25 and r=0.41 for women, MAC and CC, respectively). Also, OSI was significantly correlated with GP and TUG (r=0.24 and r=-0.16 for men, r=0.25 and r=-0.22 for women, GP and TUG, respectively). **Conclusion :** These results

suggest that bone density is associated with musculoskeletal function in the oldest old. **Keywords :** bone density, musculoskeletal function, the oldest old

PP25 C-095

DETERMINATION OF THE EFFECT OF BODY MASS INDEX IN THE ELDERLY WITH OSTEOPOROSIS ON PAIN AND FUNCTIONAL CAPACITY

Betulay KILIC¹, Nalan AKBAYRAK¹, Huseym DORUK² (1. School of Nursing, Gulhane Military Medical Academy, Turkey; 2. Geriatrics, Gulhane Military Medical Academy, Turkey)

Introduction : This study was done as a cross-sectional study to determination of the effect of body mass index in the elderly with osteoporosis on pain and functional capacity. **Method :** The research was carried out in GATA, department of geriatrics polyclinic between December 2010 and May 2011. The sample of the study is consisted of 96 individuals. Patients were divided into four groups as according to body mass index. The data were obtained from Sociodemographic Data Collection Form, Six-minute walking test and Visual Analog Scale (VAS). **Results :** Average age of ninety-six participants, who constituted the sample of the research is 77.38±6.39. 77.1% of participants are women. 15.6% of patients are thin, 24% of patients are ideal weight, 29.2% of patients are fat, 31.3% of patients are obese. 85.4% of the elderly with osteoporosis participants in research declared that they feeled pain. When compared the participants's scores of body mass index and bone mineral density, L2-L4 bone mineral density findings of patients showed meaningful difference to femoral neck, total femoral and t score body mass index (F=2.900 p=0.039), (F=5.948 p=0.001), (F=8.776 p=0.001), (F=6.700 p=0.001). When compared the participants's scores of body mass index and 6-minute walking distance, statistical meaningful difference was found between patient groups and walking distance (F=6.631 p=0.001). **Conclusion :** It was determined that when body mass index in the elderly with osteoporosis reduced, bone mineral density reduced and functional capacity reduced. There was no relationship between pain and body mass index but, exercise reduced pain. **Keywords :** elderly, osteoporosis, functional capacity

PP25 C-096

PHYSICAL PERFORMANCE AND ITS ASSOCIATED FACTORS IN HONG KONG ELDERLY WITH KNEE OSTEOARTHRITIS

Eva SIU (Department of Health, Hong Kong)

Introduction : Physical performances (PP) are commonly affected in elderly with knee osteoarthritis (OA knee). This study aimed to measure PP of elderly with OA knee in Elderly Health Centres (EHCs) of Hong Kong and compare with published data. Factors affecting PP of elderly with OA knee were investigated. **Method :** Subjects with OA knee were recruited by using convenient sampling from three EHCs. PP was measured by Timed Up and Go (TUG) for mobility as well as 30-second Chair Stand (CS) for lower body strength. Data on socio-demographics, medical status, psychological factors and clinical knee assessment were collected. PP was compared with healthy population using t-test. Multiple linear regressions were performed with TUG and CS as the dependent measures. **Results :** 199 subjects (mean age 76 years) were included in the study. When compared with previous normative values, PP of elders was poorer in OA knee population. After adjustment for age and gender, poorer physical performance among OA knee patients were associated with more co-morbidities, swelling of the knee joint, decreased range of knee joint movement, increased perceived pain, increased exertion levels and poor balance.

In contrast, a physically active lifestyle is associated with better physical performance. Conclusion : This study provides evidence on the beneficial effects of physical activity and helps to dispel the myths that physical activity should be avoided among elders suffering from OA knee. Keywords : physical performance, osteoarthritis

PP25 C-097

A CROSS-SECTIONAL STUDY OF BONE DENSITY AND ASSOCIATED FACTORS AMONG MEN

Yin-Ming LI¹, Hui-Ling LAI² (1. Family Medicine, Buddhist Tzu Chi General hospital, Tzu Chi university, Taiwan; 2. Nursing, Buddhist Tzu Chi General Hospital, Tzu Chi University, Taiwan)

Introduction : Osteoporosis in men is substantially underestimated and undertreated worldwide. We aimed to assess the bone mineral density (BMD) and predicting factors of low BMD in community dwelling men. Method : This cross-sectional study was conducted from Jan 2004 to November 2005. The subjects were 519 men from 30 to 79 years old who underwent a checkup at a teaching hospital in eastern Taiwan. Anthropometric and lifestyle factors were investigated using a standard self-reported questionnaire. Bone mineral density of the posterior-anterior lumbar spine (L1- L4) (BMD) was measured by dual energy x-ray absorptiometry. Age groups were stratified. Results : The mean BMD in the 519 subjects was 0.951 g/cm², with no significant difference between age groups. The BMDL was correlated positively with body mass index (BMI) ($r=0.22$, $P<0.001$). Of the 390 men aged 50 or older, 17.4% had an osteoporotic lumbar spine. Their mean age was 59.4 years (SD 6.3), with a mean BMD of 0.758 g/cm², and a mean BMI of 23.1 (SD 3.5). Low body mass was noted as the unique factor associated with osteoporosis in multivariate analysis , after controlling for risk factors such as aging, smoking, alcohol intake and low physical activity. Men with a BMI less than 22.9 (the 25th percentile) were 2.9 times more likely to have osteoporosis than those with a higher BMI. Conclusion : Low bone mass is not uncommon in men in Taiwan. A low body mass index was a risk factor. Further investigation of the bone health of men and the effects of environmental factors is crucial. Keywords : Bone density, Men, Osteoporosis

PP25 C-098

INDOOR LIFE-SPACE MOBILITY CORRELATES WITH OUTDOOR LIFE-SPACE MOBILITY IN ELDERLY INDIVIDUALS WITH DIFFICULTY TO PERFORM OUTDOOR ACTIVITIES

Hiroyuki HASHIDATE¹, Takeshi OHNUMA², Keisuke SAWADA³, Tomoko INOUE³, Satomi SHIMAZAKI³, Miyuki CHIBA³, Norio SASAMOTO⁴ (1. Department of Physical Therapy, School of Health Sciences, Kyorin University, Japan; 2. Department of Physical Therapy, Itabashi Rehabili Home Visit Nursing Station, Japan; 3. Ohkuni Home-Visit Rehabilitation, Sasamotokai Medical Corporation, Japan; 4. Yamanashi Care Academy, Sasamotokai Medical Corporation, Japan)

Introduction : Enhancement of indoor life-space mobility may be important to improve outdoor life-space mobility in older individuals who have difficulty performing outdoor activities. The purpose of this study was to examine relationship between indoor life-space mobility at home and outdoor life-space mobility. Method : The participants were 52 community-dwelling older individuals who utilized home-visit rehabilitation. Indoor life-space mobility was assessed by home-based life-space assessment (Hb-LSA) which was scored by assigning a value to each of 5 indoor life-space levels and then summing the 5 scores. The each indoor life-space level scores were obtained by

multiplying the level number (1=on the bed, 2=inside bedroom, 3=inside house, 4=outside house but inside site of house, 5=outside site of house) by a value for independence (2=independent, 1.5=used equipment, 1=had personal assistance) times a value for frequency of movement. Life-space assessment (LSA) was used to assess outdoor life-space mobility. Results : Hb-LSA and LSA score were 71.5 ± 22.8 points and 32.9 ± 13.4 points, respectively. Single regression analysis showed significant correlations between LSA and Hb-LSA ($r=0.862$), each indoor life-space level score (level 1 ($r=0.346$), 2 ($r=0.449$), 3 ($r=0.514$), 4 ($r=0.762$), and 5 ($r=0.891$)). The multiple regression analysis revealed that explanatory variables for LSA were indoor life-space level score for level 3, 4, and 5. Conclusion : Indoor life-space mobility was correlated with outdoor life-space mobility. Indoor activities outside bedroom were important to facilitate outdoor activities in older individuals who have difficulty performing outdoor activities. Keywords : aged, indoor life-space, outdoor life-space

PP25 C-099

INTERACTIVE VIRTUAL REALITY WII IN GERIATRIC DAY HOSPITAL: A STUDY TO ASSESS ITS FEASIBILITY, ACCEPTABILITY AND EFFICACY

Hon Wai Felix CHAN (Medicine & Geriatrics, TWGHs Fung Yiu King Hospital, Hospital Authority, Hong Kong)

Introduction : Rehabilitation using interactive virtual reality Wii (Wii-IVR) was shown to be feasible in patients with different medical problems, but there was no study looking at its use in Geriatric day hospital (GDH). To test the feasibility, acceptability and efficacy of Wii-IVR in GDH. Method : It was a clinical trial with matched historic-controls. Patients of a GDH were recruited to participate in Wii-IVR by playing "Wii Fit". Participants used Wii controller to perform movements involved in arm-ergometer. Each participant received 8 sessions of Wii-IVR on top of conventional GDH rehabilitations. Feasibility was assessed by the total time receiving Wii-IVR, percentage maximal heart rate reserve (%MHR) and Borg perceived exertion scale (BS) after participating in Wii-IVR. %MHR and BS were compared with that after performing same duration of arm-ergometer. Acceptability was assessed by an interviewer-administered questionnaire. Efficacy was assessed by comparing improvements in Functional Independence Measure (FIM) between participants and matched historic-controls, who received conventional GDH rehabilitations only. Results : 30 patients completed the study. Participants completed a total of 1941 minutes of event-free Wii-IVR. The mean %MHR was $15.9\% \pm 9.9\%$ and the mean BS was 7.9 ± 2.3 . There was no significant difference in %MHR and BS between participating in Wii-IVR and arm ergometer. Most participants found Wii-IVR similar to arm ergometer and would like to continue Wii-IVR if they had Wii at home. Improvements in FIM of participants were significantly more than that of historic-controls. Conclusion : Wii-IVR in GDH was feasible and most participants accepted it. Participants had more improvements in FIM. Keywords : Rehabilitation, Geriatric Day Hospital, Virtual Reality,

PP25 C-100

EFFECTS OF SHOCK WAVE THERAPY ON REHABILITATION OF AGES WITH NON-CALCIFIC TENDINOPATHY OF ROTATOR CUFF

Mao-Hsiung HUANG¹, Tien-Wen CHEN¹, Chia-Hsin CHEN¹, Chia-Ling LEE², Ming-Cheng WENG¹, Shih-Hung CHUANG² (1. Department of Physical Medicine and Rehabilitation, Kaohsiung Medical University Hospital, Taiwan; 2. Department of Physical Medicine and Rehabilitation, Hsiao-Kang Hospital, Kaohsiung Medical University, Taiwan)

Introduction : High incidence of shoulder pain in ages which suffering their activity of daily life, and the most of them were noncalcific tendinopathy. There is evidence supporting the use of extracorporeal shock wave therapy (ESWT) in calcific tendinopathy of the rotator cuff, but the best current evidence does not support its use in non-calcifying tendinopathy. We conducted a randomized placebo-controlled trial to investigate the effects of low energy ESWT on rehabilitation of ages with non-calcifying tendinopathy of subscapular.

Method : 30 patients with non-calcifying supraspinatus tendinopathy (NCST) were randomized to an active or a sham treatment group. Physical, blood, roentgenographic, and musculoskeletal sonography were conducted to verify that patients met the inclusion and exclusion criteria. These examinations were repeated six and twelve weeks after treatments. Effectiveness was determined by comparison of the mean improvement in the Constant and Murley score (CMS) between the treatment and the placebo groups at three months.

Results : All the patients completed the investigation protocol. At the final follow-up, significant improvement in the total CMS score and most of the CMS subscales was observed in the ESWT group when compared to the baseline values. Significantly higher total CMS, and significantly higher scores for CMS pain and ROM were observed in the ESWT group when compared to the controlled.

Conclusion : Patients suffering from NCST may benefit from low energy ESWT. The application protocol of ESWT is likely to play a key-role in a successful rehabilitation. Further study should be warranted on the long-term effects of NCST.

Keywords : Shock wave therapy, noncalcific tendinopathy, rotator cuff

PP25 C-101

EFFECT OF AEROBIC TRAINING AND THE COMBINATION OF RESISTANCE AND AEROBIC EXERCISES IN INFLAMMATORY ACTIVITY IN HYPERTENSIVE OLDER INDIVIDUALS

Leandra Goncalves LIMA, Jose Maria Thiago BONARDI, Paulo Louzada JUNIOR, Julio Cesar MORIGUTI, Eduardo FERRIOLLI, Nereida Kilza Costa LIMA (*Medical Clinic, Faculty of Medicine Ribeirao Preto, Brazil*)

Introduction : Increased inflammatory activity is strongly associated with sarcopenia, weigh loss and susceptibility to infection. The aim of this study was to determine the effect of aerobic training (AT) and resistance aerobic training (RAT) in hypertensive older individuals on serum levels of interleukin 6 (IL-6) and tumor necrosis factor α (TNF- α). **Method :** Forty-four volunteers were randomly divided into 3 groups: Group 1 - TA, Group 2: ART and Group 3: Control. The protocol lasted for 12 weeks and sessions were performed with a frequency of 3 times weekly, with the intensity and duration progressively increased over the course of training. IL6 and TNF α levels were analyzed by ELISA (Kits R & D Systems, Minneapolis, MN, USA) before the intervention (baseline) and after 12 weeks of training. **Statistical Analysis:** ANOVA and Fisher's exact test. **Results :** Mean age was 68.5 ± 5.1 years, with no difference between groups ($p = 0.44$), with a predominance of women (84%) in the 3 groups ($p = 0.32$). There was no difference between groups regarding baseline values of TNF α and IL6. After training, the TNF α remained similar between groups and there was a greater reduction in serum IL6 in G1 (G1: 11 ± 9 pg / mL; G2: 14 ± 9 pg / dL and G3: 22 ± 14 pg / dl , $p = 0.026$, Bonferroni: G1 vs G3 $p = 0.029$). **Conclusion :** Concluding, the TA significantly reduced serum levels of IL6 after 12 weeks of training. Supported by FAPESP and CNPq. **Keywords :** interleukin 6 (IL-6), tumor necrosis factor α (TNF- α), Exercise

PP25 C-102

DEVELOPMENT OF MOBILITY AND QUALITY OF LIFE AFTER DISCHARGE FROM A CLINICAL GERIATRIC SETTING

Steve STRUPEIT¹, Karin WOLF-OSTERMANN², Arne BUSS¹ (*1. Life Sciences, HAW Hamburg - University of Applied Science, Germany; 2. Nursing Science, ASH Berlin, Germany*)

Introduction : The loss of mobility is a major risk factor for disability and/or nursing care dependency and thus also for the admittance to a long-term nursing home (Brunnett, Hasseler, Strupeit, & Deneke, 2009). After discharge from rehabilitation, as a result of illnesses associated with mobility impairment, needs of those affected are different. Some stay at home with or without professional care and some have to be admitted to a nursing home (Gaugler, Duval, Anderson, & Kane, 2007). **Method :** Quality of life was assessed using the WHOQOL-Bref, activities of daily living (ADL) were measured using the Barthel-Index (BI). Independent variables were demographic characteristics as well as cognitive impairment, nutritional status and self-efficacy. Descriptive statistics and generalized linear models were used for statistical analysis. **Results :** Functional status as well as overall quality of life increased from admission to 6 months post-admission but decreased at 12 months follow-up however statistical analyses did not show significant changes. Quality of life significantly increased in psychological domain ($p = .010$). Men showed a better functional status over time ($p = .010$). Higher quality of life-scores were associated with higher MMSE ($p = .031$)- and self-efficacy-scores ($p = .019$) at admission. **Conclusion :** The Findings of this study suggest a need of interventions with the aim of improving mobility and quality of life in the population studied especially after 6 months discharge. Gender differences should be considered in planning and implementing programs. **Keywords :** mobility, quality of life, functional impairment

PP25 C-103

SEDENTARY BEHAVIOUR, STRENGTH AND MUSCULAR QUALITY OF NON-FRAIL AND FRAIL ELDERLY

Jose Ailton Oliveira CARNEIRO¹, Andre Filipe Junqueira Dos SANTOS², Juliana Cristina Lemos De Souza MARCHESI¹, Fernanda Pinheiro Amador Dos Santos PESSANHA², Rutineia Fatima MICHELETTO², Karina PFRIMER², Nereida Kilza Costa LIMA², Julio Cesar MORIGUTI², Eduardo FERRIOLLI² (*1. Department of Internal Medicine, University of Sao Paulo, Brazil; 2. Internal Medicine, University of Sao Paulo, Brazil*)

Introduction : Sedentary behaviour (SB), defined as time spent sitting or lying, has been shown to be a major modifiable risk factor for chronic disease, disablement and frailty. **Objective:** To study sedentary behaviour, strength and muscular quality of non-frail and frail elderly separated by gender. **Method :** Exploratory cross-sectional study. **Participants of the study:** 36 elderly (non-frail 12 women and 7 men and 10 women and 7 men frail) aged over 65 years. Sedentary behaviour (sitting/lying spent time) was evaluated using an activity monitor (ActivPAL). The elderly were considered frail according with the criteria of Fried et al. The appendicular skeletal muscle mass (ASMM) was evaluated using dual-energy X-ray absorptiometry (DXA), handgrip strength (HS) and lower limb strength (LLS) (isometric chair) were measured. The muscle quality (MQ) was calculated dividing the muscle strength of the limb by the muscle mass of the corresponding limb. **Results :** Age and mean BMI of the groups were: non-frail elderly women 72.1 ± 5.6 years and 27.4 ± 5.2 kg/m²; frail elderly women 77.6 ± 5.7 years and 31.1 ± 5.3 kg/m²; non-frail elderly men 72.7 ± 4.8 years and 25.5 ± 5.3 kg/m²; frail elderly men 79.1 ± 6.8 years and 25.0 ± 5.3 kg/m². The frail elderly groups presented

higher sedentary time than the non-frail elderly groups ($p < 0.05$ and $p < 0.001$), respectively. The ASMM presented no significant differences between the groups. The frail elderly groups had worse performance in the HS, LLS and upper and lower limb muscle quality ($p < 0.05$) compared to the non-frail elderly groups. Conclusion : The frail elderly groups presented higher sedentary time and worse muscle strength and quality. Keywords : Elderly, frailty, sedentary behaviour

PP25 C-104

UNDERSTANDING AND IMPROVING PATIENT EXPERIENCE OF GOUT IN PRIMARY CARE

Jane Crompton RICHARDSON, Christian David MALLEEN, Jennifer LIDDLE, Edward RODDY (*Arthritis Research UK Primary Care Centre, Keele University, United Kingdom*)

Introduction : Gout is one of the most common arthritic conditions in primary care. There is a range of helpful treatments, but these are not always used effectively by patients. The reasons for this are not known. Lay understanding of gout can create problems with stigma, shame and identity and sufferers may trivialise the impact of the disease. This can lead to undertreatment, allowing the gout to develop further. Previous research has found that sufferers want more information about the condition and treatment. Method : The aim is to enhance understanding of people's experiences of living with gout, in order to improve treatment and outcomes. A secondary aim is to provide an information resource, through the website HealthTalkOnline, for those with gout, families, friends and health professionals. The study uses qualitative research methods to explore United Kingdom patients' experience of gout, carrying out semi-structured interviews with a diverse sample of 40-50 people. Interviews are video-recorded and transcribed. A thematic analysis is carried out and summaries written for presentation on the website. Results : Results will present oral histories of each person's experience of gout, identifying respondents' own concerns, meanings and priorities. Findings will also be presented on issues including communication with health professionals, information and support needs, treatment decisions and use of complementary approaches. Conclusion : Our research aims to explain and fill the gap between clinical/ physiological knowledge and patient experience, with the aim of improving patient experience. Keywords : gout, patient experience

PP25 C-105

ADDITIVE EFFECT OF ISOFLAVONES WITH AN EXERCISE TRAINING PROGRAM ON INFLAMMATORY CYTOKINES AND BODY COMPOSITION IN OVERWEIGHT OR OBESE POSTMENOPAUSAL WOMEN? A RANDOMIZED CONTROLLED TRIAL

Johann LEBON¹, Stephane CHOQUETTE¹, Eleonor RIESCO¹, Daniel TESSIER², Isabelle J. DIONNE¹ (*1. Centre de Recherche sur le Vieillessement (CSSS-IUGS), University of Sherbrooke, Canada; 2. Faculty of Medicine and Health Sciences, University of Sherbrooke, Canada*)

Introduction : Exercise has been shown to reduce inflammation and body composition. However, when combined with isoflavones (ISO), results are discrepant: 1) aerobic+ISO: significant reduction in TNF- α and 2) resistance training or mixed exercise (Ex)+ISO: no additive effect on CRP and body composition. Nevertheless, mixed Ex+ISO produced significant improvement in body fat and lean mass, both producers of inflammatory markers such as TNF- α and IL-6. To investigate the synergistic effect of isoflavones and a 6-month mixed exercise program on IL-6, TNF- α , and CRP and body composition in overweight or obese postmenopausal women. Method : Thirty-four

postmenopausal women (50 to 70 years) were randomly assigned to Ex+placebo (Ex+PLA=15) or Ex+isoflavones (Ex+ISO=19). At baseline and after 6 months, waist and hip circumference (WC and HC), fat mass (total, %, trunk and leg FM), fat-free mass (total and leg FFM) and muscle mass index (MMI) were assessed. Inflammatory markers (Elisa) were obtained after a 12h overnight fast. Results : WC, %FM and muscle mass (IMM and total FFM) changed significantly in both groups. However, only Ex+ISO showed significant changes in FM or FFM distribution (HC: -2,51 cm, $p=0,019$; leg FM: -1,16kg, $p=0,037$; trunk FM: -0,72kg, $p=0,006$; total FM: -1,70kg, $p < 0,0001$; leg FFM: +0,56kg, $p=0,022$ and total FFM: +0,88kg, $p=0,018$). In accordance, only Ex+ISO showed significant changes in inflammatory biomarkers (CRP: -1,14mg/L, $p=0,029$ and TNF- α : +0,29pg/mL, $p=0,010$). Conclusion : The combination of isoflavones and mixed exercise seems to enhance the beneficial effects of mixed exercise on some inflammatory biomarkers, potentially through beneficial changes in fat and lean mass distribution in postmenopausal women. Keywords: Cytokines, Isoflavones, Exercise

PP25 C-106

EFFECTS OF LOW-LEVEL DIODE LASER IRRADIATION ON EXPRESSIONS OF GENES RELATED TO ALVEOLAR BONE HEALING OF EXTRACTION SOCKETS IN AGED RATS

Joon Bong PARK¹, Kyung Lhi KANG¹, Yumi CHOI² (*1. Department of Periodontology and Institute of Oral Biology, School of Dentistry, Kyung Hee University, Korea; 2. Department of Periodontology, School of Dentistry, Kyung Hee University, Korea*)

Introduction : With the explosive increase of the number of the elderly, the number of patients with senile diseases has also risen. The decreased capacity for wound healing of aged people can cause additional complications and discomforts. The aim of this study is to evaluate the effects of low-level laser therapy (LLLT) with 980-nm diode laser on genes related to osteogenesis during the healing of tooth extraction sockets in young and aged rats. Method : Twelve-week-old young rats ($n=12$) and 80-week-old aged rats ($n=12$) were used in this study. The left and right maxillary first molars of all rats were extracted and only right sockets were irradiated daily for 3, 5, 7 or 14 days with laser after extraction. Specimens acquired were evaluated with real time RT-PCR for quantitative analysis of genes related to osteogenesis, Runx2, collagen type I, osteocalcin(OCN), interleukin(IL)-1 β , IL-4, IL-6, transforming growth factor(TGF)- β , receptor activator of nuclear factor kappa-B ligand (RANKL), osteoprotegerin (OPG), and tumor necrosis factor(TNF)- α . Results : The gene expressions of Runx2, collagen type I, OCN, TGF- β , RANKL, OPG, and IL-4 were increased in LLLT groups compared with those in non-LLLT groups for young and aged rats. The gene expressions of IL-1 β , IL-6, and TNF- α in LLLT groups were decreased compared with those in non-LLLT groups for young and aged rats. Conclusion : LLLT increased the expressions of genes related to bone formation and mineralization and decreased the expressions of genes related to inflammation and bone loss. Therefore, we suggest that LLLT can stimulate the alveolar bone healing in young and aged rats. Keywords : LLLT, diode laser, alveolar bone healing, biostimulation

PP25 C-107

BODY COMPOSITION AND SARCOPENIC STATUS IN LEPROSY SURVIVORS IN COMPARISON WITH GENERAL POPULATION

Won KIM¹, Hee Won PARK², Byung Kwan HWANG¹, Soon Ook BAE¹, Sun Gun CHUNG¹ (*1. Department of Rehabilitation Medicine,*

Seoul National University Hospital, Korea; 2. Department of Rehabilitation, Kangwon National University Hospital, Korea)

Introduction : Sarcopenia is related to metabolic syndromes and poor quality of life. Because of the chronic nature of the disease and relatively poor living environment, leprosy survivors might be in high risk sarcopenia. However, little is known about body compositions or sarcopenia of leprosy survivors. The aim of this study was to evaluate the body composition and sarcopenic conditions of leprosy survivors and compare with those of age, sex, height matched general population. **Method :** 31 leprosy survivors aged 65 years or over were recruited. We measured anthropometric parameters and conducted DEXA scans for body composition analysis. Control subjects were selected from the Fourth Korea National Health and Nutrition Examination Survey (2009) by direct sex matching and propensity score matching on age and height. We compared anthropometric and body composition parameters between leprosy survivors and sex, age, height matched controls. Sarcopenia was defined as modified skeletal muscle index (SMI) being lower than the mean value of sex-specific young normal people (20-39 years-of-age) by more than 2 standard deviations. **Results :** The leprosy survivor group showed statistically significant higher body mass index, body fat mass and body fat percentage than the control group. The modified SMI was significantly lower in the leprosy survivor group (25.78 % vs. 28.96 %). Sarcopenia was more frequently observed in the leprosy survivor group than control group. **Conclusion :** Leprosy survivors showed higher BMI, higher body fat mass, higher body fat percentage and lower SMI than general population. This results suggest that sarcopenia might be more frequent in leprosy survivors than general population. **Keywords :** sarcopenia

PP25 C-108

THE EFFECT OF ACUPUNCTURE ON PAIN AND DEPRESSIVE SYMPTOMS OF ELDERLY PATIENTS

Yolanda Maria GARCIA¹, Miriam Gondim Meira TIBO², Lidiane Midori KUMAGAI³, Bernardo AYRES⁴, Douglas HIRAOKA³, Helga SILVA³, Wu Tu HSING⁵, Wilson JACOB F¹ (1. Geriatrics Division of Clinical Medicine Department, Sao Paulo University Medical School, Brazil; 2. Geriatrics Division of Clinical Medicine Department, University of Sao Paulo Medical School, Brazil; 3. Acupuncture Center, Clinics Hospital - Medical School of Sao Paulo University, Brazil; 4. Acupuncture Center, Clinics Hospital - Medical School of Sao Paulo University, Brazil; 5. Patology, Sao Paulo University Medical School, Brazil)

Introduction : Pain and depressive symptoms are common complaints of elderly patients. Those are preliminary results of an ongoing study to test efficacy and endurance of acupuncture in the elderly, for both problems. **Method :** Out-patients of the Geriatrics Division of Clinics Hospital of Medical School of Sao Paulo University, Brasil were studied. They were invited from a waiting list for treatment of pain with acupuncture. They were evaluated on eight different times: ten weeks before treatment, on first, tenth and 20th week of treatment, and every three months during one year follow-up. Evaluation included numerical rating of pain, in a range from zero to 10 and presence of two depressive symptoms of DSM-IV. Results were evaluated with ANOVA and Chi squared test, with a significance level of 5%. **Results:** 58 patients were included with a mean age of 75,16 (range of 64 to 93). Age did not vary between genders. Mean rates of pain, from first to 8th evaluations were: 7,23 ; 6,60; 3,822; 3,390; 3,875; 5,182; 6,136; 5,810; (p=0,000). Differences were significant between 2nd and 3rd (p=0,000); 2nd and 4th (p=0,000); 2nd and 5th (p=0,000); 2nd and 6th; (p=0,038); 2nd and 7th (p=0,040); 4th and 6th (p=0,007); 4th and

7th (p=0,000); 4th and 8th (p=0,002); depressive symptoms decreased significantly in frequency, returning to initial levels in the last evaluation. **Conclusion :** Results suggest that acupuncture is an efficient and lasting treatment for pain in the elderly, with positive impact on depressive symptoms. **Keywords :** pain, acupuncture, depression

PP25 C-109

FEAR OF FALLING AND QUALITY OF LIFE IN ELDERLY WITH CATARACT

Barbara Gazolla MACEDO¹, Fabio Lopes ROCHA², Leani Souza PEREIRA³, Aldemar Brandao CASTRO⁴ (1. Physiotherapy, IPSEMG, Brazil; 2. Psychiatry, IPSEMG, Brazil; 3. Physiotherapy, UFMG, Brazil; 4. Ophthalmology, IPSEMG, Brazil)

Introduction : Fear of falling is defined as low self-efficacy or self-confidence in one's own balance to avoid falls. It causes limitations in the physical and functional performance, balance and walking impairment, and negative impact on quality of life. Visual deficit is one of the factors that contribute to falls and fear of falling. **Method :** This is a observational and transversal study. 139 elderly patients with cataract were included. Interviews were made by means of the Falls Efficacy Scale International (FES-I Brasil) to evaluate the concern with falling. Vision-related quality of life was assessed through the Visual Function Questionnaire (VFQ). **Results :** Fear of falling was proportional to the functional visual impairment and to the vision-related quality of life (p=0,00 and p=0.003, Kruskal-Wallis). **Conclusion :** Elderly patients with cataract and fear of falling show less self-confidence in their balance to avoid falls and worst functional vision and related-vision quality of life. **Keywords :** fear of falling, vision, quality of life

PP25 C-110

CHRONIC EXERCISE DIFFERENTIALLY IMPACTS PERCEPTUAL OR MOTOR INHIBITION AS A FUNCTION OF AGE: A CROSS-SECTIONAL STUDY

Cedric T. ALBINET¹, Geoffroy BOUCARD¹, Fabienne COLLETTE², Cedric A. BOUQUET¹, Michel AUDIFFREN¹ (1. CerCA, CNRS, University of Poitiers, France; 2. Unite de Neuropsychologie, Universite de Liege, Belgium)

Introduction : The objective of this study was to evaluate the influence of age and regular physical activity (PA) on the performance of cognitive tasks differentially assessing perceptual and motor inhibition. **Method :** Twenty-six young (Y, 20±2 yrs) and 24 older (O, 72±3 yrs) were classified as physically active (A) or sedentary (S), according to measures of past (hours/week and METs-h/week) and present (steps/day and time spent/day in moderate to vigorous PA) PA. They performed the tasks developed by Nassauer and Halperin (2003), which assessed perceptual and motor inhibition. Performance in the inhibition tasks was assessed by Reaction Time (RT in ms) and response accuracy (% of correct responses) as a function of condition (no conflict vs. perceptual or motor conflict). **Results :** Overall, older were slower than young adults, and active people were faster than sedentary people. The results showed that PA impacted perceptual inhibition in the young participants and motor inhibition in the older participants. In the perceptual conflict condition, YA were significantly (p<0.05) faster (485±64 ms) than YS (550±69 ms), although there was no RT difference in the no-conflict condition. In the motor conflict condition, the OA group was significantly (p<0.05) more accurate (95%) than the OS group (91%) and tended to be faster (693±154 ms vs. 734±84 ms; p=0.09). **Conclusion :** The effects of PA on inhibition appear to be moderated by both age and type of

inhibition measured, deserving future research to understand the functionality of this dissociation. Keywords : Physical activity, cognition, aging

PP25 C-111

PSYCHOMETRIC PROPERTIES OF THE CLOCK DRAWING TEST IN IRANIAN OLDER PEOPLE

Masoumeh SADEGHIPOUR ROODSARI¹, Ahmad Ali AKBARI KAMRANI², Mahshid FOROUGHAN³, Farahnaz MOHAMMADI SHAHBOLAGHI⁴, Masoud KARIMLO⁵ (1. PhD Student of Gerontology, University of Social Welfare and Rehabilitation Sciences, Iran; 2. Associate professor, Iranian Research Centre on Aging, University of Social Welfare and Rehabilitation Sciences, Iran; 3. Assistant Professor, Iranian Research Centre on Aging, University of Social Welfare and Rehabilitation Sciences, Iran; 4. Assistant Professor, Nursing Department, University of Social Welfare and Rehabilitation Sciences, Iran; 5. Associate Professor, Department of Biostatistics, University of Social Welfare and Rehabilitation Sciences, Iran)

Introduction : Clock Drawing Test (CDT) is a simple inexpensive cognitive screening tool which can be used in primary care settings delivering health services to the elderly. The aim of this study was to assess psychometric properties of the CDT in Iranian elderly population. Method : In this cross sectional study the CDT and Mini Mental State Examination (MMSE) were concurrently performed on 74 literate participants aged 60 and over. Participants were recruited from the clients of Iran Alzheimer's Association (30 demented patients and 44 non-demented clients, including other patients or care givers). The CDT was performed by two trained raters using Shulman's six points scoring method. Using SPSS version 20, reliability was assessed measuring kappa statistics as well as intra class correlation coefficient. Concurrent validity between CDT and MMSE were statistically analyzed by spearman's rank correlation coefficient. Sensitivity and specificity were also calculated. Results : Mean age of the participants was 72 years with a range of 60 to 90 and 37 (50%) of them were male. Spearman's rank correlation coefficient for MMSE and CDT scores was 0.782, statistically significant at $p < 0.001$. Kappa statistics for two raters CDT scores were 0.768 ($p < 0.001$). Intra class correlation coefficient was 0.964 ($p < 0.001$). The best cutoff point for this scoring method was 3 of 0-5 scores with best sensitivity (90%) and specificity (73%). Conclusion : : CDT is a valid and reliable test that can be used as a cognitive tool in Iranian population. Further studies are required for using the CDT in illiterate people to detect cognitive impairment. Keywords : Clock Drawing Test- MMSE - validity - reliability

PP25 C-112

FEASIBILITY OF THE CLEVELAND SCALE FOR ACTIVITIES OF DAILY LIVING IN ELDERLY JAPANESE INDIVIDUALS WITH COGNITIVE IMPAIRMENTS

Risa TAKAYAMA¹, Tomoko KAMIMURA² (1. Occupational Therapy, Shinshu University, Azumi-sougo Hospital, Japan; 2. School of Health Sciences, Shinshu University, Japan)

Introduction : With regard to inpatient rehabilitation programs for elderly patients with cognitive impairments, it is essential to obtain data about ADL performance before their hospitalization. CSADL is a standardized ADL scale for elderly patients with cognitive impairments, and it is rated by the caregivers of these patients. This study aimed to investigate the feasibility of using such a standardized scale in Japanese population. Method : The family caregivers of elderly inpatients with cognitive impairments rated their patients in

terms of their ADL performance before hospitalization using CSADL. After the scale was administered, the family caregivers were asked if they had any difficulties in answering them. The patients were also undergoing occupational therapy; therefore, the ratings were shared with occupational therapists (OTs) in charge of the patients, following which the OTs were questioned whether these ratings gave them any additional information and if they incorporated any changes in their patients' rehabilitation programs on the basis of these ratings. Results : A total of 8 family caregivers rated their patients (mean age 82.3 years [SD 2.3]) on the CSADL, and none of them faced any difficulties. All the OTs answered they could obtain additional information on their patients, including telephone, medications, shopping, hobbies, and social behavior. Two OTs answered they also changed their patients' rehabilitation program. Conclusion : This study suggests standardized ADL scales provide OTs with more comprehensive information about their patients' ADL, which can help them in improving inpatient rehabilitation programs. Furthermore, this study also demonstrates the feasibility of the CSADL in elderly Japanese population. Keywords : cognitive impairments, ADL, rehabilitation

PP25 C-113

APOLIPOPROTEIN E AND PHYSICAL FUNCTION AMONG OLDER PEOPLE WITH MILD COGNITIVE IMPAIRMENT

Takehiko DOI¹, Hiroyuki SHIMADA¹, Hyuma MAKIZAKO¹, Hyuntae PARK², Kota TSUTSUMIMOTO¹, Kazuki UEMURA¹, Daisuke YOSHIDA¹, Sangyoon LEE², Yuya ANAN¹, Tadashi ITO¹, Takao SUZUKI³ (1. Section for Health Promotion, National Center for Geriatrics and Gerontology, Japan; 2. Section for Physical Functioning Activation, National Center for Geriatrics and Gerontology, Japan; 3. Research Institute, National Center for Geriatrics and Gerontology, Japan)

Introduction : Mild cognitive impairment (MCI) is conceptualized as a prodromal of Alzheimer's disease (AD). Declined physical function was one of the risk factors for progression to AD, while genetic factor, especially apolipoprotein Eε4 allele (APOE4), was also risk of AD and a major confounder among MCI. However, the association between APOE4 and physical function among MCI was still unclear. To elucidate the association, we conducted the study to compare physical function between APOE4 carrier and non-carrier in MCI. Method : The study included 386 MCI subjects (mean age: 71.6 years) and was classified APOE4 carrier and APOE4 non-carrier groups. Subjects characteristics were measured in interview. Grip strength, five chair stands test, walking speed and six minutes walking test were measured as a physical function. Results : The prevalence of APOE4 carrier was 20.2% among older adults with MCI. In univariate analysis, walking speed was decreased in APOE4 carrier subjects compared to non-carrier ($p < 0.05$) and other measures of physical function were not significant different between groups. The differences of walking speed between groups remained after adjusted for covariates in multivariate analysis ($p < 0.05$). Conclusion : Our study revealed that APOE4 associated with physical function, particularly walking speed. This result suggested that measures related to walking speed among MCI would potentially have confounder of APOE4 among MCI subjects. Further studies were required to clarify relationship between physical function and genetic factor among MCI. Keywords : mild cognitive impairment, physical function, Apolipoprotein E

PP25 C-114

APOEε4 ALLELE FREQUENCY IN VARIOUS KINDS OF COGNITIVE IMPAIRMENTS IN 997 CASES

Yongxing MA, Yue ZHU, Qingwei RUAN, Peifang LU, Zhansun WANG (Department of Aging, Antiaging and Cognitive Function,

Shanghai Institute of Gerontology and Geriatrics, Affiliated Huadong Hospital, Shanghai Medical College, Fudan University, China)

Introduction : To observe the APOE genotypes in AAMI, MCI, AD and VD in large series. **Method :** AAMI [The diagnosis of AAMI met the generally used criteria (AAMI: Textbook of Geriatric neuropsychiatry. 1994, P145-158)]421 cases and 398 controls; MCI [(The diagnosis of MCI met the generally used criteria (MCI: JAGS 2000, 48:1601-1606)]307 cases and 675 controls; AD 205 cases and 200 controls, VD 60 cases and 248 controls. The clinical diagnosis of probable AD and VD were similar to the DSM-IV and NINCDS-ADRDA. APOE gene was amplified by PCR and the PCR product was digested with 5 units of Cfo I and was separated by a 20% polyacrylamide non-denaturing gel. **Results :** (1) AAMI: No significant difference between the allele frequency of APOEε4 in AAMI (6.89%, 58/842) and control group (7.04%, 56/796). (2) MCI : ①APOEε4 in MCI 9.12% (56/614), control group 6.44% (87/1350) ($X^2=4.48, P<0.05$); ②APOEε2: MCI 7.33% (45/614), control group 5.26% (71/1350) ($X^2=3.25, P>0.05$); ③APOEε3: MCI 83.55% (513/614), control group 88.30% (1192/1350) ($X^2=8.30, P<0.01$) ④APOEε4、APOEε2、APOEε3 allele frequency: $X^2=8.31, P<0.05$. (3) AD: APOEε4 allele frequency of AD and controls were 21.0% (86/410) and 7.75% (31/400), The allele frequency of APOEε2, 3 and 4 in the AD group was 6.8%, 72.2% and 21.0% respectively and 6.3%, 86.0% and 7.7% in controls, $X^2=29.5, P<0.001$. (4) APOEε4 allele frequency of VD 15.0% (18/120) and 7.5% (37/492) in controls, $P<0.05$. **Conclusion :** APOEε4 allele frequency of MCI, AD and VD were significantly higher than that of controls, but no significant difference between the allele frequency of APOEε4 in AAMI and control group were found. It is suggested that APOE genotype determination should be used clinically for diagnosis. **Keywords :** AAMI MCI Dementia APOE

PP25 C-115
COMPARISON OF THE SLUMS, CMMSE AND MOCA-B IN DETECTION OF COGNITIVE IMPAIRMENT IN CHINESE ELDERLY FROM GERIATRIC DEPARTMENT

Li CAO (Center of Gerontology and Geriatrics, West China hospital, Sichuan University, China)

Introduction : The Saint Louis University mental status examination (SLUMS) is rarely studied in Chinese. The aim of the study is to compare consistency of the SLUMS with the Chinese version of mini mental status examination (CMMSE) and the Beijing version of Montreal Cognitive Assessment (MoCA-B) in Chinese elderly. **Method :** 278 Chinese elderly from the geriatric department of a general hospital were screened for cognitive impairment, including dementia and mild cognitive impairment (MCI), using SLUMS, CMMSE and MoCA-B. The modified education level cutoffs in diagnostic criteria of SLUMS (mSLUMS) were also used. Values and judgment to the cognitive status from the scales were compared using spearman and kappa statistics respectively. **Results :** Spearman correlation coefficient between values of the scales were 0.747 (SLUMS vs CMMSE, $p<0.001$), 0.839 (SLUMS vs MoCA-B, $p<0.001$) and 0.773 (CMMSE vs MoCA-B, $p<0.001$). For judgment of dementia, kappa values were 0.462 (SLUMS vs CMMSE, $p<0.000$) and 0.484 (mSLUMS vs CMMSE, $p<0.000$). For MCI, kappa values were 0.123 (SLUMS vs CMMSE plus MoCA-B in parallel, $p=0.089$) and 0.148 (mSLUMS vs CMMSE plus MoCA-B in parallel, $p=0.031$), for total impaired cognitive status, kappa values were 0.562 (SLUMS

vs MoCA-B, $p<0.000$) and 0.650 (SLUMS vs MoCA-B, $p<0.000$). **Conclusion :** Findings from our study indicate that the scores of SLUMS are fairly consistent with MoCA-B and CMMSE in Chinese elderly. Discrepancies of classifications for cognitive status by SLUMS and the other 2 scales implies that further work is needed to explore optimal cutoffs of SLUMS for screening mild cognitive impairment and dementia in elderly Chinese. **Keywords :** SLUMS, cognitive impairment, Chinese

PP25 C-116
THE UTILIZATION OF AMBULATORY CARE BEFORE DIAGNOSIS OF ALZHEIMER'S DISEASE IN TAIWAN

Chia-Ming LI (Family Medicine, National Taiwan University Hospital, Bei-Hu Branch, Taiwan)

Introduction : To assess if ambulatory care utilization within three years before diagnosis of Alzheimer's disease patients is significantly different to non-Alzheimer's patients. **Method :** The data were drawn from 2005 National Health Insurance Research Database (NHIRD, 2005) from 1996 to 2007. A case-control design was employed. 845 patients treated with Alzheimer's disease medicine (cholinesterase inhibitor and NMDA receptor antagonist) were case group. The other 1,677 patients who randomly matched with age, sex, and Charlson index were control group. Ambulatory care utilization of case group within three consecutive years before diagnosis was explored and compared to that of the control group. **Results :** Alzheimer's disease patients significantly used more ambulatory care (neurology and psychiatry clinics, diagnosis fee, drug fee, treatment fee) than control group within the first year before diagnosis. Especially, drug fees within three consecutive years before diagnosis were all higher than the fees of control group significantly. **Conclusion :** Alzheimer's disease patients significantly use more ambulatory care than non-Alzheimer's patients before diagnosis. **Keywords :** Alzheimer's disease, ambulatory care utilization,

PP25 C-117
CLINICAL AND ECONOMIC BURDEN OF ALZHEIMER'S DISEASE IN THE USA

Claire TAKIZAWA (Health Economics, Nestle Health Science, Switzerland)

Introduction : Alzheimer is associated with high healthcare consumptions, both from direct and indirect cost perspective. This study aimed to identify the reported economic burden of Alzheimer disease (AD) in the USA. **Method :** Economic data were collected from publications and included both direct and indirect costs. **Results :** AD is the most common dementia, accounting for 50% to 70% of cases. Average per person Medicare costs for those with Alzheimer's and other dementias are three times higher than for those without these conditions (USD13,207 versus USD4,454 per beneficiary). Beneficiaries with Alzheimer's and other dementias had 3.4 times more hospital stays; their costs for hospital care were 3.2 times higher than the average for other Medicare beneficiaries (USD7,704 versus USD2,204). They also visited a physician 1.3 times more often than other Medicare beneficiaries. In 2011, 15.2 million family and friends provided 17.4 billion hours of unpaid care to those with Alzheimer's and other dementias care valued at USD210.5 billion. Due to the physical and emotional toll of caregiving on their own health, Alzheimer's and dementia caregivers had USD 8.7 billion in additional health care costs in 2011. In 2012, the direct costs of caring for those with Alzheimer's to American society will total an estimated USD200 billion, including USD140 billion in costs to Medicare and Medicaid. **Conclusion :** Alzheimer results in significant economic burden. Unless

something is done, the costs of Alzheimer's in 2050 are estimated to total \$1.1 trillion (today's dollars). Costs to Medicare and Medicaid will increase nearly 500%. Keywords : Alzheimer, Costs

PP25 C-118

TIME COURSE ANALYSIS OF VERBAL FLUENCY PROCESSING IN MILD AD PATIENTS: STORAGE LOSS, OR RETRIEVAL SLOWING?

Claudia RODRIGUEZ-ARANDA¹, Ann-Helen HOLMEN¹, Guro Strand THORBJORNSSEN¹, Stein Harald JOHNSEN², Knut WATERLOO³ (1. Dept. of Psychology, University of Tromsø, Norway; 2. Dept. of Neurology, University Hospital North, Norway; 3. Dept. of Psychology and Dept. of Neurology, University of Tromsø and University Hospital North, Norway)

Introduction : Reduced word production on verbal fluency tasks (VFT) is an important clinical feature in early Alzheimer's disease (AD). This reduction could be due to a storage loss deficit or to a retrieval slowing deficit. The present study uses a detailed time course analysis to understand changes in word production in early AD. Method : Participants were 24 healthy elderly and 18 mild AD patients. The phonemic and semantic VFTs were employed. Spectrographic analyses were performed on the sound waves of the recorded data. Measurements included inter-response latencies, correct answers, errors and perseverations. Parameters were quantified by 10-second periods and analyzed with two-way mixed ANOVAs. Results : Correct words were generated at a similar rate than controls in phonemic but not in semantic VFT. Errors did not differ between groups. In contrast, significant interactions were obtained on perseverations, which were mainly produced during the last 30 sec in patients. A significant interaction on semantic latencies was found showing that patients produced words at the same rate during the entire task while controls have shorter latencies at the beginning and enlarged latencies at the end. Latencies on phonemic VFT were shorter at the initial part and enlarged in the last 30 sec. However, patients showed longer phonemic latencies compared to controls. Conclusion : Patients display considerably larger latencies than controls all along testing. Also, they commit significantly more perseverations after the first 20-30 seconds. These data indicate that reduced VFT performance in early AD is related to a retrieval slowing deficit and a disorganized retrieval of information. Keywords : Verbal fluency, neuropsychology, Alzheimer's disease

PP25 C-119

THE SANDWICH GENERATION AND CARING FOR AGING ALZHEIMER PARENTS: A GENERATION STORY ?-THE FRENCH ALZHEIMER ALERT STUDY-

Dominique HUVENT-GRELLE, Claire PAGNIEZ, Isabelle DELABRIERE, Juliette PODVIN, Eric BOULANGER, Francois PUISIEUX (Geriatric, CHRU LILLE, France)

Introduction : There are only a few drugs for the treatment of Alzheimer's disease (AD) which temporarily reduce the symptoms. The people who interact most with AD patients are their primary caregivers. There is a need to look after the patients and their caregivers as well. Method : - The current study examines the socio-demographic characteristics and the quality of life of the sandwich generation, defined as providing care to both grandchildren and old demented parents. - Multicentric, prospective study over one year (2011). - Setting : Eleven dementia and geriatric clinics across the north of France. - Participants: Family caregivers (99). Results : 79 % of our caregivers are women. They are "boomers" in their late fifties with parents in their mid-eighties and grandchildren aged 7 on

average. 74 % of them take medications. 57 % of them feel stressed. The AD patient is most frequently the caregiver's mother, or mother-in-law, (69 %). Care givers have three grand-children (ranging from 1 to 9) on average. 38 percent of our respondents have a full-time job to which must be added many hours to take care of their parents and grand-children at home. Most helpers report that they like to help their parents but they nevertheless prefer to look after their grandchildren. Conclusion : Women-in-the-middle as helpers and caregivers for the elderly have to face care demands from three generations. We wonder whether the phenomenon doesn't reflect a larger social problem. Future research should focus on the specific conditions under which Women-in-the middle may experience stress and role overload. Keywords : sandwich generation, Alzheimer disease, care giver, grand parent, grand children, quality of life

PP25 C-120

RELATION BETWEEN CHOLINESTERASE INHIBITORS AND PISA SYNDROME IN A COHORT OF TEN FRENCH ELDERLY ALZHEIMER PATIENTS

Dominique HUVENT-GRELLE, Claire PAGNIEZ, Isabelle DELABRIERE, Juliette PODVIN, Eric BOULANGER, Francois PUISIEUX (Geriatric, CHRU Lille, France)

Introduction : The Pisa syndrome (or pleurothotonus) is an acquired, persistent truncal dystonia which appears to be potentially reversible. It is characterized by an involuntary side flexion (on the right hand side or on the left) of the body and head and associated with a backward axial rotation, so that the person seems to be leaning like the leaning tower of Pisa. Patients are not aware of the dystonia. This syndrome had been attributed first to a rare side effect of long term classic neuroleptics medications. Method : Objectives: We describe ten cases of Pisa syndrome with Cholinesterase inhibitors (CI) use. Then we analyse the differences and the similarities between our findings and others, found in various articles (11 cases describes in the literature). Design: Descriptive Setting: 3 hospitals in the North of France Participants: 10 patients with probable Alzheimer's disease Measurements: Description without statistical analysis of 10 cases of French Pisa syndrome patients on CI observed by clinicians who treat Alzheimer's patients. Results : 4 patients were prescribed Donepezil, 2 patients received Galantamine and 4 were given Rivastigmine. The Pisa syndrome is attributed to a very rare side effect of CI medication. This persistent truncal dystonia appears to be potentially reversible with CI discontinuation as reported in the literature. Conclusion : The relation between CI treatment and Pisa syndrome may be considered as likely because dystonia stopped with CI discontinuation in most cases which suggests that CI alone can induce reversible Pisa syndrome in Alzheimer's disease patients. Keywords : Pisa syndrome, Alzheimer's disease, Cholinesterase inhibitor, France

PP25 C-121

CHARACTERIZATION OF DEMENTIA ASSOCIATED WITH DIABETES

Haruo HANYU, Tomohiko SATO, Kazumasa KUME, Soichiro SHIMIZU, Hidekazu KANETAKA, Hirofumi SAKURAI, Toshihiko IWAMOTO (Geriatric Medicine, Tokyo Medical University, Japan)

Introduction : Several diseases that cause brain damage, such as cerebrovascular disease (CVD), Alzheimer disease (AD), and diabetes mellitus (DM)-related neuronal injury, are associated with dementia in subjects with type 2 DM. Since clinical features might differ depending on the predominant brain pathology, we attempted to define possible subgroups of AD associated with DM based on brain imaging. Method : We classified 154 patients with probable or

possible AD and type 2 DM into 4 subgroups on the basis of the presence or absence of CVD on magnetic resonance imaging (CVD or no CVD) and posterior cerebral hypoperfusion on single photon emission computed tomography (AD pattern or no AD pattern). The clinical characteristics of the subgroup with no CVD and no AD pattern were compared with those of the other subgroups. Results : The subgroup showing neither CVD nor AD pattern accounted for 28% of patients. This type of dementia was characterized by old age, high hemoglobin A1c level, long duration of diabetes, high frequency of insulin therapy, low frequency of apolipoprotein E4 carriers, less severe medial temporal lobe atrophy, more impaired attention, less impaired word recall, and slow progression of cognitive impairment. These features were clearly different from the characteristics of the subgroup showing AD patterns. Conclusion : Among subjects with AD and type 2 DM, there may be a dementia subgroup with characteristics predominantly associated with DM-related metabolic abnormalities. Characterization of dementia associated with DM (diabetic dementia) may affect diagnostic and therapeutic strategies. Keywords : Dementia, Diabetes mellitus, Brain imaging

PP25 C-122

DIFFERENCES IN HIPPOCAMPAL AND PARAHIPPOCAMPAL ATROPHY BETWEEN ALZHEIMER'S DISEASE PATIENTS WITH SHORT-DURATION VERSUS LONG-DURATION DIABETES MELLITUS

Hidekazu KANETAKA, Hanyu HARUO, Hirofumi SAKURAI, Tomohiko SATO, Souichirou SHIMIZU, Kazumasa KUME, Kentarou HIRAO, Toshihiko IWAMOTO (Department of Geriatric Medicine, Tokyo Medical University, Japan)

Introduction : Some previous studies showed that type 2 diabetes mellitus (DM) increases the risk of Alzheimer's disease (AD), although it has apparently not yet been demonstrated that DM increases hippocampal atrophy in patients with AD. We investigated the association between DM duration and gray matter volume of the hippocampus and parahippocampus by magnetic resonance imaging (MRI). Method : The subjects consisted of 62 patients with AD comorbid with DM. They were classified into two groups, the long-duration group (over 10 years with DM; n=33) and the short-duration group (under 10 years with DM; n=29). The hippocampal and parahippocampal cortex Z-score for each patient was calculated using voxel-based morphometry software (VSRAD, Voxel-based Specific Regional Analysis System for Alzheimer's Disease) with 3D T1-weighted MRI. Results : As a result of comparing the long-duration group with the short-duration group, the mean Z-score of the long-duration group (2.40±0.94) was significantly greater than that of the short-duration group (1.83±0.92). Conclusion : After the onset of AD, DM is associated with hippocampal and parahippocampal atrophy. This would suggest that DM directly affects the progression of neuropathology in Alzheimer's disease. Keywords : VSRAD Alzheimer diabetes

PP25 C-123

PAIN EVALUATION AND ANALGESIC TREATMENT IN SEVERE DEMENTED PATIENTS: AN ITALIAN NURSING HOME EXPERIENCE

Jacopo TAGLIABUE, Monica AGOSTONI (Centro di Ricerche e Cura dell'Invecchiamento, IRCCS Istituto Auxologico Italiano, Milano, Italy - RSA Mons. Bicchierai, Italy)

Introduction : In severe dementia is difficult to detect pain: we tested Pain Assessment in Advanced Dementia (PAINAD) scale. Method : 106 Italian nursing home patients (pts) observed from January (t0) to

December 2011 (t4). Functional and cognitive status evaluated through Barthel Index (BI), Tinetti Balance and Gait Scale (Tinetti), MMSE, CDRS-SB. Statistical analysis: χ^2 , t-student. Results : 106 pts (87.6±6.4 ys, F 81, M 25) divided in order to cognitive assessment. 1-mild dementia group (MD): 40 pts, MMSE \geq 20, CDRS-SB \leq 9.5, pain evaluation through Visual Analogue Scale (VAS) and Facial Pain Scale (FPS). 2-severe dementia group (SD): 66 pts, MMSE <20, CDRS-SB >9.5, pain evaluation through PAINAD. No differences in BI and Tinetti. Persistent pain pts at t0: in MD 25 pts (63%), in SD 27 pts (40%) (χ^2 , p<0.05). At t4: in MD 26 pts (65%), in SD 33 pts (50%) (χ^2 , p<0.05). In MD 19 pts (76%) experienced nociceptive pain, 6 pts (24%) neurological pain; in SD 15 pts (55%) nociceptive, 12 pts (45%) neurological (χ^2 , p<0.05). In MD 14 pts (56%) with pain had analgesic treatment, 8 pts (30%) in SD (χ^2 , p<0.05). Analgesic treatment was most frequently prescribed in nociceptive vs neurological pain pts, also in MD and SD: 9 (64%) vs 5 (36%), 5 (62%) vs 3 (38%) (χ^2 , p<0.05). Conclusion : There is a statistically different pain distribution in MD vs SD. A systematic PAINAD use increased pain detection in SD at t4. Analgesic treatment is statistically most frequently prescribed in MD and in nociceptive pain pts. Keywords : pain, dementia

PP25 C-124

VALIDITY AND RELIABILITY OF THE REVISED ALZHEIMER'S DISEASE-RELATED QUALITY OF LIFE (ADRQL) IN JAPANESE VERSION

Miho MATSUI (School of Nursing, Nara Medical University, Japan)

Introduction : The Alzheimer's Disease-Related Quality of Life (ADRQL) revised instrument was developed to assess health-related quality of life in people with Alzheimer's disease using assessments from family caregivers or professional staff. validity and reliability of the original form was examined, a revised ADRQL has not done although various care setting for dementia are needed to assess the effects of treatments and care. The purpose of this study was to examine validity and reliability of the revised ADRQL for Japanese elderly. Method : Original version of the ADRQL including 48 items was translated into Japanese. The revised ADRQL consists of 40 of the 48 items that assess 5 domains; social interaction, awareness of self, feeling and mood, enjoyment of activities, response to surroundings. Scoring was made for the overall ADRQL scale and for each of the five domains according to user's manual in group home setting in Japan. Results : The revised ADRQL exhibits very low missing data and good reliability for total score. Cronbach's alpha of the total score was .769 and each domain showed .806 for social interaction, .431 for awareness of self, .700 for feeling and mood, .193 for enjoyment of activities, and .490 for response to surroundings. Concurrent validity was examined between the revised ADRQL and level of dementia and ADL. Strong associations were shown between both level of dementia (r=-.539, p<0.001) and ADL (r=.675, p<0.001). Conclusion : The revised ADRQL indicated good reliability and validity although some domain's Cronbach's alpha were low. Keywords : ADRQL, measurement development

PP25 C-125

ASSESSMENT OF PATIENTS WHO CONSULT FOR COGNITIVE COMPLAINT IN A GERIATRIC HOSPITAL

Rolando Olegario ALTAMIRANO¹, Marcela Andrea BARRENECHEA², Ricardo Roger VILLALBA², Sandra Elizabeth BERNACHEA², Estela Sanchez MANCIONI³ (1. Servicio de Psicogeriatría, Hospital Geriátrico de Agudos Juana Francisca Cabral, Argentina; 2. Hospital Geriátrico de Agudos Juana Francisca Cabral, Argentina; 3. Instituto Tercera Edad, Argentina)

Introduction : Know the population characteristics of patients who consult for cognitive complaint. Determine the utility of the psychometric test: Mini Mental State Examination and the clock drawing test in the evaluation of these patients. **Method :** Were included 66 outpatients had been evaluated for cognitive complaint, it was done a preformed tab for each patient, the tab included: birth data, cardiovascular risk factors, history of depression and anxiety. The cognitive function was evaluated with MMSE and CDT. It was valued the functional status with Katz Index, and emotional status with Yesavage Scale. It was used SPSS Program for statistical analysis. **Results :** The average age was 71,98 years old with regard to the sex of the population the 66,7% were F, the educational level more frequent was primary school in 71,2%, previous diagnosis of hypertension 66,7%, DBT 18,2%, previous history of depression 47% and anxiety 65,2%, postevaluation for GSD the 4,5% had depression set and the 22,7% had mild depression. The MMSE showed a cognitive impairment in 24,25 % of the patients with a punctuation <24 with an S:65% and E:87%, with CDT the 27,3% had cognitive impairment with a punctuation <6 with S:67% and E: 83%. Combined both test improved the S:76% with an E:86%. The functional autonomy was 83,3% and functional dependency in 9%. **Conclusion :** The patients who consulted for cognitive complaint had a high frequency of history of hypertension and depression. The psychometric test MMSE and CDT were useful to determine a good sensitivity and specificity. The use of both test improved the sensitivity to assess and set the cognitive impairment. **Keywords :** Cognitive - outpatients - impairment

PP25 C-126

APPLICATION ELISA KIT FOR THE DETECTION OF URINARY AD7C-NTP LEVEL IN ALZHEIMER'S DISEASES

Rong WANG¹, Shuli SHENG² (1. Central Laboratory, Xuanwu Hospital, Capital Medical University, China; 2. Xuanwu Hospital, Capital Medical University, China)

Introduction : Alzheimer's diseases (AD) is a common neurodegenerative diseases. AD7C-NTP is a kind of neurofilament protein, can be found in early AD in urine, so it can be used as a marker of AD for early diagnosis. In this research, we used the ELISA kit, which made by ourself, for the detection of urinary AD7C-NTP level in AD. **Method :** Immunogenicity AD7C-NTP peptide fragments had synthesized by solid-phase methods, then immunized animals and prepared antibodies. After matching screening, mouse antibody as packets antibody, while biotin-labeled rabbit antibody as testing antibody, horseradish peroxidase labeled avidin, the urine AD7C-NTP ELISA detective method was established. The morning urine samples of 121 AD patients and age-matched control group 118 were collected. **Results :** AD7C-NTP antibodies were identified. Mouse anti-AD7C-NTP antibody ELISA titer was 1:8 000, and rabbit anti-AD7C-NTP antibody ELISA titer is 1:32 000; WB detected human brain specimens found a single band. in the relative molecular mass of 41 000. The sensitivity of ELISA methodology was 0.5 µg/L, the linear range was 0~10 µg/L, normal reference value ≤1.5µg/L, the average recovery rate was 100.2%, approved of CV 3.8%, 4.5%, and inter CV 7.6%, 6.8%. AD group [2.250(0.43-8.62) µg/L] was higher than control group [0.82(0.47-2.77) µg/L, P<0.0001]. The positive rates of AD group and control group were 89.3% and 15.3% respectively, the sensitivity was 89.3% and specificity was 84.7%. **Conclusion :** This ELISA diagnostic kit is high precision and sensitive, and can be used as an assistant examination in clinical diagnosis of AD. **Keywords :** Alzheimer diseases, Urinalysis, Enzyme-linked immunosorbent assay

PP25 C-127

NON-TRADITIONAL RISK FACTORS PREDICT DEMENTIA

AND MORTALITY IN HEALTHY INDIVIDUALS

Roxanne STERNICZUK¹, Olga THEOU², Melissa K. ANDREW², Benjamin RUSAK³, Kenneth ROCKWOOD² (1. Psychiatry, Dalhousie University, Canada; 2. Medicine, Division of Geriatric Medicine, Dalhousie University, Canada; 3. Psychiatry, Psychology & Neuroscience, Dalhousie University, Canada)

Introduction : The age-associated accumulation of health deficits over time can lead to various adverse outcomes, such as Alzheimer's disease (AD) and death. Previous work re-analyzing a 1990s database suggested that in addition to traditional risk factors (TRF) for these outcomes, non-traditional risk factors (NTRF) also play an important role in determining an individual's level of frailty and with that, their risk of AD. Here, we examined whether a NTRF index was associated with incident AD or dementia, and mortality, and how this compared with TRF's, in a large contemporary sample. **Method :** Secondary analyses were conducted on data from the Survey of Health, Ageing, and Retirement in Europe (SHARE), and consisted of health individuals 50 years or over from 11 European countries (N = 14,469). **Results :** While controlling for age, sex, education, and TRF's for AD and mortality (i.e., 6 factors individually or in combination as a TRF index) the NTRF index was associated with dementia (odds ratio = 1.39; 95% CI = 1.01-1.92) and mortality (hazard ratio = 1.63, 95% CI = 1.40-1.89), at 2 years. Considered individually, physical inactivity was the only significant TRF associated with both dementia and mortality, while controlling for age, sex, and education. Of the 27 individual NTRF's, 8 and 12 of them significantly predict dementia and mortality. **Conclusion :** Although individually NTRF's may not contribute significantly to the risk of AD, dementia, and mortality, they accumulate to be strongly predictive. Multivariable risk models must not ignore important cumulative effects, especially in relation to late life illness and death. **Keywords :** Alzheimer's disease, dementia, mortality, risk factors

PP25 C-128

DIFFERENCES IN ACTIVITY PATTERNS IN THREE TYPES OF DEMENTIA MEASURED BY THE IC TAG MONITORING SYSTEM

Takahiro NONAKA¹, Shunji SUTO², Miyae YAMAKAWA¹, Kazue SHIGENOBU³, Kiyoko MAKIMOTO¹ (1. Nursing, Osaka University, Japan; 2. Medical and Welfare Management, Seibi University, Japan; 3. Psychiatry, Asakayama General Hospital, Japan)

Introduction : Frontotemporal dementia (FTD) and semantic dementia (SD) patients tend to manifest in compulsive behaviours. The study aim was to evaluate compulsive behaviour by objective measurements of activity. **Method :** Sixty-bed dementia care unit at the general hospital in Japan cooperated with the study. The IC tag monitoring system was used to monitor dementia patients' temporal movement between 2008 and 2011. Of 75 patients monitored, there were 7 FTD and 2 SD patients. 9 controls were selected from Alzheimer's disease (AD) patients (one to one matching with age and median distance moved /day). The number of detection by the monitoring system per minutes and per hour was generated. Demographic characteristics and Mini Mental State Examination (MMSE) were obtained from medical record. Spearman correlation coefficients were obtained to examine correlations. This study was approved by Osaka University, School of Allied Health Science Ethics Committee and the study hospital. Written informed consent was obtained from the patient's proxy. **Results :** Mean age of the FTD/SD cases was 69.0(±5.9) years. The mean distance moved per day was 3655.0±(2691.0)m. In AD patients, MMSE was highly correlated with the number of movements detected/hour, while no

correlation was found in FTD/SD patients. One SD patient had typical clock watching behaviour and showed sharply increased activity count around 18:00, and the activity counts rose at 35th minutes of the hour. Conclusion : In AD patients, decreased cognitive function was correlated with increased fragmentation of the activity. Pronounced clock watching was found in one SD patient. Keywords : Objective measurement, Activity patterns, Frontotemporal Lobar Degeneration

PP25 C-129

REMINDER DEVICES TO AID ELDERLY PATIENTS WITH MILD DEMENTIA AND MILD COGNITIVE IMPAIRMENT IN REGULAR AND INDEPENDENT INTAKE OF MEDICATIONS

Tomoko KAMIMURA¹, Risa TAKAYAMA¹, Kana MAEHARA¹, Takenobu INOUE², Rina ISHIWATA² (1. School of Health Sciences, Shinshu University, Japan; 2. Department of Assistive Technology, Research Institute, National Rehabilitation Center for Persons with Disabilities, Japan)

Introduction : Among the activities of daily living in elderly patients with mild dementia and mild cognitive impairment, independent intake of medications remains a major problem. Reminder devices reportedly aid these patients in this task; however, the efficacy of such devices remains unexplored. Therefore, we evaluated the efficacy of a medication reminder device. Method : Examiners first trained community-dwelling elderly subjects with Clinical Dementia Rating scores of 0.5 or 1 and their caregivers to use the device at home. Each caregiver loaded the device with the medications. The self-administration medication rate (SAMR) prior to use of the device was compared with that after 3 months of device use for all patients. SAMR was defined as the ratio of the number of doses taken independently to the number of all prescribed doses during a week. Results : Nineteen subjects (81.1 ± 6.0 years) participated in this study. After 3 months, SAMR improved to 100% in 11 (57.8%) patients and <100% in 3 (15.8%) patients. However, it remained unchanged in 1 (5.3%) patient. Four patients (21.1%) ceased to use the device during this period. Nine patients modified their usage of the device during the 3 months because they aimed at stepwise adoption of the device; in addition, they were required to respond to changes in their prescriptions and daily routine. Conclusion : These results indicate that medication reminder devices combined with support from caregivers and professionals can aid elderly patients with mild dementia and mild cognitive impairment in regular and independent intake of medications. Keywords : mild dementia, mild cognitive impairment, medication

PP25 C-130

CSF Aβ42, TAU, P-TAU AND Aβ OLIGOMERS IN CHINESE ALZHEIMER'S DISEASE PATIENTS

Yat-Fung SHEA (Medicine, Queen Mary Hospital, Department of Medicine, Queen Mary Hospital, Hong Kong)

Introduction : To investigate the validity of cerebrospinal fluid (CSF) amyloid-beta (Aβ42), Aβ oligomers, tau and phosphorylated-tau (p-tau 181) as biomarkers of Alzheimer's disease (AD) in Chinese. Method : Design: A cross-sectional study with baseline lumbar puncture and cognitive assessment. Setting: Memory Clinic of an university hospital in Hong Kong. Patients: 14 patients with probable AD and 8 patients with non-AD conditions Main outcome measures: We compared the CSF tau, p-tau 181, Aβ42, Aβ oligomers levels, and Aβ42/ tau, Aβ42/ p-tau181 ratios between AD and non-AD subjects (Mann-Whitney U test), followed by ROC curve analyses. Results : We found that AD patients had higher median levels of CSF tau (p=0.014) and p-tau (p=0.003), and lower median CSF Aβ42 level

than those of non-AD patients (p=0.034). AD patients had lower Aβ42/t-tau and Aβ42/p-tau ratios than non-AD patients (p=0.001 for both). A higher proportion of AD patients had CSF Aβ oligomers levels above the median level of 1.98 pmol/L than that of non-AD patients (35.7% versus 0 %; p=0.021, Chi-square statistics). In ROC curve analyses, the area-under-curve (AUC) of CSF levels of Aβ42, tau, p-tau181, Aβ42/ tau and Aβ42/ p-tau181 ratios ranged from 0.777 to 0.929, being highest for the ratios of Aβ42/ tau and Aβ42/ p-tau181. The sensitivity and specificity of CSF Aβ42/ tau and Aβ42/ p-tau ratios were 86%, 88%, 79% and 100% respectively. Conclusion : CSF tau, p-tau 181, Aβ42 and Aβ oligomers levels, particularly the ratios of Aβ42/tau and Aβ42/p-tau levels, are useful diagnostic biomarkers of AD in Chinese. Keywords : CSF, Alzheimer's disease, Chinese

PP25 C-131

NURSING CARE FOR EXCESSIVE WANDERING IN EARLY-ONSET DEMENTIA PATIENT : EVALUATION OF CARE USING OBJECTIVE INDICATORS

Yukiko YOSHIDA¹, Miyae YAMAKAWA¹, Shunji SUTO², Kazuo SHIGENOBU³, Kiyoko MAKIMOTO⁴ (1. Health sciences Graduate School of Medicine, Osaka University, Japan; 2. Medical and Welfare Management, Seibi University, Japan; 3. Neuropsychiatry, Asakayama General Hospital, Japan; 4. Health Sciences Graduate School of Medicine, Osaka University, Japan)

Introduction : Distances of wandering are difficult to quantify, frustrating efforts to develop nursing intervention. Excessive wandering is found in some Alzheimer's disease (AD) patients. The purpose of this study was to evaluate nursing care to reduce excessive wandering in an AD patient. Method : Wandering was measured by the IC monitoring system which measured the distance moved and location of the patient. Monitoring was conducted in a dementia ward in 50 days at a general hospital in Osaka, Japan in 2012. Sleep quality was measured by nonwear actigraphy. The study was approved the ethical committee of Osaka University's School of Allied Health Science and the study hospital. Written informed consent was obtained from patient's proxy. Participant was 62-year-old woman, diagnosed with early-onset AD, hospitalized in 2012 due to irritability and agitation. Mini-Mental State Examination: 5/30. Clinical Dementia Rating: 3 (severe). Results : When Olanzapine (2.5 mg) was prescribed, she developed nighttime wandering, and distance moved increased from 10km to 20km/day, on some days exceeding 30km. Then, Olanzapine was increased to 7.5 mg to manage irritability, mood swings and insomnia. These problems persisted. Nurses discovered triggers for wandering and insomnia. She was highly sensitivity to odor and noise in the living room or her room. Changing the environment to meet her needs, distance moved per day decreased to <15km and mean number of awakening decreased and sleep efficacy increased from 87% to 95%. Conclusion : Attentive nursing observation and appropriate medication seem to be effective in decreasing excessive wandering and eliminated sleep-disturbances. Keywords : Alzheimer's disease, Excessive wandering, Nursing intervention

PP25 C-132

ALZHEIMER'S CAREGIVERS HEALTH STATUS IN AGRICULTURE-RELATED POPULATION OF BRITTANY (FRANCE)

Herve GOARIN¹, Patrick MORVAN¹, Olivier MICHEL², Dominique SOMME³ (1. Coordination Medicale Regionale, Mutualite Sociale Agricole Des Portes de Bretagne Rue Charles Coudraie 35027 Rennes Cedex 9, France; 2. Hotel-Dieu Geriatric department, Rennes University Hospital, France; 3. Geriatric Department, Rennes

University Hospital, France)

Introduction : The French national agricultural social security service covers pensions and health expenses for active and retired farmers and agriculture-related employees, i.e. 595.000 people in Brittany (western France). The study: to analyze the health-related resources consumption of spouses/care-givers of people suffering from Alzheimer's disease. **Method :** The regional database was checked to obtain patients population. Spouses/care-givers in this study had to be covered by the same social security service and live at the same address. Patients were defined by reference to Alzheimer's diagnosis or the prescription of a specific drug. Co-morbidity of patients and health status of spouses/care-givers was established through payment exonerations and drugs consumption. **Results :** 4 112 patients are known to have Alzheimer's, 953 men (mean age: 81.4) to 3159 women (mean age:84.3). Only 29% (1196) are currently married, 2509 (61%) widowed. Patients psychotropic drug consumption : SSRIs(4.3%), hypnotics(3.84%), benzodiazepines(3.78%), anti-convulsive(2.40%) other anti-depressive (2.35%) anti-psychotics(0%). Spouse/care-givers health status: among the 1196 married patients, 457 live with their spouses. 322 care-givers (only 3 women) have serious affections. 179 (58%) have severe cardio-vascular problems and 87 (27%) have cancer. 369 care-givers(78%) benefit from paramedics interventions. 12% receive psychotropic drug, mostly hypnotics and benzodiazepines. **Conclusion :** Discussion will emphasize on specific drug prescription, high rate of cancer in care-givers and the low prescription of psychotropic drug in this agriculture-related population **Keywords :** Alzheimer's / caregivers' health

PP25 C-133

DIAGNOSIS OF MIXED DEMENTIA USING MEASUREMENT OF REGIONAL BENZODIAZEPINE RECEPTOR BINDING

Tomohiko SATO, Haruo HANYU, Kazumasa KUME, Hidekazu KANETAKA, Hirofumi SAKURAI, Toshihiko IWAMOTO (Department of Geriatric Medicine, Tokyo Medical University, Japan)

Introduction : We examined regional benzodiazepine receptors (rBZR) using single photon emission CT (SPECT) in patients with Alzheimer disease (AD), vascular dementia (VaD), and mixed AD/VaD dementia (MD) and compared the changes in the availability of rBZR with those of regional cerebral blood flow (rCBF). **Method :** A total of 7 patients with AD, 6 with MD, and 9 with VaD underwent SPECT studies with N-isopropyl-p-[(123)I] iodoamphetamine and (123)I-iomazenil to measure rCBF and rBZR. The ratios of rCBF and rBZR uptake in brain subregions to the average global activity were compared among these diseases. In addition, we acquired z-score maps using 3-dimensional stereotactic surface projections of SPECT data. **Results :** Compared with AD, VaD and MD showed rCBF and rBZR reduction predominantly in the frontal lobe, but rBZR images revealed more extensive and severe defects than rCBF images. In contrast, AD showed rCBF and rBZR reduction predominantly in the parietotemporal lobe compared with VaD and MD, but rCBF images revealed more extensive defects than rBZR images. **Conclusion :** rCBF imaging can detect parietotemporal abnormalities in AD, while rBZR imaging may enable the demonstration of underlying pathophysiological differences in the frontal lobe between VaD, MD and AD, reflecting neuronal integrity in the cerebral cortex. **Keywords:** dementia, benzodiazepine receptor, SPECT

PP25 C-134

PSYCHOTROPICS FOR PATIENTS WITH DEMENTIA

Hidetada SASAKI, Masahiko FUJII (Geriatrics, Sendai-tomizawa hospital, Japan)

Introduction : Cares using minimum doses of psychotropics including antipsychotics have been recommended to care patients with BPSD. In the present study, we report how psychotropics including antipsychotics could be reduced in Sendai Tomizawa Hospital, a psychiatric hospital for dementia patients. **Method :** Psychotropics including antipsychotics have been prospectively compared in dementia patients of 48 beds on the second floor of Sendai Tomizawa Hospital, between psychotropics before inpatient and one month after inpatient from April 2011 to March 2012. Seventy two patients were new inpatients during one year and prospectively followed up for one month. **Results :** Psychotropics were reduced markedly one month after inpatients and in about half of patients psychotropics were decreased to zero. Antipsychotics were prescribed in 44 patients before inpatients and reduced to zero one month after inpatients. Neuropsychiatric Inventory (NPI) were 21 +_ 12 out of 120 point of full scale before inpatients and reduced to 11 +_ 8 one month after inpatients (p< 0.01). Restrictions of body or hands using restriction bands were performed in 13 +_ 2 patients per day. **Conclusion :** We have previously shown that favorite and emotional stimuli could care BPSD without any side effect. The present study would be the first report of caring BPSD with minimum doses of psychotropics and without antipsychotics in psychiatric hospital. **Keywords :** Psychotropics, dementia

PP25 C-135

RIVASTIGMINE PATCH AND MASSAGE FOR ALZHEIMER'S PATIENTS

Masahiko FUJII, Hidetada SASAKI (Geriatrics, Sendai-tomizawa hospital, Japan)

Introduction : Behavioral and psychological symptoms of dementia (BPSD) is another hard problem of dementia as well as cognitive impairments. BPSD may be improved by rivastigmine capsules and by pleasant stimulations to the limbic system via tastes, smells, sounds or massage. We aimed to determine if simultaneous administration of rivastigmine patches and massage (patch-massage) improved BPSD, compared to rivastigmine patches alone (patch only). **Method :** We randomly assigned twenty patients with BPSD into patch-massage (n=10) and patch only (n=10) group. Caregivers applied the patch to the patient's back once daily and at the sametime administered massage on an acupoint ("Shinchuu" in Japanese, "Shenzhu" in Chinese, GV 12, between 3rd and 4th thoracic vertebrae). **Results :** At four weeks, the MMSE were not significantly different from baseline in either group; nor was the NPI in the patch-only group. However, in the patch-massage group, The NPI was significantly lower compared to baseline (p< 0.05). **Conclusion :** Present study suggested that the combination of rivastigmine patches and massage may improve BPSD. When caregivers treated the patch every day, simultaneous massage on the back would not be hard because both patients and caregivers agreed to the treatment. **Keywords :** Rivastigmine patch, massage, Alzheimer's patients

PP25 C-136

THE PERFORMANCE OF SHORT FORM GERIATRIC DEPRESSION SCALE (GDS-15) IN CHINESE ELDERLY

Dan TANG (Gerontology Institute, Renmin University of China, China)

Introduction : The short form Geriatric Depression Scale (GDS), consisting of 15 items is a widely used self-report instrument for measuring depression in the elderly. This scale has been translated into Chinese and its reliability and criterion validity have been established in Hong Kong and Beijing. Thus far, no study has been conducted in

rural of Mainland China to ascertain the reliability and validity of the GDS-15. Furthermore, the structures of GDS-15 varied among different language versions. The structure of Chinese GDS-15 has never been explored. This study examined the psychometric properties of GDS-15, particularly the structure of the scale, among elderly in mainland China rural and urban communities. Method : The 10 percent Data from the 2006 Survey on the Living Condition in Chinese Rural and Urban Elderly was used. Results : Item analysis showed that all the 15 items of GDS had met psychometric criteria; The Cronbach's α coefficient was 0.793; the total score of GDS-15 positive correlated with ADL, and could effectively differentiate those needing taking care from the normal; Exploratory factor analysis indicated the scale was not unidimensional and the structure was dissatisfied; after two items being deleted, three factors were extracted, named 'depression symptoms', 'positive emotion' and 'mental status'; the Cronbach's α coefficient of revised scale was 0.795. Conclusion : The Chinese GDS-15 shows acceptable reliability and validity and can be used in research of depression symptoms in the Chinese rural and urban communities, but deleting the items will improve the scale structure and made the scale more applicable to Chinese elderly. Keywords : Chinese, GDS-15, rural community

PP25 C-137
DEPRESSION IN ELDERLY LIVING IN THEIR OWN ENVIRONMENT ? 7 YEARS FOLLOW-UP

Hana MATEJOVSKA KUBESOVA, Jan MATEJOVSKY, Hana MELUZINOVA, Pavel WEBER, Katarina BIELAKOVA (*Dept. of Internal Med., Geriatrics and General Practice, Medical Faculty, Masaryk University, Czech*)

Introduction : Many data explaining high but underdiagnosed occurrence of depression in elderly population are available. Depression accelerates the cognitive impairment, decreases the independency and overall quality of life. The aim of our work was to realize the real situation among seniors living in their own environment and the development during 7 years lasting follow-up. Method : We studied the group of 161 seniors, 60 men and 101 women of average age 73.2±5.9 years living in their own environment in a rural area. The study started by complex geriatric assessment (MMSE, ADL, IADL, Geriatric Depression Scale- GDS) in 2006 and data obtained were compared with results of further assessments realized at 18th, 48th and 72nd months of the follow up. Data were analyzed by statistical methods ? Student T-test, χ^2 ? quadrate test, regression analysis. Results : We found 24 seniors of studied group (14.9%) achieving GDS between 6 and 10 points and 6 seniors (3.7%) with GDS above 11 at the start of the study. Altogether 30 seniors of studied group (18.6%) showed pathological results of GDS in 3 only this diagnosis appeared in patient's sheet. Further development showed up to 30% seniors achieving GDS value between 6 and 10 points and 15% above 11 points. MMSE, ADL and IADL values were strongly negatively dependent on GDS. Conclusion : Depression is much more frequent in elderly population as really diagnosed ? it means worse cognitive performance, loss of independency and worse quality of life. The active screening of depression could be useful in this population. Keywords : depression; geriatric assessment; independency

PP25 C-138
INFLUENCE OF SOMATIC SYMPTOMS ON THE SEVERITY OF DEPRESSIVE SYMPTOMS IN ELDERLY

Changsu HAN, In Kwa JUNG, Hyun-Ghang JEONG (*Department of Psychiatry, Korea University, Korea*)

Introduction : Older adults commonly experience somatic symptoms, and those who do are more likely to have depressive disorders as well. Our goal in this study is to examine the influence of the number and severity of somatic symptoms on the severity of depressive symptoms, including suicidality, in elderly adults. Method : Setting: A community-based cohort study in Ansan City, South Korea Participants: A total of 3210 elderly adults aged 60 years or over (1388 males and 1770 females) participated in this study. Results : Both mild and severe somatic symptoms significantly increased the risk for severe depression and high suicidality. Severe somatic symptoms doubled the risk for severe depression and suicidal intent. Conclusion : Somatic symptoms not fully explained as medical illnesses are closely associated with late-life depression, even after adjustments for comorbid physical illnesses and other confounding factors. The presence of somatic symptoms concurrent with, but not fully explained by, comorbid physical illness or disability seems to be an independent marker for predicting the severity of late-life depression and suicidality. Keywords : somatic symptom, late-life depression, suicidality

PP25 C-139
CLINICO-EPIDEMIOLOGICAL STUDY OF DEPRESSION IN INDIAN ELDERLY

Indrajeet Singh GAMBHIR, Abhinandan MISHRA (*Medicine, Banaras Hindu University, India*)

Introduction : The prevalence of depression in elderly patients varies from 15 to 50% in various studies. This study is to determine the prevalence of depression among Indian elderly patients in hospital and assess various risk factors associated with depression using Geriatric Depression Scale (GDS). Method : In this prospective study Patients 60 years and above were selected according to defined criteria and enquired about the various demographic and socioeconomic data. GDS was used as a screening tool to identify depression. Analysis was done using Chi-square test. The value of 'p' indicating the probability of significant difference was taken as <0.05 for comparison. Results : Total 504 patients were included in the study with age from 60 to 95 years (mean age 66.47±6.855 yr, 60.3% were males). In our study statistically significant association (p<0.05) was observed between depression and female sex, low literacy, widowhood and the patients with multisystem morbidities. With GDS scores, 42.9% of the elderly patients were found to be depressed with 20.8% having mild and 22.0% having moderate to severe depression. Depression was present in 38.4% of male and 49.5% of female patients. Depression was found to be more prevalent among patients with malignancies (64.3%), osteoarthritis (58.1%), chronic obstructive pulmonary disease (46.2%), Koch's infection (46.2%), cerebrovascular accident (45.9%), coronary artery disease (45%) and diabetes mellitus (43.4%). Conclusion : The study revealed that depression is a common health problem in Indian elderly patients and even more in particular risk groups. Use of GDS would detect a lot of patients with depression. Keywords : Depression, elderly, co-morbidities, Geriatric depression scale

PP25 C-140
SPECIALIST MEDICAL AND MENTAL HEALTH UNIT COMPARED WITH STANDARD CARE FOR OLDER PEOPLE WITH DELIRIUM AND DEMENTIA:RANDOMIZED CONTROLLED TRIAL

John GLADMAN¹, Rowan HARWOOD², Sarah GOLDBERG¹, Lucy BRADSHAW¹, Katherine WHITTAMORE¹, Pippa FOSTER¹, Davina POROCK³, Robert JONES⁴, Catherine RUSSELL² (*1. Division of Rehabilitation and Ageing, University of Nottingham, United Kingdom; 2. Health Care of Older People, Nottingham University*)

Hospitals NHS Trust, United Kingdom; 3. Center for Nursing Research, Buffalo University, USA; 4. Division of Psychiatry, University of Nottingham, United Kingdom)

Introduction : Patients with delirium and dementia admitted to general hospitals experience poor outcomes. Family caregivers often report dissatisfaction with care. **Method :** A Medical and Mental Health Unit was developed on an acute geriatric medical ward. Mental health professionals were employed; staff received enhanced training in delirium and dementia care; a programme of purposeful activity was introduced; the environment was modified; and an inclusive approach to caregivers adopted. Six hundred patients over 65 admitted for acute medical care, identified on admission as 'confused', were randomized to the Unit or standard care. Primary outcome was number of days spent at home over 90 days. Structured non-participant observations were undertaken to ascertain patients' experiences. **Results :** There was no statistically significant difference in days spent at home between settings (median 51 vs 45 days, 95% for difference CI -12 to 24, $p=0.3$); median index hospital stay was 11 vs 11 days, mortality 22% vs 25%, readmission 32% vs 35%, and new care home admission 20% vs 28%, for the Unit and standard care respectively. None of these differences was statistically significant. However, participants on the unit spent significantly more time with positive mood (79% vs 68%), experienced more staff interactions that addressed emotional and psychological needs (median 4 vs 1 per observation), more caregivers were satisfied with care (overall 91% vs 83%), and severe dissatisfaction was reduced (5% vs 10%). **Conclusion :** Specialist care for people with delirium and dementia can improve patient experience and caregiver satisfaction, but does not change health outcomes. **Keywords :** dementia, delirium, person centred care

PP25 C-141

SUCCESSFUL SUPPORTS RESULTED IN IMPROVING NUTRITIONAL CONDITION OF A NEUROLEPTIC MALIGNANT SYNDROME PATIENT BY DENTAL INTERVENTION -A CASE REPORT

Naoki KOBAYASHI¹, Yumi FUJIWARA¹, Ayana KANAO-OKAMOTO¹, Yoshihiko SOGA², Noriko KANDA³, Yumiko HIMURO¹, Eiko OKAMOTO¹, Sachiko MORI⁴, Kyoko ARIOKA², Ichiro TANIMOTO², Katsuyuki KUBO⁵, Kaoru MORITA⁶, Kazuhiko MORITA⁶ (1. Dentistry, Mannari Hospital, Japan; 2. Hospital Dentistry, Dentistry, Okayama University Hospital, Mannari Hospital, Japan; 3. Dentistry, Mannari Hospital (*Present affiliation: Goshikidai Hospital), Japan; 4. Psychiatry, Mannari Hospital, Japan; 5. Dentistry, Mannari Hospital (*Present affiliation: Tottori Municipal Hospital), Japan; 6. Dentistry, Morita Dental Clinic, Japan)

Introduction : Support for aged psychiatry patients is one of the important problems. Neuroleptic malignant syndrome (NMS) is the serious side effect by psychotropic drugs characterized by high fever, perspiration, and tachycardia, etc. Here, we show a case that nutritional condition of a NMS patient was improved by dysphagia rehabilitation provided by dentists and oral hygienists, and discuss on the importance of appropriate dental intervention for psychiatric patient. **Method :** The patient was a 57-year-old woman who had been entered because of schizophrenia. Risperidone, levomepromazine and tandospirone medication had been performed. During the treatment, she developed NMS. Acute dystonia characterized by the dislocation of heads of mandible and dysphagia appeared. Antipsychotic was stopped, and a neuromuscular junction blocking drug medication was started. The weight was 37.5 kg and poor nutritional condition at this time. Tube feeding was also started. Manipulative reduction of mandible was tried, but could not be improved. The collaborative

intervention of dental staff was started. Indirect dysphagia rehabilitation and oral care was started. **Results :** Her mouth-closing disturbance was improved gradually. After one month, direct swallowing training was started. After two month, prosthodontic treatment was started to feed normal texture of foods. After seven month developing NMS, her nutritional condition and the neurological was improved and she could discharge our hospital. **Conclusion :** Mouth-closing disturbance and poor nutrition of a NMS patient was improved by dental interventions consisted of dysphagia rehabilitation and oral care. Typical case that dental staff could contribute to improve general condition of psychiatry inpatients is shown. **Keywords :** Neuroleptic malignant syndrome - Dysphagia rehabilitation - Dental intervention

PP25 C-142

PSYCHOTROPIC DRUG CONSUMPTION IN ELDERLY WITH DEMENTIA: A CASE-CONTROL STUDY (COHORT PACAL-ALZ)

Sylvie BONIN-GUILLAUME¹, Xavier THIRION², Joselyne ZAFACK², Veronique ALLARIA³, Joelle MICALLEFF⁴ (1. Medecine Interne Geriatrie, Aix Marseille Univ. Assistance Publique Hopitaux de Marseille. 270 Bd Sainte Marguerite, France; 2. Laboratoire Sante Publique, Aix Marseille Univ. Assistance Publique Hopitaux de Marseille, France; 3. Direction Regionale du Service Medical, Assurance Maladie Provence - Alpes - Cote d'Azur-Corse, France; 4. CIC-Centre de Pharmacologie Clinique et d'Evaluations Therapeutiques, Aix Marseille Univ. Assistance Publique Hopitaux de Marseille., France)

Introduction : Aim Describe psychotropic medications delivered to an AD elderly population compared to a non-AD matched population, in 2010, from the French General Health Care (GHC) insurance Data Base (South East of France). **Method :** In 2008, was created the cohort PACA-Alz that enrolled all subjects aged 60 y.o. and more affiliated to the GHC insurance Provence-Alpes-Cote d'Azur and Corsica (i.e. 75% of the total population of the area), with an AD diagnosis and/or specific AD treatment. In 2010, the cohort population was matched with a non-AD population from the data base. Psychotropic drugs consumption was exhaustively registered in the data base as there is no under-the-counter delivery for these medications in France. Each delivery was considered to be given for one month. Chronic consumption was defined by three or more consecutive deliveries. **Results :** 34064 of the cohort population were matched to non-AD subjects; 68.6% aged 80 y.o and over; 73.2% were women. In the cohort population, 73.1% of the patients had at least one psychotropic drug delivery for only 53.4% in the non-AD population ($p<0.001$). All of the psychotropic classes were more frequently delivered in the AD patients. The most common psychotropic association was benzodiazepine-antidepressant in both population (23.5% for AD; 13.1% for non-AD, $p<0.001$). More than 50% of the AD and non-AD patients with a psychotropic drugs prescription were chronic consumers. The psychotropic drugs most frequently prescribed were: escitalopram, meprobamate and zopiclone in AD patients; bromazepam, zolpidem and zopiclone in non-AD patients **Conclusion :** In France, elderly persons are highly concerned about psychotropic consumption. **Keywords :** Psychotropic- consumption- elderly

PP25 C-143

SEVERITY OF PARKINSON'S DISEASE AND MEMORY FUNCTION: CORRELATION AND INFLUENCING FACTORS

Maryam NOROOZIAN¹, Leila KOUTI² (1. Geriatric Medicine, Tehran University of Medical Sciences, Iran; 2. School of Pharmacy, Ahvaz Jondishapour University of Medicine, Iran)

Introduction : There is a high prevalence of Parkinson's disease(PD) and cognitive impairment therefore routine screening of patients with PD is essential.This study was designed to evaluate the severity of disease (evaluated by unified PD rating scale (UPDRS)) and its correlation with level of memory function(evaluated by Mini-Mental State Evaluation (MMSE)). **Method :** Fifty three patients with PD and 24 healthy volunteers entered this study. UPDRS and MMSE tests were used for this study. The patients were assigned to three different groups regarding their MMSE scores (Alzheimer's disease,MIC and normal), the correlation of UPDRS scores with these states were also assessed. Other factors such as age, duration of the disease, age of onset, level of education and drug side effects correlations with these scores were assessed as well. **Results :** Mean UPDRS scores,MMSE scores,duration of the disease,age of onset,level of education and side effect scores in patient group are 29.38 ± 18.43 , 27.08 ± 2.59 , 5.68 ± 3.76 years, 58.63 ± 11.51 years, 12.68 ± 5.19 years and 1.51 ± 1.5 respectively.The higher the UPDRS score, the higher the MMSE score(P value ≤ 0.0001).Three patients had AD,24 had MCI and 26 were with normal memory function.There was no correlation between level of education and duration of disease with MMSE scores(P value= 0.260 and 0.058 respectively) but age and age of onset influenced MMSE score(P value=0.008 and 0.046 respectively). **Conclusion :** There's a correlation between higher scores of UPDRS and higher scores of MMSE.It seems patients with more severe PD have more loss of memory function. Patients with PD should be monitored for their memory function and anti-Alzheimer therapy should be considered for those who suffer from memory decline. **Keywords :** parkinson's disease, MMSE, UPDRS

PP25 C-144

THE PARKINSONIAN PERSONALITY: A ROLE OF DEPRESSION?

Malene Flensburg DAMHOLDT¹, Mette Buhl CALLESEN², Arne MOELLER² (1. Unit for Psychooncology and Health Psychology, Aarhus University Hospital/Aarhus University, Denmark; 2. PET-Centre, Aarhus University Hospital, Denmark)

Introduction : Parkinson's disease (PD) has been associated with the existence of a so-called 'parkinsonian personality', a personality profile characterized by increased introversion and neuroticism. However, such constellations of personality traits are also associated with depression, a common comorbid disorder to PD. A previous study suggests that only patients with PD and comorbid depression display evidence of a 'parkinsonian personality'. The objective of the current study was to compare patients with and without concomitant depression on personality measures and severity of motor symptomatology. **Method :** 409 patients with PD (290 non-depressed patients and 119 depressed PD patients), identified through the National Danish patients' registry, participated and were compared on the NEO-personality inventory revised short version and measures of motor functioning. **Results :** Preliminary results suggest that patients with PD and comorbid depression display a personality profile characterized by reduced extroversion and conscientiousness, and increased neuroticism compared to PD patients without comorbid depression. Greater number of motor symptoms, increased neuroticism, and reduced extroversion predicted the presence of depression in a regression analysis. **Conclusion :** The study found depression in PD to be related to specific personality traits. The study design does not allow for causal interference as to whether more pronounced symptoms of depression leads to the specific expression of personality traits or whether pre-existence of such traits makes development of depression more likely. These results resemble personality traits found in non-parkinsonian depression and hence may

be general risk factors for depression. The usability of the 'parkinsonian personality' as a theoretical and clinical construct in PD research can be questioned and assessment of personality should take depression into account. **Keywords :** Parkinson's disease, personality, depression.

PP25 C-145

CLINICAL AND GENETIC CORRELATES OF DEPRESSIVE SYMPTOMS IN PARKINSON'S DISEASE

Xiaojuan DAN¹, Piu CHAN², Zhuqin GU³, Chaodong WANG¹ (1. Neurobiology and Neurology Department, Key Laboratory of Ministry of Education on Neurodegenerative Disorders, Beijing Key Laboratory on Parkinson's Disease, Xuanwu Hospital of Capital Medical University, China; 2. Geriatrics and Neurobiology Department, Key Laboratory of Ministry of Education on Neurodegenerative Disorders, Beijing Key Laboratory on Parkinson's Disease, Xuanwu Hospital of Capital Medical University. Beijing Institute of Geriatrics, China; 3. Neurobiology, Chinese National Human Genome Center, China)

Introduction : Depression is common among individuals with Parkinson's disease (PD) and has a major impact on quality of life. The detail underlying mechanism of depression in PD(dPD) remains unclear, but changes in brain structure and neurotransmitters suggest depression might be an intrinsic element of PD. Although several factors have been associated with dPD, the determinants of dPD are still complex and controversial. We aimed to investigate clinical and genetic correlates associated with depression in the context of sporadic Parkinson's disease(sPD) in a large Chinese Han population. **Method :** 1120 individuals with a primary diagnosis of sPD were recruited. Demographics, UPDRS, Mini-mental Status Examination(MMSE) and Hamilton Rating Scale for Depression (HAMD-17) were obtained as well as nine variants located in six risk susceptibility genes to PD were determined in all subjects. Logistic regression was used to identify study variables that individually and collectively best predicted the presence of depressive symptoms(HAMD>13). **Results :** Depression occurred in 20.9% of patients with sPD. After correcting for multiple tests, depressive symptoms were significantly associated with H&Y stage and motor impairment as well as other clinical measures. Female, UPARS Part II score, motor fluctuation and TC genotype of GBA L1444P mutation were found to best predict depressive symptomatology. **Conclusion :** We discovered PD risk variant of GBA gene was also a risk factor for presence of depression and demonstrated motor impairment and functional disability are strongly correlated with depressive symptoms. **Keywords :** Depression, Parkinson's disease, correlates

PP25 C-146

EFFECTS OF 3-MONTH COMBINED FUNCTIONAL TRAINING ON LOWER EXTREMITY MUSCLE STRENGTH AND GAIT PERFORMANCE IN COMMUNITY-DWELLING INDIVIDUALS WITH CHRONIC STROKE HEMIPARESIS

Hiroyuki HASHIDATE¹, Taizo SHIOMI², Hiroyuki SHIMADA³, Norio SASAMOTO⁴ (1. Department of Physical Therapy, School of Health S, Kyorin University, Japan; 2. Department of Physical Therapy, School of Health Sciences, Kyorin University, Japan; 3. Center for Development of Advanced Medicine for Dementia, National Center for Geriatric and Gerontology, Japan; 4. Yamanashi Care Academy, Medical Corporation Sasamoto, Japan)

Introduction : The purpose of this study was to examine the effectiveness of a 3-month low-frequency combined functional training on lower extremity muscle strength and gait performance, and

to assess the relationship between the changes of lower extremity muscle strength and gait performance in community-dwelling individuals with chronic stroke hemiparesis. Method : Twenty-three individuals with chronic stroke hemiparesis who are using an adult day-care facility were enrolled in a combined functional training program consisting of stretching, strengthening, postural balance training, and gait training once or twice a week for 3 months. The main outcomes measured before and after intervention were leg muscle strength measured using a leg press machine at one repetition maximum (1RM), normal gait speed (NGS), maximal gait speed (MGS) were assessed. In addition, the difference between MGS and NGS (Δ GS) was calculated to indicate the range of controlling gait speed. Results : Comparison of each outcome before and after intervention revealed significant increases in 1RM, NGS, MGS, and Δ GS. Significant correlations were found among the percentage changes of 1RM, NGS and MGS. The change rate of the Δ GS was correlated only with that of MGS. Conclusion : Three-month low-frequency combined functional training was effective in enhancing lower extremity muscle strength and gait performances, and the Δ GS was increased with enhanced MGS in community-dwelling individuals with chronic stroke hemiparesis. Keywords : chronic stroke, combined functional training, gait performance

PP25 C-147

ASSOCIATION OF SEVERE HYPERTENSION WITH PNEUMONIA IN ELDERLY PATIENTS WITH ACUTE STAGE CEREBRAL INFARCTION

Masashi OKURO, Shigeto MORIMOTO (*Geriatric Medicine, Kanazawa Medical University, Japan*)

Introduction : Cerebral infarction is often observed in the elderly, and that complication with acute pneumonia rise the rate of death. However, there are few studies of hypertension on admission related with cerebral infarction. Method : A total of 118 patients (58 men; 60 women; mean age \pm SD:85 \pm 5 years, range 72-96 years) with acute stage cerebral infarction admitted to the Geriatric Emergency Ward were recruited into the study. Patients were classified (categorized) according to hypertension on admission: 65 control normotensive or mildly hypertensive (<160/100mmHg); 43 moderate hypertension (160-199 / 100-119mmHg); 10 severe hypertension(\geq 200 / 120mmHg). According to the results of magnetic resonance imaging, 62 patients were classified as having large-artery atherosclerosis, 22 small-vessel occlusion, 34 cardiac embolism and were stratified analysis. Pneumonia definition includes chest radiograph showing evidence of rales, fever, evidence of an infiltrate /consolidation /cavitation on x-ray or purulent sputum, and necessity of treatment and antibiotics. Results : Acute stage pneumonia occurred in 13(21.5%) out of 62 patients with control, 17 (39.5%) with moderate hypertension, 7(70%) with severe hypertension. After adjustment with ages, sex, Glasgow coma scale, WBC count, log (serum C-reactive protein), dysphagia, the incidence of pneumonia was significantly higher in severe hypertension than controls(OR:2.83, 95%CI:1.14-7.05, p=0.025). Conclusion : We conclude that severe hypertension on admission is one of the risk factors for developing acute pneumonia in elderly patients with acute-stage cerebral infarction. Keywords : Cerebral Infarction, Severe Hypertension, Pneumonia

PP25 C-148

OVERESTIMATION OF COMMUNICATION SKILLS BY STROKE SURVIVORS WITH APHASIA: COMPARISON OF SURVIVORS VERSUS CAREGIVERS

Mooyeon OH-PARK¹, A.M. BARRETT² (*1. Stroke Rehabilitation Research Lab, Kessler Foundation Research Center New Jersey*

Medical School, USA; 2. Stroke Rehabilitation Research Lab, Kessler Foundation Research Center, USA)

Introduction : Patient-reported information may be valuable in post-stroke care, however, self-reported data may underestimate the magnitude of disability. Cognitive anosognosia, unawareness of illness caused by a neuropsychological inability to self-monitor can create barriers to neurorehabilitation. The objective of this study is to investigate whether stroke survivors with aphasia overestimates their communication skills, relative to caregiver ratings. Method : Stroke survivors with aphasia lives with their caregivers participated in the study. The Communicative Effectiveness Index (CETI), a validated measure of reported communication ability, was administered to assess whether stroke survivors overestimate their own communication ability relative to their caregivers. Results : Data from 52 individuals with mean time since stroke of 6.2 years was analyzed. Stroke survivors were older (60.2 \pm 14.1 vs 51.7 \pm 12.2) and included higher proportion of male (61.5% vs 32.7%) compared to caregivers without difference in educational years between the two groups. The mean survivor self-ratings of CETI was significantly higher than caregivers (65.3% vs 58.7%). The largest overestimation was shown in the items; 1) initiation of conversation with people not close family and 2) participating in a conversation with strangers. Conclusion : Stroke survivors with aphasia overestimate their communication ability compared to caregivers. This information will help clinicians to make care planning. Further research comparing self-overestimation to rehabilitation participation and success as well as underlying neural mechanism of unawareness is needed. Keywords : stroke, anosognosia, rehabilitation

PP25 C-149

EFFICACY OF INTRAVENOUS THROMBOLYSIS WITH TISSUE PLASMINOGEN ACTIVATOR IN ELDERLY PATIENTS WITH ACUTE ISCHEMIC STROKE - FUKUOKA STROKE REGISTRY (FSR)

Ryu MATSUO, Masahiro KAMOUCI, Tetsuro AGO, Junya KURODA, Takahiro KUWASHIRO, Hiroshi SUGIMORI, Takanari KITAZONO (*Department of Medicine and Clinical Science, Graduate School of Medical Sciences, Kyushu University, Japan*)

Introduction : Intravenous tissue plasminogen activator (t-PA) therapy is efficacious to improve clinical outcomes in patients with acute ischemic stroke. However, the benefit of its use for elderly patients remains unclear. The aim of this study is to elucidate the efficacy of t-PA therapy for Japanese elderly patients. Method : In the database of Fukuoka Stroke Registry, a prospective multi-centered study for acute stroke in Japan, 13529 of stroke patients were registered from June 1999 to June 2012. In this study, we included 152 elderly patients (>80 years old) with acute ischemic stroke treated with t-PA therapy (tPA group) and age- and sex-matched 152 patients with acute ischemic stroke without t-PA therapy (non-tPA group). Neurological severity was assessed by NIH stroke scale (NIHSS) score. Good recovery was defined as decrease in NIHSS more than 4 during hospitalization or NIHSS 0 at discharge. Good functional outcome was defined as modified Rankin Scale 0-1. Results : The frequency of good recovery and good functional outcome at discharge was significantly higher in tPA group (68% and 18%) than in non-tPA group (51%, p=0.006 and 7%, p=0.006). The prevalence of in-hospital mortality was significantly lower in tPA group (11%) than in non-tPA group (23%, p<0.001). In multivariable analysis, t-PA therapy was independently associated with good recovery (OR 2.7, 95% CI 1.9-4.1, p<0.001), good functional outcome (OR 11.2, 95% CI 5.7-21.9, p<0.001) and in-hospital mortality (OR 0.57, 95% CI 0.31-0.98, p=0.04). Conclusion :

Elderly patients may be treated efficiently with intravenous t-PA.
Keywords : tissue plasminogen activator, elderly, outcome

PP25 C-150

PREDICTION METHOD FOR FUNCTIONAL RECOVERY OF STROKE PATIENTS USING A TIME CONSTANT MODELING

Shotaro SASAKI¹, Yoshitsugu OMORI¹, Seiichiro SUGIMURA¹, Mayumi HATAKEYAMA¹, Eri NAKAMURA¹, Makoto SUZUKI², Masuo SASA¹, Setsu IJIMA³ (1. Dept. of Rehabilitation Medicine, St Marianna University School of Medicine Yokohama City Seibu Hospital, Japan; 2. Faculty of Medical Technology, Niigata University of Health and Welfare, Japan; 3. Graduate School of Comprehensive Human Science, University of Tsukuba, Japan)

Introduction : We conducted a Longitudinal study to examine the validity and applicability of time constant modeling for predicting functional recovery of stroke patients. Method : The data for one hundred twenty-four inpatients with post-stroke were used in this study. The mean time after stroke event was 5.2 days (standard deviation 5.1days). Functional Independence Measure (FIM) scores were periodically assessed during hospitalization. These measurements were carried out on 4 occasions: initial assessment within 1 weeks following stroke onset, and at weeks 2,3 and 4 following the initial evaluation. Recovery of FIM scores at the 4th week was predicted using a time constant equation derived from the initial 3 evaluations. To assess the general applicability of time constant modeling, a conventional linear regression analysis was performed to compare the model prediction with the actual values for the FIM scores. Results : Although the samples in our analysis showed a wide variety of disability levels on admission (FIM scores 18-118), the predicted FIM scores derived from the time constant modeling agreed well with the actual FIM scores at the 4th week. Regression analysis showed a good correlation between the prediction and actual FIM scores ($R^2 = 0.937$). The number of patients with the predicted FIM scores higher than the actual scores was 18 out of 124. Conclusion : Provided with three initial time-point samplings, the time constant modeling allows good prediction of functional recovery for individuals. Since this modeling is mathematically simple, it can be widely applied in daily clinical practice. Keywords : activity of daily living, prognosis, stroke

PP25 C-151

A COMPARISON OF COMMUNITY-ONSET BACTEREMIC ISOLATES BETWEEN THE ELDERLY AND THE YOUNGER: A SIX-YEAR LONGITUDINAL STUDY

Ching-Chi LEE, Wen-Chien KO (Departments of Internal Medicine, National Cheng Kung University Hospital, Taiwan)

Introduction : To investigate the difference of the pathogen distribution of the community-onset bacteremia between the elderly and the young patients. Method : A case-control study of bacteremic patients sampling were conducted retrospectively in the emergency department, during the period between 2005 and 2010. A trend of major bacteremia-causing pathogens was analyzed by years. Results : Of 80,058 patients with blood culture sampling, 1526 (1.9 %) elderly patients (>65 years) was case patients and 919 younger patients (<65 years, 1.1%) was regarded as control patients. Of the total 2729 bacteremia-causing isolates (case patients, 1722 isolates; control, 1007), similar distribution of major pathogens in the case and control patients were observed; majority was Escherichia coli (37.9% and 33.9%, respectively), followed by Klebsiella pneumoniae, Staphylococcus aureus, Pseudomonas aeruginosa, Proteus mirabilis, Enterococci faecalis, Streptococcus viridans, Streptococcus agalactiae, Bacteroides fragilis and Salmonella enteritidis. In further analyses,

these was a increased trend of the proportion of extended-spectrum β -lactamase(ESBL)-producers among the case patients with Enterobacteriaceae bacteremia by years ($\gamma=0.95$, $P<0.001$), dissimilar to a decreased trend in the control patients ($\gamma=-0.16$, $P=0.04$). Moreover, these was also a increased trend of methicillin-resistant S. aureus (MRSA) among the case patients with S. aureus bacteremia ($\gamma=0.61$, $P<0.001$) and no trend of MRSA in the control patients ($\gamma=-0.004$, $P=0.96$). Conclusion : With increased trends of MRSA and ESBL-producing Enterobacteriaceae in the elderly with community-onset bacteremia, the further investigations discussed the risk factors and clinical impact of these resistant pathogens and the antimicrobial strategy for the elderly community-onset bacteremia were needed. Keywords : community-onset bacteremia, the elderly

PP25 C-152

ALZHEIMER'S DISEASE RULED OUT BY NO ERRORS IN POCKET SMELL TEST

Ib TRANE CHRISTENSEN¹, Elna-marie LARSSON², Ida HOLM³, Ole NIELSEN⁴, Stig ANDERSEN⁵ (1. Geriatrics, Aalborg University Hospital, Denmark; 2. BFC/Rontgen, Akademiska sjukhuset 751 85 Uppsala, Sweden; 3. Patologisk, Randers Hospital, Denmark; 4. Geriatrisk Afd., Aalborg Sygehus / Arhus Universitetshospital, Denmark); 5. Dept. of Geriatric Medicine, Aalborg University Hospital, Denmark)

Introduction : Hyposmia may be an early symptom of Alzheimer's disease (AD). Tests of olfaction are cheap, fast and simple and may add valuable information in the work-up on patients with cognitive decline. The purpose of this study was to assess Pocket Smell Test (PST) for discriminating patients with AD from healthy controls and to evaluate the contribution to the AD-diagnosis in patients referred for suspected dementia. Method : Study I comprised 20 patients with mild to moderate AD compared to 20 healthy age- and gender-matched controls. Study II comprised 50 consecutive patients referred for cognitive impairment. We performed 2 different PSTs, mini mental state examination test and assessed Geriatric Depression Scale. The AD diagnosis was given according to the ICD-10 criteria. Results : Healthy controls and AD patients differed markedly in olfaction performance based on the two PST's in study I ($p<0.001$). In study II, AD was diagnosed in 24 while minimal cognitive impairment was detected in 8, vascular dementia in 7, alcohol induced impairment in 6, depression in 4 and Parkinson's disease and Lewi body dementia in 1 each. AD/non-AD had 2.4/3.2 correct answers ($p=0.06$). None in the AD group had 0 smell errors and odds ratio for AD was 0.08 (95%-CI: 0.009-0.7) in patients with 0 or 1 smell error ($p=0.023$) after adjusting for age. Conclusion : AD had more scent errors than healthy controls and 0 error was seen only in non-AD patients with other causes of cognitive impairment. This suggests the inclusion of PST in first line examination of patients with cognitive decline. Keywords : Alzheimer's disease , Diagnostic smell Test

PP25 C-153

THREE-DIMENSIONAL QUANTIFICATION OF DENTAL PLAQUE USING SWEEP-SOURCE OPTICAL COHERENCE TOMOGRAPHY

Yoshihiro HESHIKI¹, Yuki KANEHARA¹, Kousuke KIRIHARA¹, Nobuyoshi OZAWA¹, Junji TAGAMI², Yasunori SUMI¹ (1. Department for Advanced Dental Research, National Center for Geriatrics and Gerontology in Japan, Japan; 2. Department of Restorative Sciences, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Japan)

Introduction : The major causes of tooth loss are caries and periodontal

disease. The pathogenic factor of these diseases is dental plaque. There have been many indices in the literature for measuring or quantifying dental plaque. However, most of these indices are assessed by dentists using visual examination, having a subjective component due to investigator interpretation. An objective method for the evaluation of dental plaque is required in clinical practice. The purpose of this in vivo study was to investigate swept-source optical coherence tomography (SS-OCT) as a new tool for evaluating 3-dimensional dental plaque more objectively. Method : The National Center for Geriatrics and Gerontology has developed a new swept-source optical coherence tomography (SS-OCT) system (dental OCT) jointly with Santec Corporation in Aichi Japan in an official collaborative relationship between industry and government. We evaluated dental plaque in 25 patients using the dental OCT at the Division of Oral and Dental Surgery, National Centre for Geriatrics and Gerontology. The 3-dimensional data provided by SS-OCT were analyzed by analysis software (AVIZO®). The study was approved by the Institutional Review Board of the National Center for Geriatrics and Gerontology in Japan. Results : Three-dimensional data of dental plaque were clearly observed by SS-OCT, and it was possible to calculate the area and volume of dental plaque. Conclusion : This method has the potential for objective quantitative measurement screening of dental plaque. SS-OCT may, therefore, be an appropriate method for objective evaluation of dental plaque. Keywords : SS-OCT, Dental plaque, Quantification

PP25 C-154

TWO-DIMENSIONAL DETECTION OF DENTAL PLAQUE USING SWEEP-SOURCE OPTICAL COHERENCE TOMOGRAPHY (SS-OCT)

Yuki KANEHARA¹, Yoshihiro HESIKI¹, Kousuke KIRIHARA¹, Nobuyoshi OZAWA¹, Junji TAGAMI², Yasunori SUMI¹ (1. Department for Advanced Dental Research, National Center for Geriatrics and Gerontology in Japan, Japan; 2. Department of Restorative Sciences, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Japan)

Introduction : The main causes of tooth loss are caries and periodontal disease, both of which are plaque-related. One of the most effective means of preventing tooth loss is evaluating the adhesion condition of the dental plaque exactly and removing it. However, because most dental plaque indices have a subjective component due to investigator interpretations, almost all of them lack objectivity. Optical coherence tomography (OCT) has emerged as a high-resolution, noninvasive, and objective clinical imaging application. The purpose of this in vivo study was to show 2-dimensional OCT images of dental plaque obtained using a swept-source OCT (SS-OCT) system. Method : The National Center for Geriatrics and Gerontology (NCGG) has jointly developed a new SS-OCT system with Santec Corporation in Aichi Japan in an official collaborative relationship between industry and government. Dental plaque OCT imaging was carried out using our new SS-OCT system with 10 healthy volunteers using a hand-held in vivo OCT scanning probe. The dental plaque was extracted by Photoshop, and the analysis of the thickness, length and cross section of the plaque was carried out. Results : Vertical and horizontal OCT dental plaque images were capable of providing simultaneous and noninvasive structural information with high resolution. In addition, a clear distinction between plaque, enamel and dentin was possible with OCT images. Conclusion : It is possible to obtain clear images of dental plaque with SS-OCT, and OCT is concluded to be an objective method for detecting the thickness, length, and cross section of dental plaque. Keywords : OCT, Dental plaque, Plaque index

PP25 C-155

OUTCOMES IN CLINICAL NURSING PRACTICE THAT INCORPORATES TRAINING OF SINGING IN GERONTOLOGICAL NURSING EDUCATION

Junko ANDO (Graduate School of Nursing, Hiroshima Bunka Gakuen University, Japan)

Introduction : Music has been incorporated into gerontological nursing education to enable patients to share positive experiences with students through singing old songs and facilitate communication between students and the elderly. This study was conducted to evaluate outcomes in clinical nursing practice incorporating training of singing. Method : Longitudinal survey. Collaborators: Nursing students (n=109). Contents of the survey: Age, Wada's personality inventory (1996), and mood (Sakano, et al., 1994). Analytical methods: Emotional instability and harmony between groups were compared. In addition, from the results of clinical nursing practice, and the results of exploratory factor analysis, we extracted three subordinate concepts (comprised of 13 items). Data were analyzed using SPSS version 19.0. Results : The subjects' mean age was 20.0 (±0.4) years. Regardless of the subjects' emotional instability (high or low), and harmony between groups, after singing all subjects felt more invigorated (p <.05). Subjects with high emotional instability had significantly lower tension, fatigue, and depressive feelings after singing (ts (13) > 14.0, p <.05). Tension, fatigue, and depressive feelings were reduced by singing. Then, results at the end of the training shows the results and valid 'surrounding behavioral change' point 5.4, 'relaxation of tension and time share' point 5.3, 'started talking' 4.8 points. Item, the song of the past 5.8 points and is effective means of communication. Conclusion : The incorporation of singing in gerontological nursing education, it is effective in elderly clinical nursing practice. Keywords: gerontological nursing education, training of singing, clinical nursing practice

PP25 C-156

THE LEADER DEVELOPMENT SEMINAR TO PROMOTE HOME CARE MEDICINE WITH EMPHASES IN GERIATRIC INTERDISCIPLINARY TEAM CARE IN JAPAN

Young-Jae HONG¹, Kazuyoshi SENDA¹, Hisayuki MIURA¹, Aya SEIKE¹, Yuko GOTO¹, Hiroko OHSHIMA², Osamu FUKADA³, Kenji TOBA⁴ (1. Division of Home Care Promotion, National Center for Geriatrics and Gerontology, Japan; 2. Center for Gerontology and Social Science, National Center for Geriatrics and Gerontology, Japan; 3. Office of Strategic Planning and Integration, National Center for Geriatrics and Gerontology, Japan; 4. Director of the Hospital, National Center for Geriatrics and Gerontology, Japan)

Introduction : In the most aged society, Japan, huge health care needs of the elders are not met with conventional clinical practice in hospitals and clinics. One of promising remedies for gap is home care medicine (HCM) with geriatric interdisciplinary team care (GITC). However, infrastructure of HCM remains unprepared, especially in human resources. Method : The first leader development seminar for promotion of HCM with emphases in GITC was held in Tokyo, October 13-14, 2012. From all of 47 prefectures, 78 of physicians, 23 of nurses, 22 of medical social workers, a dentist, two phamasists, 61 of regional executives of Japan Medical Association, and 61 of government officers attended as candidates for leaders in promotion of HCM. The program consisted of didactic lectures, video-based learning on discharge planning conference and home visit, and problem-oriented small group discussions followed by presentation on obstacles to promotion of HCM at their own communities and strategies to conquer them. Results : Nine experts lectured #1. essence

of HCM, #2. principles and skills in GITC, care for geriatric syndrome, and end-of-life care, #3. demographic aspects and administrative considerations on HCM, #4. examples of HCM promotion at metropolitan suburbs. It was the first time for the leader candidates from three different sectors to gather and discuss promotion of HCM. Conclusion : It was the first step to motivate local leaders in promotion of HCM. Next step is to strengthen each of practitioners' knowledge and skills in HCM at their communities with the leadership of attendants. Keywords : home care medicine, geriatric interdisciplinary team care, leader development

PP25 C-157

EDUCATION PROGRAM FOR OCTOGENARIANS TREATED WITH VITAMIN K ANTAGONIST

Marie-Line GAUBERT-DAHAN¹, Dominique BONNET-ZAMPONI², Eric PAUTAS³, Claire BAL DIT SOLLIER⁴, Marie-Claude AUMONT⁵, Sylvie LEGRAIN⁶ (1. *Geriatric, APHP Hopital Bretonneau, France*; 2. *Observatoire des Medicaments des Dispositifs Medicaux et des Innovations Therapeutiques, Agence Regionale de Sante Ile de France, France*; 3. *Geriatric, APHP Hopital Charles Foix, France*; 4. *Centre de Reference et d'Education des Anti-Thrombotiques d'Ile de France, APHP Hopital Lariboisiere, France*; 5. *Cardiologie, APHP Hopital Bichat-Claude Bernard, France*; 6. *Direction de l'Offre de Soins et Medico Sociale, Agence Regionale de Sante Ile de France, France*)

Introduction : The aim of this poster is to present a new therapeutic education program for octogenarians treated with vitamin K antagonist (VKA). Method : The program was developed by several health professionals involved in education for octogenarians treated with VKA in 4 hospitals of the Assistance Publique - Hopitaux de Paris, because existing programs for patients treated with VKA were not suitable for octogenarians. First, a repository of skills (especially safety skills) needed to the octogenarians treated with VKA was created. The program includes 3 sessions. The messages focus on major risk factors of treatment's destabilization; they are adapted for each patient's situation. Several educational tools were created: a questionnaire and a clinical case for patient's evaluation, a workshop about the therapeutic range of the International Normalized Ratio, a personalized document given to the patient at the end of the session. Results : Seventeen patients (82 ± 5 years old) were included since the beginning of the program. Fifteen patients were evaluated at program's end. Six patients acquired all the skills chosen at their initial individual assessment; the acquisition was incomplete for 9 patients, the most difficult skills to acquire were 'recognize and respond to situations of treatment's destabilization' (7 patients) and 'recognize and respond to warning signs' (6 patients). The notion of occult bleeding was difficult to understand by patients. Conclusion : For comorbid patients, it appears necessary to agree with them about their chronic diseases and their long-term treatment before starting the program and to set up individual sessions. Keywords : patient education, vitamin K antagonist

PP25 C-158

EVALUATION OF AGING RATE BASED ON THE INDIVIDUAL BIOLOGICAL AGE FOR HEALTHY MEN AND WOMEN IN CHINA

Xiaojuan BAI¹, Bing WU¹, Lulu HAN¹, Xiangmei CHEN² (1. *Departments of Gerontology and Geriatrics, The First affiliated Hospital of China Medical University, China*; 2. *Department of kidney, General Hospital of Chinese PLA, China*)

Introduction : Aging can be defined as a phenomenon of progressive

and cumulative decline in the body's physiological function, so aging rate is related to Chronological age (CA). However, aging is a highly individualized process. There is no study about the aging rate according to biological age (BA). The purpose of this study is sought to evaluate the aging rate between CA and BA which derived from biological age score (BAS) equation in healthy Chinese adults. Method: The BAs of 699 individuals (308 men, 391 women) from 30-85 years of age were computed based on the BAS equation. A narrow age cohort design was applied to examine the relationship between CA and BA, whereas BA<CA, BA=CA and BA>CA represent the slower, parallel and faster aging rate, respectively. Co-variant analysis was applied to assess the difference aging rate among the slopes of regression lines of BA to CA. Results : According to the relationship between BA and CA, women were divided into slower (30-45 y), parallel (>45-65 y) and faster aging rate groups (>65-85 y), men were divided into slower (30-50 y), paralleled (>50-60 y), fastest (60-75 y) and faster aging rate groups (>75-85 y). The slopes of the regression line of BA to CA for women and men showed significant difference among aging-rate groups (p<0.05) respectively. Conclusion : The aging rate is not constant during different life stage for healthy people in China. In order to evaluate the aging rate we should pay more attention to the important role of BA besides CA. Keywords : Aging rate; Chronological age; Biological age

PP25 C-159

THE CO-OCCURRENCE OF MULTIPLE GERIATRIC CONDITIONS AND THEIR ASSOCIATED FACTORS AMONG OLDER ADULTS IN TAIWAN: RESULTS FROM A NATIONALLY REPRESENTATIVE SURVEY

Chia-Lin LI¹, Hsing-Yi CHANG², Hui-Hsuan WANG¹, Kuang-Hung HSU¹ (1. *Department of Health Care Management, Chang Gung University, Taiwan*; 2. *Division of Preventive Medicine and Health Service Research, Institute of Population Health Sciences, National Health Research Institutes, Taiwan*)

Introduction : Geriatric conditions, such as falls, urinary incontinence, cognitive impairment and depressive symptoms, are highly prevalent and are associated with adverse health outcomes in older adults. There were two aims of this study. First, we investigated the co-occurrence of multiple geriatric conditions in the older adult population. Second, we explored factors associated with the co-occurrence of multiple geriatric conditions in older adults. Method : We analyzed data from a nationally representative sample of people aged 65 years and over (N=2727), participating in the 2005 National Health Interview Survey in Taiwan. We used self-reported data on the following geriatric conditions: (1) falls: one or more injurious fall in the past year; (2) urinary incontinence: loss of urine beyond the participant's control in the previous year; (3) cognitive impairment; (4) depressive symptoms. The Mini-Mental State Examination was used to assess cognitive function. The Center for Epidemiologic Studies Depression Scale was used to assess depressive symptoms. Results : Of participants aged 65 years or older, 56.1% had at least one of the four geriatric conditions, and 22.4% had two or more conditions. Respondents with two or more conditions were more likely to be female, have two or more other chronic diseases, and have been hospitalized in the past year, and less likely to have high education, high social support, and positive self-rated health. Conclusion : The co-occurrence of multiple geriatric conditions is prevalent in older adults, suggesting that disease-orientated geriatric care might not be enough. Comprehensive assessment and coordinated management of common geriatric conditions is important. Keywords : geriatric conditions

PP25 C-160

THE EFFECTS OF CAROTENOID INTAKES ON INTELLIGENCE IN COMMUNITY-DWELLING JAPANESE MIDDLE-AGED AND ELDERLY

Fujiko ANDO¹, Yukiko NISHITA², Chikako TANGE², Yuki KATO², Tomoko IMAI³, Rei OTSUKA², Hiroshi SHIMOKATA² (1. Faculty of Health and Medical Sciences, Aichi Shukutoku University, Japan; 2. Department for Development of Preventive Medicine, National Center for Geriatrics and Gerontology, Japan; 3. Faculty of Human Life and Science, Doshisha Women's College of Liberal Arts, Japan)

Introduction : The purpose of this study is to evaluate the longitudinal effects of carotenoid intakes on intelligence in Japanese middle-aged and elderly. **Method :** The subjects were 2,104 men and women who participated in a population-based cohort study (NILS-LSA), and were examined biannually to 8 years later. Intakes of vegetables, fruits and carotenoids were estimated by 3-Day dietary record at baseline. Intelligence was assessed with the Japanese Wechsler Adult Intelligence Scale-Revised Short Forms, subtests including; Information (possible range of score 0-29), Similarities (0-28), Picture-Completion (0-21), and Digit-Symbol (0-93), at each examination. General linear mixed model comprised of fixed effects of each carotenoid or food intake controlled for season, time from baseline, their interaction and covariates (age at baseline, education levels and smoking status). Individual variance (intercept and slope to time) assigned as random effects. **Results :** The main effects of beta-carotene and vegetables (especially carotene-rich vegetables) on Information were significant in men and women. Those of fruits and alpha-carotene were also significant only in men. The scores of Information in the 1st tertile of beta-carotene and vegetables in men were -1.02±0.34 (lsmeans and s.e., p=0.0031) and -0.91±0.34(p=0.008) compared with those in the 3rd tertile, respectively. There were no significant interactive effects on Information. As for Similarities in men, the main and interactive effects were significant in beta-carotene and cryptoxanthin and the effects of these carotenoids attenuated gradually. **Conclusion :** Carotenoid rich food intakes may keep crystallized intelligence at high level in the middle-aged and elderly. This work was supported by KAKENHI(23500974) from the MEXT, Japan. **Keywords :** carotenoids, intelligence, longitudinal study

PP25 C-161

RELATIONSHIP BETWEEN FASTING PLASMA GLUCOSE AND FUNCTIONAL FITNESS PERFORMANCE IN ELDERLY MALES LIVED IN RURAL COMMUNITY

Meng-Tzu HOU¹, Jin-Jong CHEN², Chih-Hsing WU³ (1. Physical Therapy and Assistive Technology, National Yang-Ming University, Taiwan; 2. Exercise and Health Science Research Center, Nation Yang-Ming University, Taiwan; 3. Department of Family Medicine, National Cheng Kung University Hospital, Taiwan)

Introduction : The purpose of this study was to disclose the relationship between physical fitness performance and serum biochemistry parameters focusing on the fasting plasma glucose in old male lived in rural community in Taiwan. **Method :** An epidemiological survey was performed for 1033 men aged 65 and over lived in Tianliao District, Southern Taiwan. A total of 414 subjects were enrolled, the respond rate was 60.8%. Structured questionnaires were inquired by face-to-face for each subject. The physical fitness tests included grasp test of dominant hand (grip-D, TKK 5401, Japan), muscle strength/endurance (30-s chair stand test), balance (open-eye stand on right foot), flexibility (chair sit-and-reach test), and reaction (8-feet walking test) were measured accordingly. After an overnight fast, fasting glucose, albumin, GOT, glomerular filtration rate (GFR-MDRDs) and high density lipoprotein cholesterol (HDLc) were

measured through venous blood test. **Results :** There were 402 subjects completed the study, the average age was 74.5±6.0 (range=65-98) y/o. Using multiple linear regression models, the fasting glucose was negatively independent factor (β coefficient) for different physical performance tests: 30-s chair stand test (-0.102), Open-eye stand on right foot (-0.168), 8-feet walking test (0.106), grasp test (-0.090). **Conclusion :** Fasting plasma glucose is highly correlated with functional fitness performance in the elderly. The biochemistry parameters can be used to screen the status of physical functions, especially the fasting plasma glucose, in the old males lived in rural community. **Keywords :** Functionl fitness, Fasting glucose, Epidemiological survey

PP25 C-162

CHANGES OF PHYSICAL TEST RESULTS AMONG COMMUNITY LIVING ELDER JAPANESE PEOPLE DURING A 5-YEAR FOLLOW-UP

Motohiko HARA¹, Hiromi NAKAMURA-THOMAS¹, Takahashi KUNIYASU¹, Hiroko IWAMITSU¹, Hiroaki NOBUHARA¹, Ikuo MUROHASHI¹, Chiyo FUJII¹, Shiori GOJYO¹, Koichi KOMAKI¹, Takahiro UENO², Masayoshi SOMA² (1. School of Health and Social Services, Saitama Prefectural University, Japan; 2. Department of Medicine, Nihon University School of Medicine, Japan)

Introduction : This study addressed changes of physical test results among community living elder Japanese people during a 5-year follow-up by comparing the group who lived in a downtown area (group D) and in a rural area (group R). **Method :** There were 132 participants in group D (40 men and 88 women, mean age 71.7) and 52 in group R (16 men and 36 women, mean age 73.7). Physical tests for analysis were Grip power (GP), Muscle strength of leg extension (MSLE) and time duration of one-foot standing with eyes closed (OFS). Data were analyzed between groups, and between the baseline and re-test within each group. **Results :** The mean age in group R was significantly higher than in group D. In comparison between the initial test and re-test, no significant difference was identified in GP and MSLE data both within the groups. Concerning the OFS, group D showed significant improvement during the 5-year follow-up and group R showed no significant difference between the baseline and re-test results. In comparisons between the groups, significant differences were not identified in GP and MSLE at the baseline while group R showed significant declines in GP and MSLE results during the 5-year follow-up than group D. **Conclusion :** It was suggested that age, opportunities of health education and flat geographical characteristics would contribute to the differences in OFS results between the groups. **Keywords :** physical test, 5-year follow-up

PP25 C-163

FACTORS ASSOCIATED WITH DIABETIC CONTROL AMONG THE MIDDLE-AGED AND ELDERLY WITH TYPE 2 DIABETES PATIENTS IN KOREA

Myung KI¹, Sujin BAEK², Youngduk YOON², Baegju NA³ (1. Department of Preventive Medicine, Eulji University, Korea; 2. Health Insurance Policy Research Institute, Korean National Health Insurance Corporation, Korea; 3. Department of Preventive Medicine, Konyang University, Korea)

Introduction : A better glycemic control in the elderly compared to the middle-aged type-2 diabetes patients is well-known, despite the increases in impaired insulin secretion and comorbidities. Notwithstanding this, hospitalization among diabetes patients has been higher for the aged. **Method :** 13,969, newly diagnosed with diabetes

during 2002-2006, aged 40-79 years, were drawn from a retrospective cohort study with about 1 million people from Korean National Health Insurance Data. Factors associated with diabetic control including continuity of care(COC) indicators (i.e., Usual Provider Continuity(UPC)) were measured over first two years of three years follow-up(2007-2009) and outcome measures including both health utilization measures (i.e., hospitalization) and clinical outcomes (i.e., fasting blood sugar(FBS)) for the last year of follow-up. Using logistic regression, we investigated risk factors associated with poor diabetic control. Results : While other factors such as COC were consistently associated with hospitalization and poor diabetic control, age was seen for having opposite effects on these outcomes; negatively with hospitalization and positively with diabetic control. This persisted after adjustments for other covariates such as comorbidities but substantially attenuated by the adjustment for body mass index. Further, the positive association between age and diabetic control was not uniform across age groups. COC indices were negatively associated with FBS level and hospitalization; e.g. odds ratio(OR)s associated with UPC were 0.59(0.44-0.81) for hospitalization and 0.90(0.82-0.99) for FBS control. Conclusion : Age plays a different role for hospitalization and diabetic control and reversal of obesity with ages partially accounts for the disparity. Increase in COC benefits the elderly and middle-aged to similar degree. Keywords : diabetes management, continuity of care, glycemic control

PP25 C-164

EFFECTS OF 12-WEEK CIRCUIT EXERCISE TRAINING ON PHYSICAL FITNESS OF OLDEST OLD PEOPLE

Chun-Fang CHAN¹, Meng-Tzu HOU¹, Jing Jong CHEN², Hsuei-Chen LEE¹ (1. Department of Physical Therapy and Assistive Technology, National Yang-Ming University, Taiwan; 2. Exercise and Health Science Research Center, National Yang-Ming University, Taiwan)

Introduction : Physical fitness is considered as an essential factor of successful aging, and circuit training, a combination of aerobic and resistance training, is recommended to optimize the goal. This study aimed to examine the dose-response effects of 12-week circuit training on performance for oldest old people. Method : This was a quasi-experimental study. The participants were recruited from the Veterans Homes in Taipei. Exercise group (EG) received the circuit training twice per week for 12 weeks. Each program contained the warm-up, cardiopulmonary fitness, strengthening and balance training for 50minutes. The control group (CG) was asked to maintain their daily life. Measurements contain chair stand, arm-curl, 2-minute step, one-leg standing (1LS), back scratch, sit-and-reach and 8-foot up-and-go (8FUG). Results : One hundred and thirty-nine males (age 83.3 years) were recruited: 41 in exercise group (age 83.3 years) and 98 in control group (age 83.2 years). After 12-week intervention, exercise group had better performance than control group in chair stand ($p=.004$); arm-curl ($p=.037$); 2-minute step ($p<.001$); one leg standing ($p=.011$); back scratch ($p=.023$) and 8FUG ($p=.019$). Conclusion : After 12-week exercise intervention, exercise group showed significant improvements on aerobic endurance and muscle strength than other oldest old people in Veterans Homes. More studies are recommended to find out the exercise intensity and protocol for the oldest old people in the long term care facility. Keywords : physical fitness, circuit training, oldest old people

PP25 C-165

VELOCITY OF TRAINING AND BODY COMPOSITION OUTCOMES: A PILOT STUDY

Melissa POWERS, Paul D. HOUSE, Kristin BOGDA, Kelsey HUBBLE, Megan SMITH (Kinesiology & Health Studies, University

of Central Oklahoma, USA)

Introduction : High-velocity resistance training is a useful way to improve or maintain body composition and functionality among older adults. However, this information has not been successfully translated into practice. The purpose of this pilot study was to determine the feasibility of conducting high-velocity resistance training in the community using free-weights with the primary outcome being body composition. Method : Thirteen participants (age 71.46 ± 5.33 years) were randomly assigned to a high-velocity (HV) or low-velocity (LV) group. Both groups trained for 12 weeks at 60% of 1-repetition maximum. The only difference between groups was the instruction given for the concentric phase of each lift. The HV group was instructed to "lift as quickly as possible." A total body iDXA scan was conducted at baseline and following training to determine measures of fat mass (FM) and lean tissue mass (LTM). Results : ANOVAs with repeated measures indicated no significant interaction or main effects for any dependent variable ($p > .05$). Effect sizes, calculated due to the small sample size, indicated a small increase in arm FM in the HV ($d = 0.20$) and LV ($d = 0.18$) groups. Conclusion : HV appears to be feasible in the community, however, HV nor LV significantly impacted body composition outcomes. No change in LTM may be positive as older adults would be expected to lose LTM. This study is limited by the small sample size and lack of control group. Further study is warranted in order to determine if HV can be successfully translated into the community setting. Keywords : exercise, resistance training, body composition

PP25 C-166

THE EFFECTS OF COMBINED AEROBIC AND RESISTANCE EXERCISE ON ANTHROPOMETRIC PARAMETER AND PHYSICAL FUNCTION IN VETERAN INSTITUTION OLDEST-OLD MALE

Meng-Tzu HOU¹, Jin-Jong CHEN² (1. Physical Therapy and Assistive Technology, National Yang-Ming University, Taiwan; 2. Exercise and Health Science Research Center, National Yang-Ming University, Taipei, Taiwan, Taiwan)

Introduction : The purpose of the study was to evaluate the effectiveness of exercise intervention that combined aerobic and resistance in male elderly. Method : We collected 114 men aged 75 and older in veteran institution. People who are bed-ridden, impaired walking, or communication disorder were excluded. The subjects will be randomized assessed to the combined training (CT) group ($n=41$) or control group ($n=73$), CT group accepted the resistance training and aerobic exercise twice per week. The items of assessment included: Anthropometric parameter: waist to hip ratio, calf and arm circuit; Rapid Assessment of Physical Activity (RAPA) was estimated quality of physical activity. Senior fitness test was measured to assess physical function. All tests were done at baseline and 12 weeks later. Results : The mean age of CT group ($y/o=83.3$) and control group ($y/o=84.5$). The base-line characteristics of the two groups were similar. RAPA didn't have different between two groups. After 12 weeks intervention, senior fitness performance improved significantly in CT group: 30 sec chair stand test ($p=0.002$), arm curl test ($p=0.034$), 2-minute step test ($p=0.004$) and 8-foot up-and-go test ($p=0.002$). CT group was significant better than control group: 30 sec chair stand test ($p=0.001$), arm curl test ($p=0.011$), 2-minute step test ($p<0.001$), chair sit-and-reach test ($p=0.041$), single leg stand ($p=0.041$) and 8-foot up-and-go test ($p=0.01$). The control group maintained physical function and physical activity. Conclusion : After 12 weeks combined aerobic and resistance exercise training, physical functions and muscle strength improved in veteran institution oldest-old male, but anthropometric

parameter had no change in a short time. Keywords : Combined training, Senior fitness test, Oldest-Old Male

PP25 C-167

FINDINGS REGARDING RELATIONSHIPS BETWEEN SOCIO-DEMOGRAPHIC, PSYCHOLOGICAL AND COMORBIDITY FACTORS, WITH THE FUNCTIONAL STATUS IN OUR GERIATRIC INPATIENTS

Ana CAPISIZU¹, Sorina AURELIAN², Andreea ZAMFIRESCU³, Ioana OMER⁴, Monica HARAS⁵, Camelia CIOBOTARU⁶, Liliana ONOSE⁷, Tiberiu SPIRCU⁸, Gelu ONOSE⁸ (1. *Geriatrics, Chronic Diseases Hospital 'Sfantul Luca', Romania*; 2. *Gerontology and Geriatrics, The 'Titu Maiorescu' University, Romania*; 3. *Geriatrics, Hospital of Chronic Diseases 'Sf. Luca', Romania*; 4. *Psychology, The 'St.Lucas' Hospital, Romania*; 5. *Physical Medicine & Rehabilitation, The University of Medicine and Pharmacy 'Carol Davila', Romania*; 6. *Rehabilitation, The University 'Ovidius', Romania*; 7. *Occupational Medicine, The Medical Service of 'Metrorex', Romania*; 8. *Biostatistics, The University of Medicine and Pharmacy 'Carol Davila', Romania*)

Introduction : To our knowledge, there are no reported research data regarding the relationships between depressive disorders and functional status in Romanian elderly. Aim: To statistically assess the impact of socio-demographic and quantified depressive symptoms, and co-morbidity factors on disability in our inpatients. Method : Observational cross-sectional study including a number of 80 elderly (16 males,64 females; mean age 72.48 years; standard deviation 9.95 years) admitted in our Geriatrics Division between May-July, 2012. We used the: Functional Independence Measure, Geriatric Depression Scale and an array of socio-demographic and polipathology parameters, respectively. Statistical analysis included Somers'D for ordinal variables, linear bivariate correlations, general linear model analysis, ANOVA and Kruskal-Wallis, tests. Results : FIM scores were negatively correlated with age ($R=-0.301$; 95%*c.i.*-0.439;-0.163 $p=0.007$), GDS score had a weak, negative impact on FIM ($D=-0.188$; 95%*c.i.*-0.324;-0.052 $p=0.006$). An univariate general linear model, including the other variables (education, living conditions, provenance, gender, matrimonial state) as factors, found living conditions ($p=0.027$) and the combination of matrimonial state and gender ($p=0.004$) to significantly influencing the FIM score. ANOVA showed significant differences in FIM scores stratified by the number of chronic diseases ($p=0.035$). Conclusion : Our study objectifies the negative impact of depression on functional status. Interestingly, education had no influence on FIM scores; the living conditions and the combination of matrimonial state and gender had an important impact on functional scores: patients with living spouses performed better than the divorced/widowers; the number of chronic diseases also affected FIM scores, which were lower in patients with significant polipathology. Keywords : elderly, depression, disability

PP25 C-168

SENIOR FITNESS PERFORMANCE AND NORMATIVE SCORE OF ELDERLY MALE RURAL DWELLERS

Ken-Rung TU¹, Meng-Tzu HOU¹, Chih-Hsing WU², Jin-Jong CHEN¹ (1. *Physical Therapy and Assistive Technology, National Yang-Ming University, Taiwan*; 2. *Family Medicine, National Cheng Kung University Hospital, Taiwan*)

Introduction : In Taiwan, there is no national consensus on the normative score for assessing physical fitness performance in elderly people living in rural communities. The study thus endeavored to set up the normative score and to understand the current status of physical

fitness of elderly male rural dwellers in Taiwan. Method : The study first surveyed the 1,033 men aged 65 up in Tianliao township of Kaohsiung County. After an entire township sampling, 414 subjects were selected to receive examination, resulting in a response rate of 60.8%. Twelve subjects were excluded due to use of assistive devices or severe joint disease. Each subject had completed questionnaires and received physical fitness assessment. The subjects were divided into five 5-year-age subgroups. The normative physical fitness scores were listed by nine-rank percentile distribution (5%, 10%, 25%, 30%, 50%, 70%, 75%, 90%, 95%). Results : The average age of the 402 subjects read 74.5±6.0 years old. The 50 percentile of each physical fitness assessment were listed such as BMI 24.1 kg/m², percent body fat 20.6%, grasp test of dominant hand 33.3 kg, 5-time sit-and-stand 11.2sec, 30-s chair stand test 14 time, open-eye stand on right foot 19.6sec, chair sit-and-reach test -1.2cm, and 8-feet walking test 8.0sec. All physical fitness performance was observed to decrease with ageing. Conclusion : Elderly males in different age groups demonstrate different levels of physical fitness as indicated by the disparities in the normative physical fitness scores, and it seems sensible to adopt different normative physical fitness scores for elderly males living in rural and urban areas. Keywords : epidemiological survey, socioeconomic status , physical activity

PP25 C-169

LARGE PROPORTION OF FRAIL INDEPENDENT OLDER PATIENTS WITH COGNITIVE IMPAIRMENT SHOW FUNCTIONAL DECLINE AFTER EMERGENCY DEPARTMENT VISITS FOR MINOR INJURIES

Veronique PROVENCHER, Marie-Josée SIROIS, Marcel EMOND, Stephanie CAMDEN, Nadine ALLAIN-BOULE (*Unite de traumatologie-urgence-soins intensifs, Centre de recherche du CHA, Hopital de l'Enfant-Jesus, Canada*)

Introduction : Minor injuries such as falls are a common reason for emergency department (ED) visits by seniors and can trigger functional decline. However, predictors of functional decline following ED visit for minor injuries among independent seniors remained unclear. Our hypothesis is that seniors at high-risk of functional decline are more frail and cognitively impaired. Our objective was to compare functional decline of seniors admitted in ED for a minor injury, according to their frailty and cognitive status. Method : 426 participants (≥65 years) who were independent at baseline in basic activities of daily living (BADL) have been consecutively recruited in six Canadian ED. The Older American Resources and Service was completed at 3 months after minor injury to ascertain functional decline (≥1 point-drop in BADL score). Participants were considered as 'frail' based on the CHSA frailty scale (≤level 4:'vulnerable'). Cognitive impairment (CI) was defined as a performance below cut-offs on the Montreal Cognitive Assessment or the Telephone Interview for Cognitive Status. Four subgroups were created: 1-Frail with CI; 2-Frail without CI; 3-Non-frail with CI; 4-Non-frail without CI. Results : Respectively 7.7% and 16.1% of non-frail participants without and with CI showed functional decline. 25.0% of frail patients without CI demonstrated a decrease in BADL score, while loss of independence was observed in 38.5% of frail patients with CI. The difference between groups was significant ($p<0.001$, Fisher exact test). Conclusion : Our study will help identify independent seniors at high-risk of functional decline after minor injury, so that appropriate services may be provided to prevent deterioration in BADL. Keywords : Frailty; functional decline; emergency department

PP25 C-170

DEVELOPMENT OF THE COMPREHENSIVE GERIATRIC ASSESSMENT SCALE FOR CHINESE ELDERLY

Xiu-Ying HU, Na LONG, Lin-Na WU (*The Center of Gerontology and Geriatrics, West China Hospital, Sichuan University, China*)

Introduction : Comprehensive Geriatric Assessment(CGA) is important for the elderly. The domestic research mostly uses the single scale or some specific functional scale for evaluation, and it is difficult to understand older people's comprehensive health status. This article is to establish a comprehensive geriatric assessment scale which fits the situations of Chinese old people most, and to provide an evaluation tool for the proposal and intervention of functional health problems for the elderly. **Method :** The comprehensive geriatric assessment scale was produced by Delphi method combining with Chinese cultural background, some methods such as literature review and experts evaluation were conducted. The manuscript of this questionnaire was developed through Delphi and pre-experiment. Then the manuscript questionnaires were used among 300 old people, to analyse and assess the reliability, validity and reactivity. **Results :** The experiment analysis showed that the total Cronbach alpha coefficient was 0.909 and that of each index ranged from 0.718-0.960, most of the dimension-related coefficients were over 0.5. The construct validity was validated by factor analysis and the cumulative contribution rate was up to 76.88%. Results of non-parametric test on reactivity showed that the differences of total scores and each dimension scores and substitute scores between the elderly from different institutions are statistically ($p < 0.01$). **Conclusion :** The comprehensive geriatric assessment scale owns a reasonable reliability, validity and reactivity, and this scale can be used as an evaluation instrument discovering and intervening the elderly's health problems. **Keywords :** Elderly, Health Function, CGA (Comprehensive Geriatric Assessment)

PP25 C-171

ORTHOSTATIC DIZZINESS, NOT ORTHOSTATIC HYPOTENSION, IS ASSOCIATED WITH FUNCTIONAL DISABILITY IN COMMUNITY ELDERLY IN SOUTHERN TAIWAN

Ying Hsiang HUANG, Feng Hwa LU, Yi Ching YANG, Chih Jen CHANG, Jin Shang WU (*Department of Family Medicine, National Cheng Kung University Hospital, Taiwan*)

Introduction : To evaluate the associated factors of functional disability in the community elderly population. **Method :** A cross-sectional study design with stratified randomized systematic cluster sampling throughout the Tainan city in southern Taiwan, was conducted from Nov. 2000 to May 2001. A total of 1438 elderly aged ~65 years were included. All subjects were interviewed according to a structured questionnaire and received a complete physical examination and measurement of seated blood pressure (BP). Orthostatic hypotension (OH) was defined as a decline in systolic blood pressure of at least 20 mmHg and/or a decline in diastolic BP of at least 10 mmHg after either 1 or 3 minutes of standing after a person changed from a supine to a standing position. Orthostatic dizziness (OD) was defined as dizziness, lightheadedness, or faintness during the standing procedure with any change in systolic or diastolic BP. Functional disability was defined by at least one impairment in ADLs or IADLs contents, respectively. **Results :** Of the 2146 eligible elderly, 1438 (801 men and 637 women) agreed to participate, representing a response rate of 68.2%. Multivariate analysis showed age, lower education, hypertension, cerebrovascular disease, and osteoporosis were independently related to disability in ADLs. Female gender, age, lower education, and cerebrovascular disease were the associated

factors of disability in IADLs after adjusting for other confounders in two different models. Besides, orthostatic dizziness, not orthostatic hypotension, is independent factor associated with functional disability in different models. **Conclusion :** Orthostatic dizziness, not orthostatic hypotension, is independent factor associated with functional disability in different models in community elderly. **Keywords :** functional disability, orthostatic hypotension, orthostatic dizziness

PP25 C-172

DEMOGRAPHIC COMPARISON OF IRANIAN AND PORTUGUESE OLDER PEOPLE: RESULTS FROM THE EASY-CARE PROJECT

Vida ALIZAD¹, Ali ASGARI², Reza FADAYEVATAN¹, Farshad SHARIFI³, Maria Piedade BRANDAO⁴, Liliana SOUSA⁵, Ian PHILP⁶ (*1. Iranian Research Center on Ageing, The University of Social Welfare and Rehabilitation Sciences, Iran; 2. Department of Educational Psychology, The University of Kharazmi, Iran; 3. Elderly Health Research Center, Tehran University of Medical Sciences, Iran; 4. School of Health Sciences, The University of Aveiro, Portugal; 5. Health Sciences Section, The University of Aveiro, Portugal; 6. Warwick Medical School, The University of Warwick, United Kingdom*)

Introduction : Population ageing can be seen as a success story from 20th century public health policies. In the 21st century, a key policy challenge for public health is to promote independence in old age. The EASY-Care assessment instrument generates an independence score which is valid for cross-cultural comparison. The aim of this study was to explore relationships between demographic variables and the independence score in two disparate populations of older people from Iran and Portugal. **Method :** An Ex-Post Facto study was designed. A demographic page and the 18-item Independence Score of the EASY-Care assessment was performed on 460 participants from Portugal and 319 from Iran aged 65 years and over by trained interviewers. Data was analyzed using SPSS version 16. **Results :** Portuguese men were more independent than their Iranian peers while Portuguese women were more dependant in comparison with Iranian women. Iranian literate older people were more independent than Portuguese. Iranian single and divorced participants were more independent in comparison with Portuguese. There were no significant relationship between living arrangement and independence in both countries. **Conclusion :** Findings of this study suggest that independence for older people is a concept related to both cultural and demographic variables. The Independence Score from an EASY-Care assessment is a valuable tool for exploring these relationships. Further studies using data from a larger number of countries should be carried out to explore the determinants of independence in old age. **Keywords :** Independence, EASY-Care, Cross-cultural study, Demographic variables, Older people

PP25 C-173

THE EASY-CARE STANDARD: IS IT SUITABLE FOR USE WITH TURKISH OLDER ADULTS?

Rukiye PINAR¹, Ayse ERGUN², Saime EROL³, Kamer GUR³, Zeynep KURTULUS³, Havva SERT⁴, Zeynep ERDOGAN⁵, Ian PHILP⁶ (*1. Nursing, Yeditepe University Faculty of Health Sciences, Turkey; 2. Nursing, Marmara University Faculty of Health Sciences, Turkey; 3. Nursing, Namik Kemal University, School of Health, Turkey; 4. Nursing, Sakarya University, School of Health, Turkey; 5. Nursing, Marmara University, Faculty of Health Sciences, Turkey; 6. South Warwickshire, NHS Foundation Trust, United Kingdom*)

Introduction : The assessment of elderly people's needs is an important

indicator for planning health and social services that promote independency, well-being and quality of life. A review of the literature on measuring physical, mental, and social needs perceived by elderly yielded no instrument appropriate for use in Turkey. The aim of this study was to evaluate reliability and validity of Easy-care among Turkish elderly. Method : The Easy-care was administered to 400 elderly. Internal consistency, item-total correlations, and test-retest stability were used to investigate the reliability. Construct validity was examined by comparing correlations between subdomains of Easy-care, and using convergent, and divergent validity. Results : Internal consistency was 0.93, 0.75 and 0.64 for the subscales of independence, risk of breakdown in care, and risk of fall respectively. The ICC was found to be 0.87, 0.88 and 0.88 for the three subdimensions. All of the items, except two, correlated significantly with their subscale. Correlation coefficients among sub-domains were ranged from 0.67 to 0.71. Convergent validity supported by high-moderate correlations between EASY-care scores and two main component scores in SF-36. EASY-care subdomains scores were discriminated by living arrangements, educational status, perceived health, urinary incontinence, depression, malnutrition, and history of hospital admission. Conclusion : Turkish Easy-care is a reliable and valid instrument; it can be used to measure functional status of Turkish elderly. Keywords : EASY-Care, Reliability, Validity

PP25 C-174

FINDINGS REGARDING RELATIONSHIPS BETWEEN THYROID FUNCTION AND COGNITIVE DECLINE IN OUR GERIATRIC INPATIENTS

Ana CAPISIZU¹, Andreea ZAMFIRESCU², Monica HARAS³, Sorina AURELIAN⁴, Ioana OMER⁵, Camelia CIOBOTARU⁶, Liliana ONOSE⁷, Tiberiu SPIRCU⁸, Gelu ONOSE⁹ (1. Geriatrics, Chronic Diseases Hospital 'Sfantul Luca', Romania; 2. Gerontology and Geriatrics, The 'St.Lucas' Hospital, Romania; 3. Physical Medicine & Rehabilitation, The University of Medicine and Pharmacy 'Carol Davila', Romania; 4. Gerontology and Geriatrics, The 'Titu Maiorescu' University, Romania; 5. Psychology, The 'St.Lucas' Hospital, Romania; 6. Rehabilitation, The University 'Ovidius', Romania; 7. Occupational Medicine, The Medical Service of 'Metorex', Romania; 8. Biostatistics, The University of Medicine and Pharmacy 'Carol Davila', Romania; 9. Physical Medicine & Rehabilitation, The University of Medicine and Pharmacy 'Carol Davila', Romania)

Introduction : Numerous studies have analysed the relationship between the thyroid function and cognitive decline, but they gave contradictory results. In Romania, to our knowledge, there haven't been any published data from clinical studies investigating the connection between thyroid status and cognitive decline in elderly. Method : Observational cross-sectional one year study (2011-2012), on 93 geriatric inpatients (69 females, 24 males, mean age 79.95±6.60 years) with cognitive decline. We assessed the cognitive deficit by psychological tests: MMSE, Clock test, Reisberg scale and the thyroid function by determining thyrotropin/TSH, total triiodothyronine/tT3, and free thyroxine/FT4 plasma levels. Statistical analysis included linear correlations, general linear models and data comparison, using t test or Mann-Whitney test. Results : We found no significant linear correlations between cognitive scores and thyrotropin/thyroid hormones ($R \leq 0.090$, $p \geq 0.050$, for all bivariate correlations investigated). To further investigate we stratified the patients by TSH tertiles. The analysis showed that patients in the low TSH tertile had significantly better MMSE scores than those in the middle ($p=0.045$) and high tertile (0.039); we found no significant differences between MMSE scores for patients in the middle TSH tertile versus the third

one ($p > 0.050$). The Clock test and Reisberg Scale scores were similar in the 3 groups ($p > 0.050$). Conclusion : There were no linear relationship between cognitive scores and thyroid function. After stratification MMSE scores were significantly higher for patients with lower TSH. There were no significant differences between the Clock test's and Reisberg scale's scores, even if stratified by TSH tertiles. Keywords : elderly, cognitive decline , thyroid function

PP25 C-175

ORAL SENSATION ,SALIVARY SECRETION AND TONGUE STRENGTH FOLLOWING ENDOTRACHEAL EXTUBATION Han SU (National Taiwan University, School of Nursing, Taiwan)

Introduction : Loss of oral sensation, declined salivary secretion, and decreased tongue strength may occur after prolonged endotracheal intubation. All the above may affect oral intake following endotracheal extubation. The aim of this study was to assess the functional recovery of oral sensation, salivary secretion, and tongue strength in patients with prolonged endotracheal intubation. Method : A prospective observational study was conducted to assess the functional recovery of oral sensation, tongue strength, and salivary secretion among patients aged 20 years and older following endotracheal extubation. In keeping with previous research, we only included patient who had been intubated for at least 48 hours. Data were assessed at three points in time, 48 hours within extubation, and 7 days and 14 days postextubation. Specifically, salivary secretion was measured by oral Schirmer test ; oral sensation was measured by oral stereognosis and two-point discrimination on the tongue; tongue strength was measured by the Iowa Oral Performance Instrument (IOPI) System. Results : Preliminary results from this on-going study have shown that oral sensation, salivary secretion ,and tongue strength were all at the lowest point 48 hours within extubation. Oral sensation was gradually recovered 14 days after extubation, while salivary secretion and tongue strength did not improve even at 14 days after extubation. Conclusion : Functions of oral sensation, salivary secretion ,and tongue strength affected significantly after prolonged endotracheal intubation and most did not recovered even after 14 days. This prolonged dysfunction is likely affect oral intake. More attention is needed in this important area. Keywords : Oral sensation, salivary secretion , tongue strength

PP25 C-176

RCT OF SPECIALIST GERIATRIC MEDICAL ASSESSMENT FOR HIGH RISK PATIENTS DISCHARGED FROM HOSPITAL ACUTE MEDICAL UNITS

John GLADMAN¹, Judi EDMANS¹, Lucy BRADSHAW¹, Simon CONROY² (1. Division of Rehabilitation and Ageing, University of Nottingham, United Kingdom; 2. Geriatric Medicine, University Hospitals of Leicester/University of Leicester, United Kingdom)

Introduction : Specialist geriatric medical assessment may improve patient outcomes for older people presenting to hospital Acute Medical Units (AMU) discharged after a short stay (< 72 hours). Method : Patients aged ≥ 70 discharged from two UK AMUs and scoring ≥ 2 on the Identification of Seniors At Risk tool were randomised to receive specialist geriatric medical assessment and after care or usual care. Follow up was by postal questionnaire 90 days. Outcomes included mortality, institutionalisation, dependency in activities of daily living (ADL), mental well-being, and quality of life. Results : 433 participants were recruited: 217 control and 216 intervention. At 90 days there was no difference in mortality (6% control v 7% intervention) or the proportion of participants moving to care homes (3% both groups). There were also no differences in dependency in

ADL (median Barthel ADL: 16 both groups), psychological well-being (median General Health Questionnaire ? 12: 12.5 control, 12 intervention), or quality of life (mean EQ-5D: 0.45 both groups). Conclusion : Specialist geriatric medical input to high risk patients discharged from AMUs made no difference to these measures of health and well-being. Keywords : comprehensive geriatric assessment, emergency medicine

PP25 C-177

THE KINEMATIC ANALYSIS OF TRUNK AND PELVIS MOVEMENT DURING WALKING USING A SMARTPHONE - COMPARISON OF COMMUNITY-DWELLING ELDERLY WOMEN AND HEALTHY YOUNG WOMEN-

Kosuke MIZUNO¹, Yoshitaka SHIBA², Noriaki IKEDA², Haruhiko SATO², Naoto KAMIDE², Yoshikazu SUZUKI¹, Michinari FUKUDA², Akihiro TAKEUCHI¹ (1. Department of Rehabilitation, Kitasato University East Hospital, Japan; 2. School of Allied Health Sciences, Kitasato University, Japan)

Introduction : We developed an application using the built-in sensor of the iPod touch (Apple Inc., USA), to analyze the kinematics of the trunk and pelvis movement during walking and standing. The purpose of this study was to analyze kinematically the trunk and pelvic movement in healthy young women and elderly women while walking using a smartphone. Method : Thirty healthy young women (mean age, 21.3 ± 1.0 years) and 41 community-dwelling elderly women (mean age, 71.8 ± 4.5 years) participated in our study. Subjects were instructed to perform a 10-m gait test at comfortable and maximum speed. The tilt angle and rotation angle of the trunk and pelvis were measured using smartphones during the 10-m gait. Results : Anterior, posterior and lateral tilt angle of the pelvis in elderly women were significantly greater than that in young women in both conditions of comfortable and maximum speed. In addition, when the gait speed was increasing, the rotation angle of the pelvis was increasing in the elderly women. In the young women, the rotation angle of trunk increased at higher gait speed. Conclusion : We found that kinematic analysis using a smartphone could detect the movement of the trunk and pelvis during walking, and could discriminate the difference in movement between healthy young women and elderly women. Keywords : Gait, Kinematic analysis, Smartphone

PP25 C-178

A COMPARISON OF SWALLOWING FUNCTION RECOVERY AFTER PROLONGED ORAL ENDOTRACHEAL INTUBATION BETWEEN THE YOUNGER AND OLDER PATIENTS

Min-Hsuan TSAI (School of Nursing, National Taiwan University, Taiwan)

Introduction : Swallowing difficulty after endotracheal extubation occurred commonly and affected patients across all diagnostic categories, particularly for patients who are older and sicker. Because oral intake is an important component of patient recovery after critical illness, the aim of this study was to compare signs and symptoms of swallowing difficulty over time in younger (20-64 years) and older patients (~65 years) with prolonged oral endotracheal intubation. Method : A prospective observational study was conducted to assess the recovery of swallowing function among patients aged 20 years and older following endotracheal extubation. In keeping with previous research, we only included patient who had been intubated for at least 48 hours. Data was assessed at four points in time, 48 hours within extubation, 7 days, 14 days, and 21 days postextubation. Swallowing difficulties were measured by symptom checklist, tongue strength,

repetitive saliva swallowing test, 3 steps swallowing screen, and functional oral intake scale. Results : Preliminary results from this ongoing study (n=30, as of 10/31/2012) have shown that older patients (~65 years) had slower recovery on all swallowing difficulty indicators compared to younger counterparts. For younger patients, swallowing difficulty was uncommon 7 days within extubation, while most older patients had signs and symptoms of swallowing difficulty last till 2 weeks after extubation. Conclusion : Recovery trend of swallowing difficulty significantly differ between younger and older patients. This result emphasize the importance of screening and intervening swallowing difficulty for older patients with prolonged oral endotracheal intubation. Keywords : elderly, swallowing difficulty, prolonged intubation

PP25 C-179

EXAMINING THE FACTORS THAT INFLUENCE PAIN-RELATED BEHAVIORS AMONG OLDER ADULTS WITH DEMENTIA IN JAPAN

Yukari TAKAI¹, Yu FUJIMAKI², Ayami SATO¹, Yoshie FURUTA³, Mizue SUZUKI³, Noriko YAMAMOTO-MITANI⁴ (1. Graduate School of Health Sciences, Gunma University, Japan; 2. Faculty of Medicine, Gunma University, Japan; 3. Faculty of Nursing, Hamamatsu University School of Medicine, Japan; 4. Graduate School of Medicine, The University of Tokyo, Japan)

Introduction : The purpose of this study was to examine the factors influencing pain-related behaviors among older adults with dementia in Japan. Method : All older adults from dementia wards at a hospital and 2 aged care facilities were asked to participate in this study. Data were collected on demographics, prescribed medications, Mini-Mental State Examination (MMSE) score, Gottfries-Brane-Steen Scale score, and Checklist for the Assessment of Pain in Elderly People with Communication Impairment-Japanese Version (PACSLAC-J) score from the participants or from their medical charts. The PACSLAC-J scores were compared by each factor using the Mann-Whitney U test or Spearman's rank correlation. The design of the present study was approved by the ethical committee at the Hamamatsu University School of Medicine, and consents from the older adults' families or guardians were obtained before data collection. Results : A total of 117 older adults participated in this study. The average age was 82.3 (SD 9.5) years, and women comprised 74.4% (n = 87) of the study population. Almost all the participants were diagnosed with dementia, including Alzheimer's disease (n = 54) and/or vascular dementia (n = 35). The average MMSE score was 11.3 (SD 8.8). Sex, psychiatric medication prescription, and the necessity of total transfer assistance were factors that significantly contributed to the total and/or subscale scores of the PACSLAC-J. Conclusion : Adequate pain management for older adults with dementia, especially those with contracture and motor-related diseases, is necessary. Keywords : Pain, Dementia, Scale

PP25 C-180

A NEW TOOL FOR ASSESSMENT OF ELBOW ARTICULAR AMPLITUDE IN GERONTOLOGY: ACTIGRAPH AGAINST INCLINOMETER

Cecile CRIDELICH¹, Jean-Michel TURPIN², Laure BOSCHER³, Audrey MARTEU², Bernard TEBOUL³, Charlotte SAKAROVITCH⁴, Patrick MALLEA⁵, Olivier GUERIN¹ (1. Plateforme Partenariale d'Innovation, Universite de Nice Sophia-Antipolis, France; 2. Hopital de Cimiez, Centre Hospitalier Universitaire de Nice, France; 3. Plateforme Patient, Centre Hospitalier Universitaire de Nice, France; 4. Departement de la recherche clinique et de l'innovation, Centre Hospitalier Universitaire de Nice, France; 5. Centre National de Reference Sante a domicile et Autonomie,

Centre National de Reference Sante a domicile et Autonomie, France)

Introduction : Different techniques exist for the evaluation of articular angles, but present some drawbacks. Actually the main method for this measure is the inclinometer. We hypothesize that an actigraph used as inertial sensor (Motion Pod developed by Movea), coupled to the specific software Bioval, developed by RM-Ingenierie (MP-BV), is an interesting alternative for assessment of articular amplitude in gerontology. **Method :** The validity of the MP-BV was evaluated for elbow against an inclinometer by calculating the proportion of measures for which the difference between the two tools is below 10 degrees for the four movements (flexion, extension, pronation, supination). We compared too the measurement time between the MP-BV and the inclinometer. Finally the acceptability of the MP-BV was assessed using visual analogue scales. **Results :** The proportion of valid measures by the actigraph is only between 60% and 70% regardless of the movement studied. With regard to patient comfort and adherence to the tool, there is no significant difference between the two tools. For tool use (Δ EVA (acti-incli) : $1,42 \pm 2,1$ $p < 0,0001$) and results export (Δ EVA (acti-incli) : $1,52 \pm 2,8$ $p < 0,0001$), there is a significant difference between the two instruments in favor of actimeter. Measure time with an actimeter is higher than with an inclinometer: $117,4$ seconds $\pm 26,9$ / $104,4$ seconds ± 34 ($p < 0,0001$). **Conclusion :** According to various results, we can conclude that actigraphy is not a valid instrument for measuring range of motion of the elbow, under the joint assessment in gerontology. **Keywords :** actigraph, articular amplitude, inclinometer

PP25 C-181

TRANSITION CARE FOR HIP FRACTURED ELDERLY PATIENTS WITH ANTICOAGULATION THERAPY

Jung-Ah LEE (*Program in Nursing Science, University of California Irvine, USA*)

Introduction : The risk of venous thromboembolism (VTE) is highest in elderly patients undergoing hip fracture surgery. These patients are expected to receive extended VTE prophylaxis using anticoagulants after hospital discharge. The purpose of the study was to identify elderly patients' satisfaction and adherence to anticoagulation therapy during hospitalization and after discharge. **Method :** We conducted surveys on elderly hip-fractured patients aged 65 or older immediately before discharge from a community hospital and performed one-month phone follow-ups. **Results :** A total of 24 elderly patients without cognitive impairment participated in the discharge survey and 19 patients responded to follow-up surveys. The VTE knowledge score was 62.1%. Patient satisfaction with anticoagulation education was 3.6 out of 5. Patients reported that they need to know more about anticoagulation medication and its side effects. Most hip-fractured patients (73%) reported being discharged to a skilled nursing home for rehabilitation. The majority of patients reported their general health was very good or good at one month after surgery. Patients who lived alone reported lower general health than those living with others ($p < 0.05$). One-third of patients reported that they had a minor bleeding episode and missed at least a dose of warfarin prescribed. **Conclusion :** The results of the study show that hip-fractured older adult patients need more education about anticoagulants in the transition period in order to enhance anticoagulation safety after hospital discharge. Focused discharge education including during transition from acute care to home or long-term care should be considered in the development of a hip fracture program for older adults. **Keywords :** hip fracture; anticoagulation; transition care

PP25 C-182

THE STATUS QUO OF HOW WELL THE NURSES IN GENERAL HOSPITALS GRASP THE HEARING ABILITIES OF THE ELDERLY PATIENTS

Keiko MORITA¹, Aiko FURUTA², Sumie FUJISAKI³, Tomoko SANO³, Naoko ITOH¹, Hisao OSADA⁴, Tazuko KAMIBAYASHI³, Yukiko MOGAMI³, Miyuki SATO⁵ (*1. School of Nursing, Faculty of Health Care, Nihon Institute of Medical Science, Japan; 2. Nursing department, Tokyo Metropolitan Geriatric Hospital, Japan; 3. Faculty of Social Work Studies, Josai International University, Japan; 4. Graduate School, J.F.Oberin University, Japan; 5. School of Nursing, Faculty of Health Sciences, University of Human Arts and Sciences, Japan*)

Introduction : The number of hearing-impaired elderly in Japan is estimated at around 15 million according to the National Institute for Longevity Sciences (NILS-LSA). Among them, the number of hospitalization is expected to increase in the future. In this study the authors investigated the present situation of how well the nurses in general hospitals grasp the hearing abilities of the aged. **Method :** Information related to inpatients' sensory functions found in the nursing database of about 500 hospitalized cases (present illness affecting hearing ability, past medical history, drug treatments, presence or absence of hearing impairment) as well as that related to their usage of hearing aids were investigated for analyses. (Ethical considerations) This study was approved by the Ethical Committees of the TOKYO METROPOLITAN GERIATRIC HOSPITAL and J.F.Oberin University Graduate School (№1154). **Results :** Our hypothesis is being examined that the information regarding patients' sensory organs at the time of hospitalization has not been sufficiently grasped. Presently, data collection for analyses is still in progress. **Conclusion :** Improvements in nursing database description should be necessary. **Keywords :** elderly patients nurses hearing abilities

PP25 C-183

ASPECTS OF EATING AND QUALITY OF CARE AMONG ELDERLY IN SHORT-TERM ACCOMMODATIONS - BEFORE AND AFTER AN INTERVENTION

Lena OLAI¹, Eva CARLSSON², Mona PERSENIUS³, Katri STAHLNACKE⁴, Mary HAGG⁵ (*1. School of Health and Social Studies, Dalarna University, Sweden; 2. School of Medicine and Health Sciences, Orebro University, Sweden; 3. Nursing Department, Karlstad University, Sweden; 4. Public Dental Health Service, Orebro County Council, Sweden; 5. Speech & Swallowing Centre, Otorhinolaryngology Department, Hudiksvall Hospital, Sweden*)

Introduction : Lately, oral health-related quality of life (OHRQoL) and the mealtime situation for elderly people living in special accommodations have been placed in focus. In addition, it has been shown that the prevalence of dysphagia, an important aspect of the eating process, is high among frail elderly people. However, the knowledge on how frail elderly people in general perceive oral health and the mealtime situation is scarce. To our knowledge, there is no research on which eating and oral health related experience, older people regard as important factors in short-term accommodations. A simple and innovative training method for people with dysphagia has been successfully tested among people with stroke. In the present study the aims are (1) to describe OHRQoL, the prevalence of dysphagia and eating difficulties among elderly people in short-term accommodations, as well as their perceptions of care quality related to oral health and eating, (2) to compare elderly peoples' and nursing staffs' perceptions of quality, and (3) to evaluate a training program for dysphagia. **Method :** In this prospective study 400 older people will be examined with validated instruments measuring OHRQoL,

perception of care quality, swallowing capacity and eating ability (OHIP14, QPP, SCT, MEONF-II). Patients with dysphagia will be included in an intervention program and tested before and after the training period. Results : Preliminary results will be presented. Conclusion : Eating and oral health is a multidisciplinary responsibility and key factors of importance for this process will be identified. Keywords : oral health related quality of life, mealtime situation, dysphagia

PP25 C-184

ENTITLED TO COERCIVE TREATMENT? - REGISTERED NURSES' EXPERIENCE AND PERCEPTIONS' OF HOW DIGNIFIED NURSING ARE MET WHILE THE DEMENTED PERSONS' HUMAN RIGHTS AND FREEDOMS ARE MAINTAINED

Margareta WESTERBOTN¹, Eva LEJMAN¹, Ulrica PODER², Barbro WADSTEN² (1. *Sophiahemmet Hogskola, Sweden*; 2. *Department of Public Health and Caring Sciences, Uppsala University, Sweden*)

Introduction : In everyday dementia care, there are severe ethical dilemmas, in that legitimate demands for good and safe nursing conflict with national and international legislation. Preserving the dignity and integrity of older people with dementia, registered nurses must balance between legislation and safe gerontological nursing. The aim of the present study was to describe how registered nurses in nursing homes ensure legal security, good and safe nursing care without violating legal integrity of demented residents. Method : This qualitative study involved audio-taped semi-structured interviews with ten charge nurses in a county in central Sweden. The transcribed interviews were examined using manifest and latent content analysis. The manifest analysis identified local routines involving coercive treatment, registered nurses' descriptions of related complications and alternative measures. Three different nursing strategies to ensure legal integrity of demented residents emerged from the latent analysis. Results : Findings revealed that some registered nurses' could not see how coercive measures limited the resident's rights and freedom. Others were aware of the need for informed consent before the use of constraint. However, some registered nurses used prevented interventions to avoid coercive treatment. Conclusion : The results indicate that despite the delegalization of coercive treatment in Sweden, registered nurses' still use constraint as a way to ensure high quality nursing. Registered nurses interpretations of legal terms, inadequate staff and lack of gerontological nursing in dementia care seem to preserve the use of coercive measures. Keywords : constraint, dementia, older people, nursing home, physical restraints

PP25 C-185

HOW DO ELDERLY PEOPLE, LIVING AT HOME, EXPERIENCE MEDICINE MANAGEMENT?

Margareta WESTERBOTN, Asa CRAFTMAN GRANSJON (*Sophiahemmet Hogskola, Sweden*)

Introduction : Aging is frequently accompanied by age related chronic conditions and multi-morbidity, resulting in a higher use of medication. A majority of elderly persons live at home, and often have cognitive, visual or physical limitations that may decrease their ability to take medicines accurately, which makes taking prescribed drugs a complex task. The aim of this study was to describe how older people living at home in Stockholm, Sweden, experienced the management of their own medication regimen from their own perspective. Method : This qualitative study involved audio-taped interviews with 25 persons, aged 85 years and older, and were cognitively intact (Mini-Mental State Examination >23), living at home, and taking medicines

regularly. Data was analysed using content analysis. Results : Findings revealed that most participants managed their medicines by themselves and were very content with this. Older people who received help were also very pleased with that help. The most important components for older people were to have good cognitive ability, to be independent, and to get support with their medicines from a close person as a backup. Conclusion : To observe the life of an older person as a whole is important in nursing care, so that the person's behaviour can be understood, since how older people manage to handle their medicines may have an impact on their autonomy and on health-care resource utilisation. Without proper medication many of them would not function well and would not be able to remain in their own homes. Keywords : very old people, experience, management of medicines, community dwellers

PP25 C-186

NURSES' UNDERSTANDING LEVEL OF THE RISKS AND THE RISK FACTORS ASSOCIATED WITH ELDERLY WHEELCHAIR USERS

Masako SOTOMURA, Midori SHIRAI (*Graduate School of Nursing, Osaka City University, Japan*)

Introduction : A variety of risks caused by improper sitting posture of the elderly in a wheelchair are reported. Nurses are in charge of lessening the risks and preventing accidents. The purpose of this study is to clarify the nurses' understanding level of the risks and the risk factors associated with elderly wheelchair users. Method : Twelve working nurses in the nursing home of six facilities in Osaka Prefecture were collected as subjects. Then the subjects were interviewed about the risk and risk factors about the elderly wheelchair users in a semi-structured form. Their answers were recorded verbatim and analyzed. Results : Such risks as falls, pressure ulcers, injury, etc. were extracted. Possible risk factors for the main three factors were as follow, Fall: the physical features and function of the elderly users, behavior of the users, the recognition of their physical condition or ability of the users, nursing care. Pressure ulcer: the users' skin condition, sitting posture, sitting time, Injury: wheelchair specifications, nursing care. Different understandings among nurses on risks and risk factors were found. These differences seem to be caused by the nurses' experience and knowledge. Conclusion : Different risk factors are observed among extracted risks. The recognition about the risk factors are different among nurses. The differences seem to be contributed by the nurses' experience and knowledge. The result would suggest that the education of the nursing method for elderly wheelchair users should be needed. Keywords : elderly wheelchair risks

PP25 C-187

BEST PRACTICE POTENTIALS FOR THE MANAGEMENT OF OLDER PEOPLE WITH COGNITIVE IMPAIRMENT PRESENTING TO EMERGENCY DEPARTMENTS: A SYSTEMATIC REVIEW

Linda Maria SCHNITKER¹, Melinda MARTIN-KHAN¹, Elizabeth BEATTIE², Len GRAY¹ (1. *The Centre for Research in Geriatric Medicine, The University of Queensland, Australia*; 2. *School of Nursing, Queensland University of Technology, Australia*)

Introduction : This paper reviews the research-based literature to identify care practices that meet the specific care needs of the older cognitively impaired ED population. Method : The study was a systematic literature review of papers describing ED interventions aiming to prevent adverse events and improve health outcomes for older ED patients with cognitive impairment. Interventions carried out

in acute care hospitals were also considered. Relevant papers' reference lists were hand searched for additional articles. Two authors independently reviewed the papers by abstract and full text. Discrepancies were decided by consensus discussion. Results : The literature outlines a number of strategies to improve the care for older ED patients with cognitive impairment, including interventions to improve cognitive impairment recognition and clinical approaches to reduce falls and delirium. Supplemental studies carried out in acute care settings regarding primary and secondary prevention of delirium were also relevant. Intervention studies that reduced the prescription of potentially deliriogenic drugs in older persons, reduced behavioural symptoms, and improved patient comfort and nutritional intake in hospitalised older persons with dementia were also identified. Conclusion : Useful information was available from several studies testing interventions that improved cognitive impairment recognition and a single study that investigated the effectiveness of a fall prevention program. Other than this, there is little research carried out to improve the quality of care of older ED patients with cognitive impairment. Although this study found additional evidence obtained from the acute care setting, additional research is needed to identify whether these interventions are beneficial in fast-paced emergency settings. Keywords : Older Persons with Cognitive Impairment, Emergency Department, Best practice

PP25 C-188

DEVELOPMENT OF A PRACTICE ALGORITHM FOR EMERGENCY NURSING CARE TO ELDERLY STROKE PATIENT IN NURSING HOME

Mi So KIM, Sung Ok CHANG, Eun Young KIM (*College of Nursing, Korea University, Korea*)

Introduction : The purpose of this study was to develop a practice algorithm for emergency nursing care to elderly stroke patient in nursing home. Method : This study was a methodological research to develop a practice algorithm. In order to construct preliminary algorithm, detailed items were deducted from literature review and interviews with 30 experienced nurses in 12 nursing home. And then, the preliminary items were evaluated for validity and modified by expert group. Results : The developed preliminary algorithm was composed of total 3 categories (assessment, intervention, and evaluation) with 54 detailed items. The preliminary algorithm for emergency nursing management related to stroke in the elderly in nursing home had assessment category which included verification underlying diseases involved with stroke such as hypertension/diabetes mellitus, appearance (ex. dysbasia/ parathria/ paralysis), and physical examination (ex. check of level of consciousness and vital signs, assessment of neurologic status using GCS). Intervention category included underlying diseases care, nursing care of patients with stroke. Lastly, through evaluation category, nurses could make a decision to transfer to ER or keep managing the elderly in nursing home. Conclusion : The algorithm developed in this study could be utilized as knowledge to be help to nurses when they offer rapid and appropriate emergency nursing care to elderly stroke patient. Through this study, this algorithm will contribute to quality enhancement of emergency nursing care by increasing efficiency of nursing practice. This research was supported by Basic Science Research Program through the National Research Foundation of Korea(NRF) funded by the Ministry of Education, Science and Technology(2010-0009022). Keywords : Stroke, Nursing Home, Emergency Nursing, Algorithm

PP25 C-189

SITTING POSTURE SUPPORT FOR FRAIL ELDERLY USING WHEELCHAIRS:SEATING GUIDELINES FOR NURSES AND

CARE WORKERS

Midori SHIRAI¹, Yachiyo SASAKI², Yuka KITAMURA³, Yoshie SUGIMOTO⁴, Kimika USUI⁵, Hideyuki HIROSE⁶ (*1. Graduate School of Nursing, Osaka City University, Japan; 2. School of Nursing, Sonoda Women's University, Japan; 3. School of Nursing, Osaka Medical College, Japan; 4. Graduate School of Nursing, Osaka Prefecture University, Japan; 5. Graduate School of Nursing, Konan Women's University, Japan; 6. Department of Assistive Technology, Research Institute, National Rehabilitation Center for Persons with Disabilities, Japan*)

Introduction : Although maintaining a proper sitting posture is one condition for improving activity in frail elderly, many elderly people who use wheelchairs have difficulty maintaining or correcting their sitting posture. There is therefore a need to provide seating to help them maintain a proper sitting posture. This report outlines Seating Guidelines we created for nurses and care workers. Method : The Guidelines were created based on the results of past intervention studies (a) and a survey study (b). a) Effects of seating care for frail elderly sitting in a regular wheelchair (2 studies) b) Seating care provision by nurses and care workers in advanced facilities. Results : From the intervention studies, we clarified the efficacy of seating provided by nurses and care workers. In addition, we confirmed validity of methods for observation of posture and behavior and method for seating. From the survey study, we were able to derive the following information for the guidelines: effects of sitting posture on health and lifestyle of elderly people, observation and assessment of sitting posture, selection and adjustment of sitting device, methods for confirming and correcting sitting posture, and intervention examples. Conclusion : We were able to create practical guidelines from the results of intervention studies and a survey study. We are currently testing the validity of the guidelines. Keywords : Seating Elderly Wheelchair

PP25 C-190

CASE CONFERENCES CHANGED HOSPITAL NURSE PERCEPTIONS AND USES OF PHYSICAL RESTRAINTS FOR ELDER INPATIENTS

Sadami KURATA, Kumiko MAKINO, Shizuko MURAKAMI (*Gerontological Nursing, Hamamatsu University School of Medicine, Japan*)

Introduction : In Japan with the highest proportion of elderly, hospital nurses tend to use physical restraints (PRs) to protect the safe implementation of therapies for the elderly. We organized case conferences utilizing person-centered care (PCC), and evaluated their effects on frequencies of PRs and perceptions of nurses about PRs. Method : In a hospital with an acute care ward, we organized lectures for learning PCC and case conferences of elder inpatients with impaired cognition and PRs. Before and after the course, nurse perceptions of PRs were assessed with questionnaire. Results : Four cases restrained with mittens, arm fixation, bedrails, and straitjackets were discussed in total 5 conferences held from September 2010 to January 2011, and each conference included 13 to 19 nurses. In September 2009 and September 2011, 70% (52/60 nurses) and 69% (51/74 nurses) returned a questionnaire, respectively. Falls over bedrails were significantly more frequently perceived as harmful PR effects of in 2011 than in 2009 (p=0.043). In 2011, all nurses perceived muscle weakness, arthrogyposis, and decubitus, falls from wheelchairs, and falls over bedrails as harmful PR effects, and PR perception were changed in 31 nurses (61%), 28 (90%) of whom reported changes in their behaviors. The prevalence of nurses reporting that they used PRs by themselves significantly decreased from 90% to

73% ($p=0.029$). On the other hand, PRs were removed, changed to alternatives, or their durations were shortened in all 4 cases discussed. Conclusion : Case conferences utilizing PCC may raise the nurse perception of harmful PR effects and decrease inappropriate PRs by nurses. Keywords : physical restraint, case conference, acute care ward

PP25 C-191

SYMPTOM SEVERITY AND SYMPTOM INTERFERENCE IN OLDER PEOPLE WITH CANCER AND THEIR RELATIONSHIP WITH DEPRESSION, FIGHTING SPIRIT AND SOCIAL SUPPORT

Hee Sun KIM, Soo Jung CHANG (*Dept. of Nursing, Woosuk University, Korea*)

Introduction : The objectives of this study were to (1) examine the levels of symptom severity, symptom interference, depression, fighting spirit and social support (2) identify the predictors of symptom severity and symptom interference 65 years of age and older people with cancer. Method : This cross-sectional descriptive design used secondary data from 113 older cancer patients recruited from the J university hospital in Korea. Measurements used included M. D. Anderson Symptom Inventory (MDASI), Hospital Anxiety and Depression Scale (HADS), Fighting subscales of the Mental Adjust to Cancer (MAC) and Medical Outcome Study Social Support Survey (MOS-SSS). Data were analyzed using descriptive statistics, Pearson correlation and multiple linear regression. Results : The participants had multiple symptoms, with a mean number of 11.8 out of 13 symptoms. Fatigue and numbness were the most severe, while vomiting and distress were the least severe. The most prevalent area of daily life interfered by symptoms was general activity followed by work. A significant relationship was noted among symptom severity, symptom inference, depression, fighting spirit and social support. Depression and fighting spirit were significant predictors of symptom severity. Living with family, advanced cancer, follow up cancer treatment status, depression and fighting spirit were significant predictors of symptom inference. Conclusion : Most of the older people with cancer suffered from various symptoms. Depression and fighting spirit are important factors in predicting symptom severity and symptom interference. These findings support the need for assessment of severe symptoms and tailored interventions to manage symptoms severity and symptom inference in older people with cancer. Keywords : neoplasms, symptoms severity, symptom interference

PP25 C-192

PRE-DISCHARGE PLANNING AND POST-DISCHARGE SUPPORT PROGRAM (PPPSP) IN A REGIONAL HKSAR HOSPITAL

Stephen Shing-Fai WONG¹, Yu Pak CHAN¹, Wing Lan NGAI¹, L. CHAN², S.M. WONG², S.M. CHEUNG¹, S.H. YEUNG¹, S.K. LI¹ (*1. Medicine, Hospital Authority, Hong Kong; 2. Community Nursing Service, Hospital Authority, Hong Kong*)

Introduction : Discharge planning of older patients is important to facilitate timely and appropriate discharge from hospital. We had piloted Pre-discharge Planning and Post-discharge Support Program (PPPSP) to determine its effectiveness in reducing the attendance to the Accident and Emergency Department (AED) and unplanned readmissions (UPR) after discharge. Method : Older adults aged 65 or above who were admitted through AED were screened. Those who were at risk of unplanned readmissions, defined as emergency admission through AED within 28 days after discharge, were recruited. They were then randomized into either PPPSP or usual care (UC). In PPPSP group, an Advance Practice Nurse (APN) would

formulate discharge plans, and a community nurse (CN) would then provide support and counseling at home by means of home visit and telephone follow-ups within 28 days of discharge. Results : We had recruited 1,346 patients, 898 were assigned to PPPSP and 448 to UC. UPR rates (the percentage of patients being readmitted through AED within 28 days of hospital discharge) were 38.0% and 59.7% in PPPSP and UC group respectively. There was an absolute reduction of 1.2 days per patient in PPPSP group compared with UC group. The AED attendance rate was 1.4 episodes per patient in PPPSP group compared with 1.7 in UC group. Conclusion : A nurse-led discharge planning program with community nurse support could lead to fewer UPR, shorter average total LOS of UPR and fewer AED attendances, and these favourable outcomes could have financial implication. Further analysis of its cost-effectiveness is warranted. Keywords : discharge planning, unplanned readmissions

PP25 C-193

DIFFERENCES IN BEHAVIORAL PROBLEMS AND CAREGIVER HEALTH OUTCOMES BETWEEN PATIENTS WITH VASCULAR DEMENTIA AND ALZHEIMER'S DISEASE

Yea-Ing Lotus SHYU¹, Lin-Min KUO² (*1. School of Nursing, College of Medicine, Chang Gung University, Taiwan; 2. School of Nursing, Hsin Sheng College of Medical Care and Management, Taiwan*)

Introduction : Little is known about whether the behavioral problems and family caregiver's responses being different between patients with vascular dementia (VaD) and Alzheimer's dementia (AD). Thus, the purpose of this study was to explore the differences between patient's behavioral problems and caregiver's self-efficacy and health-related quality of life (HRQoL) between patients with VaD and AD. Method : Secondary data analysis on the baseline data of 46 VaD and 86 AD patients from a large clinical trial which recruited from neurological clinics and community care centers was conducted. Patient's behavioral problems was measured by using Cohen-Mansfield Agitation Inventory, caregivers' self-efficacy was measured by the Agitation Management Self-efficacy Scale, and caregiver's HRQoL was measured by Taiwan version of the Medical Outcomes SF-36. Results : For behavioral problems, AD patients had significantly more verbally non-aggressive behaviors (VNAB) than VaD patients ($P=0.01$). At the same time, family caregivers reported higher self-efficacy in handling verbally non-aggressive behaviors ($P=0.01$) and verbally aggressive behaviors ($P=0.04$) for patients with VaD than AD. However, poorer HRQoL in many dimensions including role physical ($P=0.01$), bodily pain ($P=0.02$), social function ($P=0.04$), and physical summary score ($P=0.02$) for family caregivers of patients with VaD than AD was found. Conclusion: More attention might need to be paid to HRQoL for family caregivers of patients with VaD. Conclusion : More attention might need to be paid to HRQoL for family caregivers of patients with VaD. Keywords : Family caregiver, Health related quality of life, Vascular dementia, Alzheimer's disease

PP25 C-194

ORTHOGERIATRICS IN TAIWAN: A PILOT MODEL OF CARE FOR HIP FRACTURES

Li-Ning PENG, Liang-Kung CHEN (*Center for Geriatrics and Gerontology, Taipei Veterans General Hospital, Taiwan*)

Introduction : Hip fracture is a common clinical condition of older people and early mobility is of great importance to these patients. The purpose of the study is to evaluate the clinical benefits of post-acute rehabilitation for older patients with hip fractures in Taiwan. Method : This is a prospective cohort study. Patients hospitalized for hip

fracture between Jan 1, 2007 and Dec. 31, 2011 in Taipei Veterans General Hospital (TVGH), a tertiary care hospital, were eligible for the study. Basic characteristics, Barthel Index, Instrumental Activities of Daily Living, Mimi-Mental State Examination, Geriatric Depression Scale, time to surgery, length of stay, mortality were recorded. Results: During the study period, 467 hip fracture patients participated in this study with the mean age of 82.1 ± 10.0 years, and were male predominant (270/467, 57.8%). Every patients may be discharged back to the communities receiving home-based rehabilitation (HBR) program, long-term care facilities for institute-based rehabilitation (IBR) or back home for conventional care (CC) (no fixed rehabilitation program being involved). Among all patients, 28.9% (135/467) patients received HBR, 25.3% (118/467) patients received IBR, and 45.8% (214/467) were back to the communities for CC. Survival status of all patients were surveyed, which disclosed that 28.7% of all patients died within a mean of 880.6 ± 482.8 days. Adjusted for age, gender, baseline physical function, patients receiving CC were significantly more likely to die than HBR group (H.R.=1.750, 95% C.I.: 1.11-2.76, P=0.016). Conclusion : Post-acute rehabilitation for hip fracture patients was of great survival benefits, either through home-based or institute-based rehabilitation. Keywords: hip fracture, home-based rehabilitation

PP25 C-195

ADVERSE OUTCOMES AND EVENTS IN OLDER ED PATIENTS: A SYSTEMATIC REVIEW

Linda Maria SCHNITKER¹, Melinda MARTIN-KHAN¹, Elizabeth BEATTIE², Len GRAY¹ (1. The Centre for Research in Geriatric Medicine, The University of Queensland, Australia; 2. School of Nursing, Queensland University of Technology, Australia)

Introduction : The aim of this systematic review was to identify adverse health outcomes and negative events experienced by older persons presenting to emergency departments. Method : Electronic databases were searched for relevant English references. Search terms included: 'older person'; 'emergency department'; 'health outcome'; and 'adverse event'. Relevant systematic reviews from the Cochrane library, which were not detected by the search in the other databases, were added to the results. A hand search of reference lists was carried out. Two authors independently reviewed the selected papers at exclusion levels by title and full text. Any discrepancies were decided by consensus discussion. Results : After removal of duplicates, 2193 papers were reviewed in a culling process (by title, abstract and full text). Thirty-seven papers were considered relevant to this review. Conclusion : Common adverse health outcomes in the older ED population are functional decline, ED re-admission, institutionalisation, and death. Examples of adverse events included 1) under triage of illness severity, 2) medication errors, and 3) lack of recognition of geriatric syndromes, including cognitive impairment. Keywords : Older Persons, Emergency Department, Outcomes and Events

PP25 C-196

EFFECTIVENESS OF NOVEL MULTIDISCIPLINARY DISCHARGE PLANNING AND COMMUNITY SUPPORT PROGRAM FOR HIGH RISK OLDER PATIENTS

Oi Yee LIN, K.H.J. LUK, W.M.W. MOK, T.C. CHAN, F.H.W. CHAN (Queen Mary Hospital, Hong Kong)

Introduction : In Jan 2012, Hong Kong West Cluster has launched the Integrated Care and Discharge Support for Elderly Patients (ICDS) which comprised of 2 important components: Integrated Care Model Case Management (ICM Case Management) and Integrated Discharge

Service Program (IDSP). In this program, link nurses and geriatricians perform multi-dimensional assessments for home dwelling elderly aged 60 or above admitting to medical wards through Accident and Emergency Department. Pre discharge planning is performed on high risk elderly and they are recruited into either ICM Case Management, IDSP or ECNS depending on their needs. Method : It is a prospective cohort study. Baseline data, will be collected when these subjects joining the ICDS program. The number of AED attendances; hospital admissions and duration of hospital admission 6 months after joining the ICDS program will be obtained. Subjects will be divided into 2 groups. One group will be those having reduced admission when compared to 6 months before joining the program while the other group will be those who are having either increased or static admissions. These 2 groups of patients will be compared to identify any independent factors that predicts the efficacy of the program. Motor and functional status after the completion of program by using MFAC and BI 20 respectively and the proportion of elderly discharged to institution will also be studied as secondary outcomes. Results : This 18-month prospective cohort study is still in progress. The outcome result will be available in the end of 2012. Conclusion : Result will be available in the end of 2012. Keywords : Integrated Care and Discharge Support for Elderly Patients, ICDS, reduce readmission

PP25 C-197

HEALTH CARE USE DURING THE LAST YEAR OF LIFE AMONG OLDER DECEDENTS

Tatsuro ISHIZAKI, Masaya SHIMMEI, Ryutaro TAKAHASHI, Ryo HIRAYAMA (Human Care Research Team, Tokyo Metropolitan Institute of Gerontology, Japan)

Introduction : From 1960 to 2010, the proportion of Japanese people who died at hospital quadrupled from 18% to 78%. However, these statistics do not depict how much and what kinds of healthcare services non-surviving older adults spent before death. We explored time spent in hospital during a quarterly period in the last year of life among older decedents stratified by their characteristics. Method : Using claim data of medical and long-term care insurance plans provided by a local government and death certificate data provided by the national government, we analyzed 570 decedents who died at hospital at the age of 65 or older between 2005 and 2007. We examined health care use before death and compared cumulative bed days during a quarterly period in the last year of life by sex, age at death, long-term care use, and proximity of death. Results : Decedents spent a median of 50 days in hospital during the last year of life. Most of the total occupied bed days were accumulated during the quarterly period immediately before death. Cumulative bed days during a quarterly period significantly increased as death approached. Decedents who used any long-term care services had significantly shorter bed days than those who did not. Conclusion : This study shows that, regardless of sex and age, bed days during the quarterly period increased as death approached. We should cautiously interpret the association between long-term care use and shorter bed days, because some patients might be in too serious condition to use long-term care services. Keywords : resource use, bed days, end of life

PP25 C-198

LONG-TERM CARE ARRANGEMENT AND CONTINUITY OF CARE

Wen-Chiung CHANG, Shwu-Chong WU (Institute of Health Policy and Management, National Taiwan University, Taiwan)

Introduction : Long-term care arrangement and continuity of care

(COC) both have important effects on health care utilization of older adults. This study aimed to investigate the effect of long-term care arrangement on COC. Method : The data analyzed in this study came from the "2002 National Assessment of Long-Term Care Need" survey and the outpatient claims data of the National Health Insurance of the same year. A total of 14,094 individuals aged 50 or older who had long-term care need were included. COC was defined by outpatient visit concentration which was measured by the Bice-Boxerman continuity of care index (COCI) with increasing scores indicating higher continuity. Long-term care arrangement was categorized as: no caregiver, family caregivers only, using home- and community based services, hiring care aides, and institutionalization. Multiple linear regression was applied to examine the association between long-term care arrangement and COC, controlling for sex, age, number of diseases, disability level, family income, and educational level. Results: Comparing with being cared by family caregivers only, hiring care aides was associated with lower COC ($B = -0.018, p = 0.002$), and institutionalization was related to higher COC ($B = 0.025, p = 0.002$). Other significant factors included number of diseases ($B = -0.013, p < 0.001$), middle ($B = 0.023, p < 0.001$) and severe ($B = 0.021, p = 0.003$) disability, low family income ($B = 0.021, p = 0.014$), and educational level of elementary school ($B = -0.010, p = 0.037$) or high school or above ($B = -0.019, p = 0.011$). Conclusion : Long-term care arrangement may affect the COC of middle-aged and older adults. This finding had major implications for long-term care policy. Further studies should investigate the mechanism resulting in this phenomenon. Keywords : Long-term care arrangement; Continuity of care, Taiwan

PP25 C-199

HOME CARE FOR ED ELDERLY: OUT-OF-POCKET COSTS IS A MAJOR BARRIER TO BOTH SERVICE UPTAKE AND CONTINUATION

Zheng Jie TOH, Chik Loon FOO, Su Xian LEE, Tse Ling TAN
(Emergency Department, Tan Tock Seng Hospital, Singapore)

Introduction : Post-acute care at home (PACH) is a home medical and nursing service. We describe our experience with emergency department (ED) referrals to PACH, and examine if out-of-pocket expenses pose an impediment to service continuity and evaluate its efficacy in reducing repeat ED visits. Method : This was a retrospective study conducted between Mar 2010 and Aug 2012. The control group had the first PACH visit cost waived, while the intervention group enjoyed waivers for their first five visits. Baseline demographics and number of PACH visits were compared, together with ED reattendance and hospitalisation at 4 weeks. Results : There were 63 and 52 patients in the the control and intervention groups respectively. There was no difference in baseline age, gender, mobility status and acuity between the two groups. Patients who enjoyed five visit-waivers were more likely to continue PACH visits beyond the first visit (41.3% vs 75.0%, $OR = 5.1, CI = 2.048$ to 12.601). They were also more likely to continue the service beyond 5 visits, even when the subsidy ended (1.6% vs 26.9%, $OR = 82.6, CI = 5.52$ to 1236.495). This was accompanied by a trend towards lower 4-week ED reattendance (34.9% vs 23.1%; $p = 0.24$) and hospital admission (28.6% vs 19.2%; $p = 0.35$), but these were not statistically significant. Conclusion : Elderly patients are highly sensitive to out-of-pocket expenses. They are far more likely to accept, as well as continue, home care services if this barrier is removed. Keywords : Home Care, Geriatrics, Emergency Department

PP25 C-200

PROMOTE THE MANAGEMENT OF THE HEALTH FOR THE OLD BY DISTANCE CARE

Chiu Yu CHEN¹, Tu Shih TE² (1. Community of Development Nurse, Changhua Christian Hospital Lukang Branch, Lukang, Taiwan; 2. Superintendent, Changhua Christian Hospital Lukang Branch, Lukang, Taiwan)

Introduction : With the increase of the elderly population and the prolonging of the average life, the elders' health can't be overlooked. Method : By distance physical care and the management, measure the blood pressure, build the data of the blood sugar and care every month; manage the abnormal process changes from the individual case. By way of hospital distance physical care and the information management, help the old take medical treatment, care consultation, and health situation on a regular time schedule. Results : 39 people joined the distance care. After 10 months' management model, 18 people improve the blood pressure, 17 people improve the blood sugar, and keep tracking their situation now. Conclusion : The increase of the elderly population means the increase of the medical need. Let the old realize the physical situation by the website construction of Distance Care Service to assist improvement of lifestyle and medical change and achieve the function of the health care and the promoting the health-life quality. Keywords : distance care, elders' health

PP25 C-201

AN ASIAN CULTURE-ROOTED NATURALISTIC SPIRITUALITY AND ITS ROLE IN POSTOPERATIVE HOSPITAL STAY IN THE UNITED STATES

Amy Lee AI¹, Paul WINK², Hyejin KIM¹ (1. College of Social Work, Florida State University, USA; 2. Department of Psychology, Wellesley College, USA)

Introduction : Despite the surging interest in the faith-health connection in aging, understanding this link is complicated by the growing diversification of the American religious landscape (Pew Forum, 2008) coinciding with the coming of age of the Baby Boomers. The present study investigated the influence of traditional religiousness and of experiencing reverence in religious and secular (e.g., naturalistic, moralistic) contexts in postoperative hospital length of stay among patients undergoing open-heart surgery 400+. Reverence was broadly defined as "feeling or attitude of deep respect, love, and awe, as for something sacred." Method : Information on demographics, faith factors, sense of reverence, mental health, and medical comorbidities was collected from 400+ patients (age 62+12) around two weeks before surgery via personal interview. Measures included depression, social support, optimism, religiousness, spirituality, and reverence. Standardized medical indices, including hospital length of stay, were retrieved from the Society of Thoracic Surgeons' national database. Results : Hierarchical multiple regression showed that reverence in secular contexts predicted shorter hospitalization, after controlling for demographics, medical indices, depression, and psychosocial protectors. Other hospital length of stay predictors included female gender, age, medical comorbidities, low left ventricular ejection fraction, perfusion time, and coronary bypass graft surgery. Conclusion : Secular reverence exerts a protective impact on an objective measure of cardiac health. More investigation is warrant on naturalistic view of spirituality in older patients with diverse beliefs. If the finding can be replicated, health providers may integrate a naturalistic perspective of spirituality in cardiac aging care. Keywords : Posttraumatic growth; cardiovascular diseases and surgery; religious coping and spiritual support

PP25 C-202

MOBILE HEALTH APPS FOR OLDER ADULTS WITH ANTICOAGULATION THERAPY: AN INNOVATIVE WAY TO

REDUCE ADVERSE DRUG EVENTS AND INCREASE SAFETY IN TRANSITION FROM THE ACUTE CARE SETTING TO THE COMMUNITY/HOME

Jung-Ah LEE¹, Alpesh N. AMIN², Mark BACHMAN³ (1. Program in Nursing Science, University of California Irvine, USA; 2. Medicine, University of California Irvine, USA; 3. Electronic Engineering and Computer Science, University of California Irvine, USA)

Introduction : Anticoagulation-associated adverse drug events are one of the most common medication errors in hospitalized patients. Despite the strong evidence that the use of anticoagulation therapy in older adults with cardiovascular disorders reduces thromboembolic events such as stroke or pulmonary embolism, challenges for anticoagulation therapy in elderly patients remain. Advances in the area of mobile Health (mHealth) via smartphones or tablet computers allow the design and development of new patient-centric models for the provision of personalized healthcare services, increase of patient independence, and improvement of patients' self-control and self-management capabilities. The overall aims of the study are to design an elderly-centered, interactive game-based mhealth program for older adults with anticoagulation therapy and examine the satisfaction with and feasibility of the program in order to improve adherence to anticoagulation therapy and quality of life in this vulnerable population. **Method :** A multidisciplinary research team including experts from medicine, nursing, pharmacy, information and computer science, and electrical science, has been working together on the development of this innovative, multifaceted system approached mHealth apps and will conduct a pilot testing of its feasibility and effectiveness in older adults with anticoagulation. **Results :** Preliminary results from the study phase 1 development of the system will be presented at the conference. **Conclusion :** Findings from the study can be used to ensure continuum of care for older adults requiring anticoagulation therapy by providing tailored coaching by healthcare providers from inpatient stays to outpatient clinics to enhance adherence, communication, and quality of life and reduce adverse drug events associated with anticoagulants. **Keywords :** mobile health; self-care; anticoagulation therapy

PP25 C-203 RELATIONSHIP BETWEEN HANDICRAFT AND SUBJECTIVE HEALTH IN ELDERLY PEOPLE

Masayo AYUKAWA, Shunyue CHENG, Hiraoka KEIKO (School of Nursing, Hiroshima Bunka Gakuen University, Japan)

Introduction : The aim of the present study was to clarify the relationship of engaging in handicrafts to subjective health status among elderly people in Japan. **Method :** The data were obtained from elderly people who participated a public seminar "to keep being healthy ever after" conducted in Kure, Hiroshima, Japan on February, 2011. A questionnaire survey regarding hobby activities and self-reported health status was carried out. The data of 418 (83%) elderly who completed the questionnaire were available for the statistical analysis. This study was approved by the committee of Ethics in Hiroshima Bunka Gakuen University and all participants were received informed consent for this survey. Multiple regression analysis was performed with the level of subjective health as independent variable and leisure activities (27 leisure activities that included handicraft) as dependent variables by gender. **Results :** Results showed that elderly people who engaging in handicrafts had a significantly higher subjective health scores than others even after adjusting for age and other leisure activities such as swimming, community activities and etc. (B=0.208, p<0.01) in the female but not male. The mean ± SD

age of 66 ± 9.9. People 281 women (67.2%). **Conclusion :** This result indicates that engaging in handicrafts have a positive effect on subjective health in female elderly people. Our findings also suggest that it is likely to increase subjective health by providing the place which can enjoy the handicraft especially in female elderly people. **Keywords :** elderly, subjective health, handicraft

PP25 C-204 EFFECTS OF PROFESSIONAL ORAL CARE ON HEALTH OF THE ELDRLY IN NURSING CARE

Sato MATSUKAWA¹, Katsuo YAMANAKA², Kumiko SUGIMOTO³ (1. Oral and Maxillofacial Surgery, The University of Tokyo Hospital, Japan; 2. Faculty of Human Science, University of Tsukuba, Japan; 3. Basic Oral Health Science, School of Oral Health Care Sciences, Faculty of Dentistry, Tokyo Medical and Dental University, Japan)

Introduction : It is generally recognized that maintenance and improvement of oral hygiene is important for elderly people to prevent from aspiration pneumonia and keep physical health. Professional oral care by dental hygienists is expected to be much more effective for oral health of the elderly comparing with self-care. In this study, therefore, we investigated the efficacy of professional oral care for the improvement of physical status as well as mental status in the elderly in need of nursing care. **Method :** Nine individuals using nursing care facilities underwent professional oral care by a dental hygienist once a week for three months. Before the intervention, oral care was carried out by themselves for one month as the baseline period. The status of oral hygiene and oral functions such as salivation and taste and mental stress level were assessed throughout the baseline period and the intervention period. **Results :** Professional oral care resulted in improvement of oral hygiene and increases in salivary secretion and concentration of secretory immunoglobulin A which is a dominant immunoactive substance in saliva. Regarding taste function, the recognition thresholds for saltiness and sweetness were lowered during intervention period showing improvement of taste sensitivity. Measurement of autonomic nervous activities demonstrated elevation of parasympathetic nervous activities during the intervention period, which was consistent with the decrement of salivary amylase activity, another stress index. **Conclusion :** The present results suggest that professional oral care of elderly persons in need of nursing care is effective for improvement of oral hygiene, oral function and mental comfort. **Keywords :** Professional oral care, Mental health, Oral health

PP25 C-205 DIAGNOSTIC DETERMINANTS OF VITAMIN D DEFICIENCY IN INDONESIAN POSTMENOPAUSAL WOMEN

Vera VERA¹, Siti SETIATI², Arya Govinda ROOSHEROE² (1. Internal Medicine, Maranatha Christian University, Indonesia; 2. Geriatric Medicine, Department of Internal Medicine University of Indonesia, Indonesia)

Introduction : Although Indonesia is a tropical country, previous studies on Indonesian elderly indicate high prevalence of vitamin D deficiency. Measurement of serum vitamin D level is very costly, so cheaper and simpler screening method is required to detect vitamin D deficiency. **Method :** 240 community-dwelling postmenopausal women were screened for vitamin D deficiency. History of falls, history of diabetes mellitus, history of postmenopausal fracture, medication list, diffuse bone pain, difficulty of climbing stairs, creatinine clearance, sun exposure score, sun protection score, tandem test, 5 timed chair stands (TCS), body mass index were assessed. For

each variables, bivariate analysis was performed, subsequently followed by multivariate analysis. Results : 15,8% of subjects had 25(OH)D < 25 nmol/L. Diagnostic determinants of vitamin D deficiency were: history of diabetes mellitus (OR 2,66), sun protection score (OR 5,26), TCS (OR 2,38). Based on these determinants, scoring system was made to screen subjects with vitamin D deficiency at sensitivity of 84,2% and specificity of 51,5%. Score ≥ 2 increased the clinical suspicion of having vitamin D deficiency. Conclusion : Diabetes mellitus, sun protection, muscle weakness of lower extremities were associated with vitamin D deficiency. Scoring system based on these determinants may be useful for primary care physicians to screen vitamin D deficiency in postmenopausal Indonesian women. Keywords : vitamin D deficiency, postmenopausal, determinants

PP25 C-206

PROMOTING AND ADVOCATING AGE-FRIENDLY HEALTHCARE IN THE THAR DESERT, INDIA

Prakash TYAGI (Admin, GRAVIS, India)

Introduction : The second most populous country in the world, India, is home to second largest population of older people. India is a country of villages as 70% of its population live in villages, which are underserved, less developed and are home to large number of older people. Impacted by chronic droughts and severe food, water shortages, Thar is one of the least developed regions. Older people live in most difficult conditions in Thar. They are impoverished, malnourished and isolated. Method : GRAVIS, an NGO, has been focusing strongly on older people's health. To identify the challenges, in 2000, a survey covering over 5,000 older people was organized, aiming on gathering information on older people's health needs. In the year 2000, GRAVIS set up a fully-equipped hospital in a remote village with special facilities for older people. The hospital staff goes through age-friendly healthcare trainings at least once in a year. In 2003, GRAVIS launched eye-care program for older people. A network of Village Health Workers (VHWs) has been developed. Currently, 564 VHWs are active serving in remote areas. They get specialized trainings on geriatric health. GRAVIS has been advocating older people's health at local, national, regional and global levels. Results : GRAVIS programmes have directly benefited over 150,000 older people of the region and in improved awareness levels among older people. The efforts have also resulted in increased attention for older people at government health facilities. Conclusion : Integrated approach is crucial to address older people's health needs in remote settings with scarce facilities. Keywords : aging, rural health, integration

PP25 C-207

INCIDENCE AND CHARACTERISTICS OF METABOLIC DISORDERS AND VASCULAR COMPLICATIONS IN WERNER SYNDROME PATIENTS IN JAPAN

Emiko OKABE, Minoru TAKEMOTO, Shunichiro ONISHI, Takahiro ISHIKAWA, Ryoichi ISHIBASHI, Masaki FUJIMOTO, Harukiyo KAWAMURA, Kazuki KOBAYASHI (Department of Clinical Cell Biology and Medicine, Chiba University Graduate School of Medicine, Japan)

Introduction : Werner syndrome (WS) is an autosomal recessive disorder and considered as a representative type of progeroid syndrome, highly prevalent in Japan; however, the recent status of WS has not been clarified. Method : We initiated a nation-wide epidemiologic survey to obtain the current picture of clinical of WS patients. Of 6,000 survey sheets sent to hospitals with more than 200 beds as the primary survey, we confirmed new 336 patients. As

secondary survey, we sent questionnaire to hospitals responded in the primary survey, we obtained detailed clinical data for 185 cases. Results : Of 185 patients, the morbidity rates of diabetes were 55.7%. The morbidity rate of hyperlipidemia was 51.6%. The morbidity rate of hypertension was 25.9%. Morbidities of vascular diseases in WS were found to be 1.1%, 2.7%, 10.3%, and 17.3% for brain hemorrhage, cerebral infarction, angina or myocardial infarction, and arteriosclerosis obliteration, respectively. We divided the WS patients into 2 groups: with (n=45) and without vascular disease (n=140) and we examined the correlation among diabetes, hyperlipidemia, and hypertension with a critical value of 3.84: $\chi^2 = 4.24$ ($p = 0.039$), $\chi^2 = 7.90$ ($p = 0.005$); and $\chi^2 = 11.16$ ($p = 0.0008$); respectively. These data confirmed that metabolic disorders were closely related with vascular diseases. Conclusion : We confirmed a much higher prevalence of metabolic disorders and vascular diseases in Japanese WS patients. Keywords : Progeria, Werner syndrome, Cardiovascular disease

PP25 C-208

DIAGNOSTIC CRITERIA FOR WERNER SYNDROME BASED ON JAPANESE NATIONWIDE EPIDEMIOLOGICAL SURVEY

Minoru TAKEMOTO¹, Seijiro MORI², Masafumi KUZUYA³, Shinya YOSHIMOTO⁴, Akira SHIMAMOTO⁵, Masahiko IGARASHI⁶, Yasuhito TANAKA⁷, Tetsuro MIKI⁸, Koutaro YOKOTE¹ (1. Department of Medicine, Division of Diabetes, Metabolism and Endocrinology, Chiba University Hospital, Japan; 2. Center for Promotion of Clinical Investigation, Tokyo Metropolitan Geriatric Hospital, Japan; 3. Department of Community Healthcare & Geriatrics, Nagoya University Graduate School of Medicine, Japan; 4. Department of Plastic Surgery, Showa University, Japan; 5. Department of Cellular and Molecular Biology, Hiroshima University Graduated School of Biomedical Sciences, Japan; 6. Department of Endocrinology, Yamagata City Hospital Saiseikai, Japan; 7. Department of Orthopaedic Surgery, Nara Medical University, Japan; 8. Department of Geriatric Medicine, Ehime University Graduate School of Medicine, Japan)

Introduction : Werner syndrome (WS), also known as adult progeria, is an autosomal recessive disorder caused by a mutation in the gene encoding the RecQ DNA helicase. WS is characterized by early aging phenotypes including graying and loss of hair, juvenile cataracts, skin ulcers, insulin-resistant diabetes, premature atherosclerosis, and neoplasms. The diagnostic guidelines of Japanese WS were released in 1984. However, the prevalence of WS in Japan and its diagnostic criteria have not been reviewed since. Therefore, the aim of this study was to revise the diagnostic criteria for Japanese Werner syndrome. Method : A nationwide epidemiological study was performed from 2009 to 2011, involving 6,921 surveys sent to hospitals with more than 200 beds to assess existing WS diagnostic criteria as well as additional signs of high incidence on the basis of clinical experience with WS. Results : The existing diagnostic criteria were reviewed, and signs with >90% incidence were listed as cardinal signs. Several criteria were added, including genetic testing and calcification of the Achilles tendon, whereas criteria that are practically difficult to obtain, such as measurement of urinary hyaluronic acid, were omitted. Conclusion : The 26-yr-old diagnostic criteria for WS were revised on the basis of the results of a nationwide epidemiological study. The proposed revised criteria will facilitate simpler, faster, and more robust diagnosis of WS in the Japanese population. Keywords : Werner syndrome, Adult progeria, Diagnostic criteria

PP25 C-209

RESPONSES OF THE ELDERLY WITH DEMENTIA TO SUGGESTION OF GASTROSTOMY

Kazuhiro NIIZATO¹, Gen OH², Hiroyuki UCHIYAMA¹, Tomonari KOTO¹, Yosuke YUMOTO¹, Ito KAWAKAMI³, Kenichi OSHIMA¹, Masahiko SAITO¹ (1. Tokyo Metropolitan Matsuzawa Hospital, Department of Psychiatry, Japan; 2. Professor Emeritus of the University of Tokyo, Matsuzawa Hospital, Japan; 3. Tokyo Metropolitan Institute of Medical Science, Department of Neuropathology, Japan)

Introduction : More than 560,000 patients in Japan are currently placed with percutaneous endoscopic gastroscopy (PEG), a controversial treatment for the elderly with advanced dementia. **Method :** As their preference for PEG installment seems routinely ignored, we asked 70 demented elderly (29 males, 41 females; 37 Alzheimer's Disease, 11 vascular dementia, 22 other types; MMSE 17.7 points; HDS-R 14.3 points) if they would have gastrostomy installed as a life-prolonging measure. **Results :** Eighty % promptly rejected the idea with frequent shows of disgust and the remaining 20% were unable to answer. None responded affirmatively. **Conclusion :** Their instant and emotional rejections may represent activation of a prior emotional experience in comparable situations. We believe that asking the intent of the demented elderly regarding initiating gastrostomy is an ethically valid and practical precaution to avert the controversial issue. **Keywords :** dementia, percutaneous endoscopic gastroscopy, emotional rejection

PP25 C-210 UNDERNUTRITION - SARCOPENIA - FRAILTY COMPLEX IN REHABILITATION HOSPITAL; INCIDENCE AND INFLUENCE TO OUTCOME

Sadao YOSHIDA¹, Jiro FUJIYAMA¹, Naoto HAMASAKI², Yoshikazu MIYAZATO³ (1. Department of Internal Medicine, Okinawa Rehabilitation Center Hospital, Japan; 2. Department of Orthopedic Surgery, Okinawa Rehabilitation Center Hospital, Japan; 3. Department of Neuropsychiatry, Okinawa Rehabilitation Center Hospital, Japan)

Introduction : Incidence of undernutrition, sarcopenia and frailty is high in elderly patients. It is not rare that 2 or 3 of them coexist. And they correlate between each other. We examined their incidence and influence to outcome in rehabilitation hospital patients. **Method :** Thirty three elderly patients (> 65 yr) admitted in our hospital were administered. Undernutrition was screened with Mini Nutrition Assessment (MNA-SF). Diagnosis of sarcopenia was undergone according to EWGSOP guideline. Cut-off values of muscle mass loss were 28.32 cm² (male) or 20.93 cm² (female) in arm muscle area (AMA) or 28.0 cm in calf circumference (CC). Frailty was defined as described previously. Insulin resistance was evaluated with HOMA-R (> 1.6). Outcome of rehabilitation was evaluated with FIM. **Results :** On admission, 27 patients (82%) were classified as undernutrition, 24 patients (73%) were diagnosed as sarcopenia, and all 33 patients (100%) were identified as frailty. Insulin resistance was detected in 5 patients (15%). On discharge, undernutrition was recovered in 11/27 patients, sarcopenia was recovered in 4/24 patients, and frailty was recovered in 7/33 patients. Undernourished patients on the period of discharge show less improvement of FIM (p=0.0002). All patients who show recovering of sarcopenia or frailty were well-nourished on discharge (p=0.04 and p=0.002). MNA score on admission correlates existence of frailty on discharge (p=0.011). **Conclusion :** Incidence of undernutrition, sarcopenia and frailty is extremely high in Japanese rehabilitation hospital patients. Nutrition care is important for recovering of sarcopenia and frailty. MNA predicts outcome and status of frailty on discharge. **Keywords :** MNA, sarcopenia, frailty

PP25 C-211

NUTRITIONAL STATUS AND RELATED FACTORS IN ELDERLY NURSING HOME RESIDENTS IN TURKEY: A CROSS-SECTIONAL STUDY

Zeynep KURTULUS¹, Rukiye PINAR² (1. Nursing, Namik Kemal University, School of Health, Turkey; 2. Nursing, Yeditepe University Faculty of Health Sciences, Turkey)

Introduction : The prevalence of malnutrition seems to be higher in hospital and nursing home settings. Determining the factors affecting malnutrition and evaluating the nutritional status of the elderly in these settings in particular may contribute to the solution of this problem. The aim of the study was to determine the prevalence of malnutrition in elderly nursing home residents and to investigate the association between malnutrition and socio-demographic variables, medical factors, cognitive impairment, and depression. **Method :** This study was conducted in all nursing homes located in Istanbul affiliated to the Prime Ministry Social Service and Institution of Child Protection (five nursing homes). **Participants:** Four hundred and ten elderly people who live in nursing homes were examined in a study. The Mini Nutritional Assessment (MNA), the Mini Mental State Examination for the educated and uneducated (MMSE), and the Geriatric Depression Scale (GDS) were used for data collection. **Results :** The mean age of the study population was 76.4 years. Among the participants, 42% were female, 18% were married, and 7% were with malnutrition, 24% were at risk of malnutrition, 32% had cognitive impairment and 53% had depression. The high number of chronic diseases (p<0.001), and number of medication used (p<0.001), low body mass index (BMI) (p<0.001), dental problems (p<0.01), cognitive impairment (p<0.01), and depression (p<0.01) seemed to be associated with malnutrition in elderly nursing home residents. **Conclusion :** The nutritional status of elderly nursing home residents, particularly the risk groups, should be evaluated and interventions aiming to improve their nutritional status should be planned. **Keywords :** Elderly, Malnutrition, Nursing Home

PP25 C-212 CHANGES OF THE EATING INDEPENDENCY IN ELDERLY PATIENTS WITH DEMENTIA IN LONG-TERM PROGRESS – COMPARISON OF AD AND VAD BY THE FOLLOW-UP SURVEY DURING SIX YEARS –

Ayako EDAHIRO¹, Hirohiko HIRANO², Toshiaki ABE³ (1. Toshima Dental Association Oral Health Center "Azalea Dental Clinic", Tokyo Metropolitan Geriatric Hospital and Institute of Gerontology, Japan; 2. Research Team for Promoting Independence of the Elderly, Tokyo Metropolitan Geriatric Hospital and Institute of Gerontology, Japan; 3. Toshima Dental Association, Toshima Dental Association, Japan)

Introduction : We have been providing visiting dental care for elderly patients who needs care, from the Toshima Dental Association Oral Health Center "Azalea Dental Clinic" since 1999. We also have been performing continued dental health checkups every two years. We report comparisons of changes in eating independency between the Alzheimer's disease (AD) and vascular dementia (VaD), based on the information collected from continued dental health checkups. **Method :** Subjects included 88 elderly dementia patients requiring care who underwent the dental health checkups of this center from 2005 to 2011. All subjects were aged 65 and over at the first year, capable of eating orally, and who's investigation data over 6 continuous years was available. Patients underwent vital function tests (eating independency was included), cognitive assessment, and a basic information survey. **Results :** The data were compared with stratification by severity of dementia of the first year, and significant declines in eating independency were seen in AD in the moderate dementia group. In

VaD group, some patients declined in eating function, while some maintained eating function, regardless of dementia severity of the first year. Conclusion : This research suggested that it is necessary to offer predictive support for elderly patients with dementia, after taking into consideration functional decline over time can be different according to the cause of dementia. Keywords : Dementia, Eating independency, Functional decline

PP25 C-213

ASSESSING THE SITUATION OF PROBLEMS CONCERNING MEALS AND NUTRITION FOR THE ELDERLY UNDER HOME CARE

Koko UDAGAWA-RUSU¹, Toshikazu SUZUKI², Yukie YANAGISAWA² (1. Graduate School of Human Ecology, Wayo Women's University, Futaba Nutrition College, Japan; 2. Department of Health and Nutrition, Wayo Women's University, Japan)

Introduction : The purposes of this survey include: i) to analyze whether registered dietitians have a grasp of the problems understood by at-home care service providers with regard to meals and nutrition issues in care management, ii) to investigate whether registered dietitians can provide guidance and whether they are keen to acquire a higher level knowledge to improve the quality of their meals and nutritional guidance, and iii) to determine what information is required by the elderly under home care and to improve meals and nutritional guidance provided to them. Method : The survey was conducted by posting questionnaires to 197 at-home long-term care support providers operating in Tokyo, and 67 registered dietitians working for NPOs. Results : According to the at-home care services providers, "difficulty in swallowing" is experienced in many cases, where "choking and coughing" is a problem, and they select "effective means of rehydration" as necessary information. By way of comparison, while the registered dietitians are also aware of "choking and coughing" problems, only a few of them listed "effective means of rehydration" under such criteria as "able to provide nutritional guidance with confidence" and "wish to acquire a higher level knowledge." On the contrary, many of them answered that they are "able to provide nutritional guidance with confidence" in terms of "confirmation of food intake amount and nutritional balance." Conclusion : We consider that it is necessary to carefully consider their declining eating functions, and to acquire greater knowledge of what information they need, in order to provide such guidance with confidence. Keywords : eating functions, at-home care, nutritional guidance through visits

PP25 C-214

ELDERLY PATIENTS WITH HIP FRACTURE IN A REHABILITATION CENTRE: THE SOONER THE VISIT OF THE DIETICIAN THE BETTER FOR NUTRITIONAL STATUS

Marie-Line GAUBERT-DAHAN¹, Fatma SADOUDI-GAZOU¹, Yves WOLMARK¹, Agathe RAYNAUD-SIMON² (1. Geriatrie, APHP Hopital Bretonneau, France; 2. Geriatrie, APHP Hopital Bichat-Claude Bernard, France)

Introduction : Malnutrition is common in elderly hospitalized for hip fracture. Improving their nutritional status is a challenge for the professionals who work in rehabilitation centres. The aim of this retrospective study was to identify the potential predictors of improved nutritional status at 1 month of hospitalization and at hospital discharge. Method : All patients hospitalized between 2009 and 2011 for hip fracture in our rehabilitation centre and that stayed more than 3 weeks were included. Improved nutritional status was defined as an increase in weight greater than or equal to 0.5 kg or as a weight

stabilization (a change in weight between -0.5 kg and 0.5 kg). Nutritional status as described as worsening in case of weight loss greater or equal to 0.5 kg. Results : Seventy-seven patients (86 ± 6 years) were included, 60 (78%) had malnutrition on admission. After 1 month of hospitalization, 43 patients improved their nutritional status and 34 got worse. Improving nutritional status at 1 month of hospitalization was only associated with a shorter delay in the dietician visit (5 ± 6 days versus 14 ± 14 days; p = 0.009). The duration of hospitalization was 91 ± 66 days. At the hospital discharge, 42 patients improved and 35 got worse. Factors associated with improved nutritional status at hospital discharge were a better autonomy and a higher prealbumin at admission, a higher weight after 1 month of hospitalization and a nutritional status improving after 1 month of hospitalization. Conclusion : Malnutrition must be diagnosed and treated as fast as possible. Keywords : hip fracture, malnutrition

PP25 C-215

BLOOD LEVELS OF MICRONUTRIENTS VITAMIN B1 AND ZINC DECREASE WITH ADVANCING AGE IN NORMALLY-NOURISHED ELDERLY AGED 75 AND OVER

Michiyo TAKAHASHI¹, Toshikazu SUZUKI², Ayumi TAKAGI², Naotaka HASHIZUME³, Hikaru MATSUMOTO² (1. Graduate School of Human Ecology, Wayo Women's University, Japan; 2. Department of Health and Nutrition, Wayo Women's University, Japan; 3. Graduate School and Department of Health and Nutrition, University of Human Arts and Sciences, Japan)

Introduction : Many studies addressing nutrition in the elderly have concerned malnutrition and quality of life. In contrast, there are few studies assessing nutritional status in normally-nourished elderly persons. In this study, we investigated the changes in blood nutrient levels with aging in elderly persons 75 years and older, who were self-supporting and classified as normally-nourished. Method : The participants comprised 13 elderly adults (7 men, 6 women, mean age 82.5±5.2 years), living in I City, Chiba, Japan. Body composition, estimated nutrient intake, and blood levels of nutrients were measured in March 2009 and then in December 2011. Results : The estimated nutrient intake revealed that all participants were relatively well-nourished. However, the estimated intake of vitamin B1 and zinc was slightly lower than the recommended dietary allowance in men. During the 2 years 9 months, the intake was similar, but the levels of serum vitamin B1 had decreased by 73% in men and 65% in women, and the levels of serum zinc had decreased by 23% in men and by 19% in women. The levels had declined to near the lower limits recommended as optimal. Conclusion : The results presented here suggest that elderly people aged 75 and over become susceptible to vitamin B1 and zinc insufficiency with increasing age, even if they are considered normally-nourished. Dietary supplements to increase the intake of vitamin B1 and zinc may be effective to prevent their deficiency, to avoid a depressed innate immune response, and to reduce the risk of geriatric syndrome in the future. Keywords : elderly persons, vitamin B1, zinc

PP25 C-216

EVALUATION OF NUTRITIONAL STATUS USING ANTHROPOMETRY AND BIOCHEMICAL INDICES OF COMMUNITY DWELLING OLDER PERSONS

Ogechi Chinyere NZEAGWU, Ada Charity UWAEGBUTE (Human Nutrition and Dietetics, Michael Okpara University of Agriculture, Umudike, Abia State, Nigeria)

Introduction : Elderly population is on the increase while nutrition and health risks increase with age. Objective: Evaluate the nutritional

status of community dwelling older persons using biochemical and anthropometric indices. Method : Design:Cross-sectional.Setting:semi-urban and rural.Participants: 600 elderly community dwelling aged ≥ 60 years.Measurements:Nutritional status was assessed by body mass index(BMI),mid-upper arm circumference (MUAC),waist-hip ratio (WHR), waist circumference (WC), calf circumference (CC) for all the subjects; biochemical indices- serum haemoglobin (Hb), albumin, ferritin, total cholesterol (TC), low density lipoprotein (LDL), C-reactive protein (CRP) for 25% of the subjects using standard procedures. Results were compared with their recommended cut-off points. Results : Majority(62.7%)had normal BMI(18.5-24.9 kg/m²), 21.33% overweight, 11.5%underweight. More than 70%were at risk of heart disease using WHR. In MUAC 75.6% had normal, 24.33% malnourished. Also 69.5% had normal WC,15.8% increased risk, 14.7% substantially at risk of abdominal fat adiposity. More (56.2%) had normal CC,43.8% at risk of malnutrition.Anaemia was high as 78% had low Hb, 81.3% had serum ferritin below normal, 56.7% had abnormal albumin, 43.3% normal albumin levels. About 82.7% were in the lower risk, 18% moderate and high risk category in CRP.82% had desirable TC, 9.3% borderline high risk, 8.7% high risk, 53.3% optimal LDL levels, 14% had very high level. Age correlated ($p < 0.05$) negatively with CC ($r = -0.22$), MUAC ($r = -0.295$), positively with albumin ($p < 0.05$, $r = 0.214$) in females. Significant relationship ($p < 0.01$) existed between Hb and ferritin for both males ($r = 0.074$) and females($r = 0.339$). Negative relationship ($p < 0.05$) noted for Hb and CRP ($r = 0.361$). There was positive association ($p < 0.01$) between BMI and CC, MUAC, WC, TC and LDL for males ($r = 0.966$) and females ($r = 0.955$). Conclusion : Anaemia was prevalent as many had low Hb, albumin and ferritin. Most subjects had normal BMI, however many were at risk of heart disease with WHR. More subjects were malnourished with MUAC than BMI. Association existed between TC and LDL. Keywords : Nutritional status, Anthropometry, Older persons

PP25 C-217

DETERMINANT OF UNDERNUTRITION AMONG AGING IN WEST JAVA AND BANTEN INDONESIA

Charles SURJADI¹, Yunisa ASTIARANI¹, Annisa Riza CHAERUNISA² (1. Department of Public Health, Faculty of Medicine Atma Jaya Catholic University of Indonesia, Indonesia; 2. Health Promotion, Indonesian Society of Education of Health Promotion, Indonesia)

Introduction : Overnutrition is a problem among elderly in Metropolitan city Jakarta, it is about 31.3% elderly are overweight. Meanwhile we want to know the nutritional problems and its determinants in elderly in West Java and Banten, we do analysis based on 2007 Basic National Health Research data. Method : From basic national health research data, a total of 7176 elderly persons were asked of their characteristics (age, sex), socio-economic status, physical activities, vegetables and fruits intake, and measurement of BMI. The data was analyzed by using chi square and multiple logistic regression to look for the best model factors related to undernutrition among Aging. Results : The prevalence of undernutrition among elderly in West Java and Banten is 25.5%, normal nutrition is 58.9%, overweight is 12.3%, and obese is 3.3%. Further analysis using Multivariate logistic regression gave the result that undernutrition is significantly related to low socioeconomics status OR 1.5 (95% CI 1.2-1.8), unemployed OR 1.2 (95% CI 1.0-1.3), age older than 75 years OR 1.5(95%CI 1.3-1.8), living at district areas OR 1.2(95%CI 1.1-1.4), have not been eating fruit daily OR 1.8(95% CI 1.4-2.2), having mental health problems OR 1.1(95% CI 1.0-1.3). Conclusion : Contradictory with elderly at metropolitan city of Jakarta which is

faced with Overweight and Obesity, a quarter of elderly in West Java and Banten are undernutrition. This calls for the government to overcome undernutrition among elderly with specific attention to low socioeconomic and those who live in district areas and increase active aging policy and programs. Keywords : aging, nutrition, undernutrition

PP25 C-218

END-OF-LIFE ANGUISH: AMINOFF SUFFERING SYNDROME AND RELIEF OF SUFFERING UNITS

Bechor Zvi AMINOFF (Geriatrics, Geriatric Division, Sheba Medical Center, Tel-Hashomer & Minerva Center at Tel-Aviv University, Israel)

Introduction : Aminoff Suffering Syndrome (ASS) in end-of-life is the new proposed term for a pathological symptomatology and entity that is characterized by a high Mini Suffering State Examination (MSSE) scale score (1999), <6 months survival, irreversible and intractable aggravation of suffering and medical condition until demise. Method : Aminoff Suffering Syndrome was proposed as the key criterion for enrolling end-stage disease and dying patients to Relief of Suffering Units. Based on clinical experience, the following items were included in the MSSE: Not calm, screams, pain, decubitus ulcers, malnutrition, eating disorders, invasive action, unstable medical condition, suffering according to medical opinion, and suffering according to family opinion. The results of clinical experience with this scale were presented at world and regional congresses in Berlin (1999), Jerusalem (2000), Vancouver (2001), Stockholm (2002), Tokyo (2003), Las Vegas (2004), Rio-de-Janeiro (2005), Madrid (2006), Saint-Petersburg (2007), Trondheim (2008), Paris (2009), Honolulu (2010), Athens (2011) and in Copenhagen (2012). Results : This paper proffers a new, alternative approach and setting for terminal and dying patients with ASS that could pertain to the Israeli setting, and could possibly also be applicable in other countries. Short hospitalization periods of approximately 1 month, and treatment in Relief of Suffering Units may be a new, palliative approach and present a possible solution for coping with the horrendous burden of the anguish of terminal and dying patients, their families, and the medical and nursing staff. Conclusion : Relief of Suffering Units should be part of intensive care units of any hospital department. Keywords : Anguish, setting, end-of-life

PP25 C-219

POLYPHARMACY, INTERACTIONS AND RE-ADMISSIONS; A LIKELY TRIUMVIRATE

Clifford LISK, Muhammad MATIN, Ada OKOLI, Ahmed Javid NOORI (Medicine, Barnet Hospital, United Kingdom)

Introduction : Older adults are prescribed medications by Health Care professionals to treat chronic disease. They are aided by disease specific clinical guidelines which when applied to older adults can lead to polypharmacy. This has implications;related to medication costs and to the risk of adverse drug reactions and hospital readmission. Method: A review of case notes, medication charts and electronic patient records was done evaluating the prevalence of polypharmacy and patient readmission rates in a cohort of hospitalised older adults in a UK District General hospital. Potential adverse drug reactions were established using the Medscape Interaction checker. Results : 173 patients were identified. Of these 51% were female. 82% were above 60 years old. Patients were on a median of 9 medications (range 0-18) with nearly three quarters on >5 medications. The proportion of patients with 3 or more admissions was highest in the over 60 group (19%) when compared to the 15-59 group (3%). 74 patients on more than 5 medications were responsible for 193/198 admissions in the

previous year. The number of serious interactions totalled 94 compared to 817 significant interactions. Conclusion : This study highlights the increased risk of serious and significant medication interactions in patients with polypharmacy. It raises the concern that polypharmacy may play an important role in hospital readmission. It is therefore important that Healthcare professionals use clinical guidelines wisely placing an emphasis on weighing up the benefits, risks and burden of complex therapies in a process of shared decision making in order to improve the quality of prescribing to patients. Keywords : polypharmacy, interactions, readmissions

PP25 C-220

POLYPHARMACY AND NECESSITY OF MEDICATION INTEGRATION ON ADMISSION TO A LONG-TERM CARE HEALTH FACILITY

Chinori KURATA¹, Michio IHARA¹, Sadami KURATA² (1. Clinic, Care Center Hougawa, Japan; 2. Gerontological Nursing, Hamamatsu University School of Medicine, Japan)

Introduction : In Japan, as a rule, only physicians of long-term care health facilities (LTCHFs) can prescribe medication for LTCHF residents. LTCHF admission may thus be a golden opportunity to integrate medications, as well as to address polypharmacy. Method : In 108 residents aged ≥ 65 years (84.2 ± 6.8 years) on admission to a LTCHF in Japan, their drugs and diseases informed by prior physicians before admission were surveyed on whether prior physicians informed the LTCHF physician about medications and their indications. Results : The number of drugs in total, informed and not informed by prior physicians were 6.7 ± 4.1 (range 0-20), 5.4 ± 3.5 (0-16), and 1.4 ± 2.3 (0-15) per resident, respectively, and that without clear indications was 4.6 ± 3.6 (0-20). These numbers were not significantly different between females and males and between those transferred from hospital and from the others. On the other hand, the number of drugs in total was significantly larger in those with more recent than in those with less recent admission (7.5 ± 4.4 vs 5.9 ± 3.5 , $p=0.04$), and that not informed by prior physicians was significantly larger in those aged ≥ 86 years than in those aged ≤ 85 years (1.9 ± 2.9 vs 0.8 ± 1.4 , $p=0.02$) and in those with lower than in those higher care need levels (1.9 ± 2.9 vs 0.9 ± 1.5 , $p=0.03$). Conclusion : Polypharmacy has been getting more prevalent on LTCHF admission in Japan, and medication information provided by prior physicians was frequently insufficient. In Japan, medication reconciliation and integration may be required on LTCHF admission to address polypharmacy by reducing unnecessary drugs. Keywords : polypharmacy, medication reconciliation, long-term care

PP25 C-221

ANTICHOLINERGIC BURDEN AND TEN YEAR SURVIVAL WITHIN A COHORT OF ELDERLY MEXICAN AMERICANS

G. Blair SARBACKER¹, S. Liliana OAKES², Robert C. WOOD², Dheeraj ANAND², David V. ESPINO³ (1. Department of Pharmacy Practice, University of the Incarnate Word Feik School of Pharmacy, USA; 2. Department of Family and Community Medicine, University of Texas Health Science Center San Antonio, USA; 3. Department of Medicine, San Antonio State Supported Living Center, USA)

Introduction : The purpose of this study is to determine whether higher anticholinergic burden increases 10 year mortality in a cohort representative of all community-based older Mexican Americans in the United States. Method : The original Hispanic Established Populations for the Epidemiologic Study of the Elderly (HEPESE) cohort was a probability sample of 3050 Mexican American elders from five southwestern States followed from 1993 to 2012. Ten year mortality of

this cohort was assessed beginning at the time of their second interview in 1995 until their 5th interview in 2005 ($n=2438$). Each of up to 8 medications was classified for anticholinergic burden according to the modified-ADS. These categories were then summed across all reported medications creating a combined measure of total anticholinergic burden. This sum was then re-categorized into 5 levels representing total burdens of 0,1,2,3 and 4+. Anticholinergic burden was tested for association with 10 year mortality using survival analysis. Covariates examined included socio-demographics, interview language, cognitive status and self reported comorbidities. Results : The 1497 elders with any reported prescription medication had a mean age of 75.6, of which 63.3% were female. Multiple variable Cox regression survival analysis revealed a statistically significant ($p<0.05$) relationship between anticholinergic burden and increased mortality after adjustment for covariates. Conclusion : Anticholinergic burden is significantly associated with mortality in Southwestern Mexican American elders who report taking prescription medications. This relationship remains significant after covariate adjustment. This is the first study we are aware of examining anticholinergic burden in the older Mexican American population. Keywords : anticholinergic burden; Mexican-American

PP25 C-222

THE PREVALENCE OF POTENTIALLY INAPPROPRIATE MEDICATIONS (PIMS) IN TAIWAN

Hui-Tzu CHEN¹, Wen-Chiung CHANG², Ya-Fang ZENG¹, Tzuo-Yun LAN¹ (1. Institute of Hospital & Health Care Administration, National Yang-Ming University, Taiwan; 2. Institute of Health Policy and Management, National Taiwan University, Taiwan)

Introduction : Elderly patients commonly have multiple comorbid conditions and subsequent poly-pharmacy, which place them at higher risk of adverse drug events. AS the population in the world is aging rapidly, potentially inappropriate medications (PIMs) has become an important health issue. The aim of this study was to investigate the prevalence of PIMs in Taiwan. Method : Data were from the National Health Insurance Research Database and 2009 claim data for the sample drawn in 2005 was used. The 2002 Beers Criteria was used to analyze the individuals aged 65 and over on their health utilization (outpatient, inpatient and emergency). Basic characteristics of 3 different levels including prescription, patient, care provider between PIM and non-PIM were also compared. Results : At the individual level, the prevalence were higher for inpatient (67.8%) and Outpatient (65.5%) care, followed by emergency (41.3%) care. At the prescriptions level, the prevalence for inpatient (57.11%), emergency (30.6%), and Outpatient (14.7%) care were relatively lower. A number of characteristics among 3 levels were identified to be different between PIM and non-PIM. Conclusion : The prevalence of PIMs in Taiwan was higher than those in other countries. Further investigation is needed to further identify factors associated with PIMs. Keywords : The elderly, Potentially inappropriate medications (PIMs), Beers criteria

PP25 C-223

DUPLICATE MEDICATIONS OF CALCIUM CHANNEL BLOCKERS AND RELATED FACTORS

Ya-Fang ZENG¹, Wen-Chiung CHANG², Hui-Tzu CHEN¹, Tzuo-Yun LAN¹ (1. Institute of Hospital & Health Care Administration, National Yang-Ming University, Taiwan; 2. Institute of Health Policy and Management, National Taiwan University, Taiwan)

Introduction : Duplicate medications is a problem resulting from doctor-shopping and insufficient sharing of information in the health

care system of Taiwan. The aim of this study was to examine the prevalence and related factors of duplicate medications among the older adults in Taiwan. Method : We analyzed the 2009 outpatient visit claims data of a randomly sampled 1000000-person cohort from the National Health Insurance Research Database. The visit records of patients aged 65 or older claiming for prescriptions of calcium channel blockers, including generic and brand drugs, were analyzed. Duplicate medications was defined as three or more days of drug duplication for general prescriptions, or eight or more days of duplication for refill prescriptions. The independent variables in visits-level was drug expense in each visit; in patient-level included age, sex, and continuity of care index; and in provider-level were the accreditation level of medical institution, physician age and sex. Results : Among the 311,289 outpatient visits, 11.6% were defined as duplicate medications. The multiple logistic regression showed significant factors were drug expense (odds ratio=1.00, $p<0.001$) in visit-level; being male (OR=1.04, $p<0.001$) and continuity of care (OR=0.50, $p<0.001$) in patient-level; institutions accredited as local hospitals (OR= 1.26, $p<0.001$), area hospitals (OR=1.39, $p<0.001$), or medical centers (OR=1.59, $p<0.001$), and physician age of 40-49 (OR=0.93, $p<0.001$), 50-59 (OR=0.89, $p<0.001$), and 60 or older (OR=0.92, $p<0.001$) in provider-level. Conclusion : Duplicate medications was prevalent among older patients in Taiwan. Health care professionals should pay attention to the related factors identified in this study. Keywords : Duplicate medications; calcium channel blockers; Taiwan

PP25 C-224

MULTI-PROFESSIONAL MEDICATION REVIEW USING COMPUTERIZED MEDICAL RECORDS HELPS REDUCE THE NUMBERS OF DRUGS FOR ELDERLY IN-PATIENTS

Yuichi HAYASHI, Megumi YAMADA, Nobuaki YOSHIKURA, Naoko HARADA, Akihiro KOUMURA, Akio KIMURA, Takashi INUZUKA (*Neurology and Geriatrics, Gifu University Graduate School of Medicine, Japan*)

Introduction : Polypharmacy, usually defined as concurrent use of more than 6 drugs, is major problem in elderly patients in developed countries. Burns et al reported that multi-professional medication review helped reduces the numbers of drugs in elderly patients with polypharmacy. Therefore, we investigated whether multi-professional medication review using computerized medical records afforded similar results. Method : Four hundred and thirty-five elderly patients (ages, 65-74-year-old [269]; and >75-year-old [166]; 188 women, 247 men) were admitted to Department of Neurology, Gifu University Hospital, between 2004 and 2011. The numbers of drugs used at admission and at discharge, oral immunotherapy (e.g. corticosteroid use) history, fall experience in the past 1-year, and presence or absence of falling risk factors were examined using computerized medical records. The data were assessed using t-test, and P values of <0.05 were considered statistically significant. Results : The number of drugs used in all elderly patients was 5.1 ± 3.5 (range 0-16) at admission. At discharge, the number of drugs reduced by 1.3 ± 3.1 in patients with polypharmacy ($P<1.09\times 10^{-13}$). The number of drugs reduced by 0.5 ± 3.1 in patients with fall experience in the past 1-year ($P<0.04$), but increased by 1.7 ± 3.3 in patients undergoing oral immunotherapy ($P<1.08\times 10^{-8}$). Conclusion : Multi-professional medication review using by computerized medical records helps reduce the numbers of drugs in elderly patients with polypharmacy, and fall experience in the past 1-year except in those undergoing oral immunotherapy. Keywords: polypharmacy, multi-professional reviewing system, computed medical records

PP25 C-225

HEALTH-RELATED QUALITY OF LIFE MEASURES AS PREDICTORS OF FRAILTY INCIDENCE IN ELDERERS: A PROSPECTIVE STUDY OF COMMUNITY-DWELLING ELDERERS IN TAIWAN

Tsai-Chung LI¹, Cheng-Chieh LIN², Chih-Hsueh LIN², Wen-Yuan LIN³ (*1. Graduate Institute of Biostatistics, College of Public Health, China Medical University, Taiwan; 2. Department of Family Medicine & Geriatric Medicine, China Medical University & Hospital, Taiwan; 3. Department of Family Medicine, China Medical University & Hospital, Taiwan*)

Introduction : Frailty is a multidimensional syndrome that confers a high risk for adverse health outcomes. Little information exists on the predictors of frailty. The aim of the study is to examine the predictive ability of health-related quality of life (HRQOL) on frailty incidence in a Taiwanese metropolitan elderly population. Method : At baseline 1,099 subjects aged 65 years and over were recruited in 2009 from a metropolitan city in Taiwan. After excluding individuals with frailty or missing data, 471 older persons were evaluated one year later. Adopting the Fried criteria, frailty was determined by five components: shrinking, weakness, poor endurance and energy, slowness, and low physical activity level. HRQOL was assessed by the short form 36 (SF-36). The areas under the curve (AUCs) of receiver operating characteristic curves were used to predict the ability for correctly classifying elders with frailty incidence. Results : In total 27 persons (5.73%) have a frailty event during 1 year of follow up. Decreases in scores of physical functioning (PF), general health (GH), vitality (VT), social functioning (SF), and Physical Component Summary (PCS) were significantly associated with frailty incidence after multivariate adjustment (all p for trend <0.05). The AUC for considering scales of PF, GH, VT, and SF simultaneously was 0.86 (95% CI: 0.78-0.94), which was significantly higher than that for PCS and Mental Component Summary (MCS) (0.82, 0.73-0.91) ($p<0.05$). Conclusion : SF-36 is a predictor of frailty incidence in a Taiwanese metropolitan elderly population. Our study finding has important implication on screening of older persons for frailty incidence in community settings. Keywords : prospective study, SF-36, frailty incidence

PP25 C-226

QUALITY OF LIFE IN ALCOHOL RELATED BRAIN DAMAGED INDIVIDUALS: WHAT A GOOD-TEMPERED, SOCIALLY INTEGRATED AND HIGHLY EFFICIENT GROUP OF OLDER ADULTS ... OR MAYBE NOT?

Jean-Paul STEINMETZ¹, Christiane THEISEN¹, Carine FEDERSPIEL² (*1. Department of Research & Development, ZithaSenior, Luxembourg; 2. Department of Geriatric Rehabilitation, Department of Research & Development, ZithaKlinik, ZithaSenior, Luxembourg*)

Introduction : Long-term care individuals suffering from severe chronic alcohol abuse have been shown to experience widespread deficits in cognitive and affective functioning. Consequences of alcohol related brain damage seem however not to be limited to cognitive and affective performances during test situations, but have been found to influence the patient's perception of their performance level and personal health condition in everyday situations. The aim of the present research is to investigate the ability of detoxified chronic alcoholics to correctly perceive their own cognitive deficits and corresponding quality of life. Method : Our study group is composed of 12 older alcohol related brain damaged individuals (mean age 58.5, SD = 6.4) living in a specialized ward providing 24h care and support. Patient self-ratings are contrasted to expert ratings provided by two

health care professionals using two rating instruments: (1) the quality of life profile for chronologically ill patients (Laubach et al., 2001) and the Dysexecutive questionnaire (Wilson et al., 2000). It is hypothesized that alcohol related brain damaged (ARBD) individuals systematically overrate their own quality of life and level of everyday functioning. Results : Results of the present research support our hypotheses, suggesting that ARBD individuals are unable to correctly perceive and interpret their personal health and life situation. Conclusion : Crucially, these misperceptions may be at the origin of social conflicts, inadequate coping strategies (i.e., relapse), and may compromise adequate provision of care and support. Keywords : alcohol related brain damage, quality of life, self-perceptions vs. other-perceptions

PP25 C-227

QUALITY OF LIFE OF GROUP HOME RESIDENTS IN JAPAN

Miho MATSUI (School of Nursing, Nara Medical University, Japan)

Introduction : There are few empirical studies relating to quality of life (QOL) in group home residents in Japan although those facilities are extremely increasing and major care setting in Japan. The purpose of this study was to assess QOL and examine its associated factors in Japanese group home residents. Method : One hundred and nineteen residents of seven group homes participated, and the staff assessed the resident's QOL, level of dementia and caregiving, and Activity of Daily Living (ADL). QOL was assessed using The Alzheimer's Disease-Related Quality of Life (ADRQL) revised version. The ADRQL consists of 40 items that assess 5 domains; social interaction, awareness of self, feeling and mood, enjoyment of activities, response to surroundings. Higher scores indicate good QOL. Results : The mean age of the participants was 86.6 (SD 6.2), and 80% of them was female. The mean length of stay was 40 months (SD 26.1, Range 1 to 88). The ADRQL score showed that the mean of the total score was 66.5 (SD 17.1), social interaction for 59.9 (SD 29.0), awareness of self for 59.9 (SD 29.3), feeling and mood for 78.2 (SD 19.8), enjoyment of activities for 50.5 (SD 36.6), response to surroundings for 81.9 (SD 23.2). Age and gender were not related to ADQOL, on the other hand, level of dementia ($r=-.539$, $p<0.001$), level of caregiving ($r=-.581$, $p<0.001$), length of stay ($r=-.363$, $p=0.001$), and ADL ($r=.675$, $p<0.001$) were significantly associated to ADQOL. Conclusion : Group home resident's QOL were significantly associated with ADL. Keywords : QOL, Group home, ADL

PP25 C-228

A SURVEY OF ANAEMIA AND ITS ASSOCIATION WITH POST-OPERATIVE TRANSFUSION AND LENGTH OF STAY IN FRAIL OLDER PATIENTS UNDERGOING ELECTIVE ORTHOPAEDIC SURGERY

Mun Hoe POON¹, Jennifer SMITH¹, Rob MORRIS¹, Cherry CHANG², Tahir MASUD³, Adam Lee GORDON³ (1. Department of Healthcare for Older Persons, Nottingham University Hospitals NHS Trust, United Kingdom; 2. Department of Clinical Haematology, Nottingham University Hospitals NHS Trust, United Kingdom; 3. Division of Rehabilitation and Ageing, University of Nottingham, United Kingdom)

Introduction : Despite evidence that pre-operative anaemia is associated with post-operative complications and international guidelines which recommend normalisation of haemoglobin (Hb) prior to elective surgery, many hospitals in the United Kingdom lack robust mechanisms to identify and treat anaemia pre-operatively. We surveyed the prevalence of anaemia in a cohort of frail older patients

undergoing elective hip and knee replacement and investigated the association between pre-operative haemoglobin, post-operative transfusion rate and length of stay (LOS). Method : Data on type of operation, LOS and blood transfusion requirements were collected for all patients undergoing elective hip and knee replacement and seen at the Systematic Care for Older People in Elective Surgery (SCOPES) clinic between November 2011 and February 2012. Pre-operative haemoglobins were collected retrospectively from the hospital electronic blood results system. Results : 177 patients were studied. The average age was 76.7(SD 5.0). 106(59.9%) were female. 100(56.5%) and 77(43.5%) underwent total knee and hip replacements respectively. 29 (16.4%) patients were anaemic pre-operatively. 12(41%) patients with pre-operative anaemia required a post-operative transfusion, compared with 27(18%) who had normal pre-operative haemoglobin ($p<0.01$; Chi-square). The median (range; IQR) LOS was 6 days (3-56; 3.5-8.5) for the group as whole, 9 (4-56; 5-14) for those requiring transfusion and 6 (3-41; 3.5-8.5) for those not requiring transfusion ($p<0.01$; Median test). Conclusion : Anaemia was prevalent and was associated with a requirement for post-operative blood transfusion. Transfusion was associated with a longer LOS. We are developing a pathway to identify and treat frail older patients with pre-operative anaemia prior to elective hip and knee replacement. Keywords : Anaemia, Elective, Orthopaedic

PP25 C-229

CLINICAL AND ECONOMIC EFFICIENCY OF SIMULTANEOUS OPERATIONS FOR THE SECOND WORLD WAR VETERANS

Igor LESCHENKO, Igor ALEXANDROV, Valeriy SLIVKIN, Oleg YAKOVLEV (Samara Regional Clinical Hospital for War Veterans, First Research Institute of Rehabilitation of War Veterans of Medical Institute 'REAVIZ', Russia)

Introduction : The Surgery and Urology departments of our Research institute have performed 726 elective simultaneous operations since 1994 until 2011 of the Second World War veterans. This amounted to more than 14% of elderly patients requiring simultaneous operations. Method : Out of which 8,8 % are mild, 78,5% - moderate, 12,7% - severe. The results of simultaneous operations and similar staged operations differed insignificantly ($p>0,05$). Such achievement was realized due to advanced professional education of all medical staff of the departments and introduction of new techniques in examination and treatment: accurate definition of absolute and relative contraindications for simultaneous surgery, preoperative efficiency assessment, low-invasive operations, different types of non-endotracheal anesthesia. Results : In addition to a positive clinical effect, new technology of simultaneous operations reduces economic costs by 2,2 times vs staged surgery, and significantly improves quality of life of the above patients. Conclusion : In our research institute we realised high clinical and economic efficiency of simultaneous operations for senile patients. Keywords : simultaneous operations, senile patients, urological patients

PP25 C-230

COMPARISON OF PNEUMONIA IN THE ELDERLY WITH OR WITHOUT HYPERCAPNIA IN A SINGLE INTENSIVE CARE UNIT

Alice BREINING¹, Jacques BODDAERT², Christophe CRACCO³ (1. Geriatric, Pitie-Salpetriere Hospital, APHP, UPMC Paris 6, France; 2. Geriatric Department. Peri-Operative Unit., Pitie-Salpetriere Hospital, APHP, UPMC Paris 6, France; 3. Intensive Care Unit, Angouleme Hospital, France)

Introduction : Acute respiratory failure with hypercapnia > 45 mmHg in the elderly has been described as a predictive factor of death in emergency department. The aim of the study is to analyse the prognostic value of hypercapnia in elderly with pneumonia. **Method :** A retrospective study of prospectively collected data relative to elderly ≥ 75 years old admitted in a single Intensive Care Unit (ICU) for an acute severe bacterial pneumonia over a 28 month period was performed. Clinical and biological data and outcomes were compared in patients with and without hypercapnia > 45 mmHg. **Results :** 63 patients were included in this study: 27 patients with hypercapnia and 36 patients without hypercapnia. Mean age of patients was 81.9 ± 0.8 years old. Patients with hypercapnia had more often chronic obstructive pulmonary disease (59% vs 31%, $p=0.04$). Other comorbidities (chronic heart failure, chronic renal insufficiency, diabetes, cerebrovascular disease and cancer) were not found to be different between the 2 groups of patients. Advanced life support measures (use of invasive ventilation, renal replacement therapy and vasoactive drugs) and outcomes (ICU and hospital death and ICU and hospital length of stay) were not significantly different in the 2 groups except for patients with hypercapnia who had more non invasive ventilation (78% vs 50%, $p<0.05$). **Conclusion :** In our ICU, elderly admitted for acute respiratory failure due to pneumonia with hypercapnia have more often a COPD and required more frequently non invasive ventilation but didn't have a worse prognosis than those without hypercapnia. **Keywords :** Hypercapnia, Pneumonia, Elderly

PP25 C-231

ABNORMAL GLUCOSE TOLERANCE IS ASSOCIATED WITH LUNG DYSFUNCTION IN OLD SUBJECTS AROUND AGE 70 YEARS - SONIC STUDY

Ryosuke OGURO¹, Kei KAMIDE¹, Chikako NAKAMA¹, Tatsuo KAWAI¹, Hiroshi KUSUNOKI¹, Mitsuru OHISHI¹, Yukie MASUI², Kazunori IKEBE³, Yasuyuki GONDO⁴, Hiromi RAKUGI¹ (1. Geriatric Medicine and Nephrology, Osaka University Graduate School of Medicine, Japan; 2. Institute of Gerontology, Tokyo Metropolitan Geriatric Hospital, Japan; 3. Removable Prosthodontics, Osaka University Graduate School of Dentistry, Japan; 4. Clinical Thanatology and Geriatric Behavioral Science, Osaka University Graduate School of Human Sciences, Japan)

Introduction : Obstructive lung disease is one of a major cause of death in the old subjects. The number of this disease has been increasing in most of industrial countries. Lung function is known to be affected by multiple factors, especially such as age and smoking. To elucidate factors associated with the lung dysfunction, the analysis without the influence of age would be very important. In present study, we performed the analysis for old subjects around 70 and 80 years in SONIC study to reveal the factors associated with lung dysfunction. **Method :** We analyzed 388 subjects with age around 70 (70 ± 1) years and 482 subjects with age around 80 (80 ± 1) years in Japanese general population. We performed the spirometer, physical examination and collected blood samples. We assessed the factors associated with lung dysfunction. **Results :** Lung dysfunction was significantly associated with smoking status both in 70 and 80 elderly. In 70 years, lung dysfunction was significantly associated with diabetes. Forced expiratory volume in 1 second (FEV1) was significantly lower in diabetic than in non-diabetic subjects (74.6% vs. 79.7%; $P=0.015$). HbA1c was also significantly associated with % vital capacity (%VC) in linear regression analysis ($P=0.015$). On the other hand, these significant associations were not recognized in subjects with age around 80 years. **Conclusion :** Diabetes is one of associated factors with lung dysfunction in subjects with 70 years, but not with 80 years. We speculate this discrepancy will be due to multiple issues.

Keywords : diabetes lung dysfunction

PP25 C-232

MORTALITY AND RISK FACTORS FOR FATAL OUTCOMES IN ELDERLY CHINESE PATIENTS WITH BULLOUS PEMPHIGOID

Wing Man Christie LI¹, Hon Wai Felix CHAN², Chun Yin Johnny CHAN¹, Ka Hay James LUK² (1. Department of Medicine, Queen Mary Hospital, The University of Hong Kong, Hong Kong; 2. Department of Medicine, Fung Yiu King Hospital, Hong Kong)

Introduction : Bullous pemphigoid (BP) is the commonest autoimmune blistering disease and affecting the elderly (>65yo). High case-fatality rate was demonstrated in Caucasians. Local data on the mortality rate and associated risk factors are lacking. We aim to determine the 1-year and 3-year mortality rates of Chinese elderly patients with BP. An attempt was made to identify the risk factors associated with poor survivals. **Method :** Retrospective analysis on 80 Chinese patients with BP diagnosed in a regional hospital in Hong Kong between January 2009 and December 2010. **Results :** The 1-year and 3-year mortality rates were 32.9% and 52.3%. Mean age at diagnosis was 83.9 ± 9.7 years. A majority of patients (72.2%) lived in old-aged homes (OAH). In our study, 39.2% of patients were solely managed by the Community Geriatric Assessment Team (CGAT). Most patients had dependent active daily activities (ADL-D) and poor mobility status (bed-bound or chair-bound) (77.2%). Most patients (62%) had generalized blisters and 5.1% had mucosal involvement. 49 patients (61.3%) required systemic corticosteroid. Risk factors associated with lethal outcomes included OAH residency ($p=0.001$), pre-morbid bed-bound status ($p=0.02$), low albumin level ($p=0.002$), systemic corticosteroid therapy ($p=0.03$) and high prednisolone dose at three month ($p=0.03$). **Conclusion :** BP is an important geriatric disease associated with high mortality. Several risk factors may predict lethality of BP in elderly. Most BP patients are OAH residents and have poor pre-morbid condition. The CGAT service plays a pivot role in their long term management. Geriatricians should be aware of the predictive factors in treatment elderly patients with BP. **Keywords :** Bullous Pemphigoid, Mortality

PP25 C-233

ASSESSMENT OF SKIN MACERATION AS AN INDICATOR OF RISK OF INCONTINENCE-ASSOCIATED DERMATITIS

Yoshie ICHIKAWA¹, Hiromi SANADA², Chizuko KONYA³, Gojiro NAKAGAMP², Saldy YUSUF¹, Supriadi Junko MATSUO⁴, Takeo MINEMATSU², Yuko YAMAMOTO², Junko SUGAMA¹ (1. Department of Clinical Nursing, Institute of Medical, Pharmaceutical and Health Sciences, Kanazawa University, Japan; 2. Department of Gerontological Nursing/Wound Care Management, Graduate School of Medicine, The University of Tokyo, Japan; 3. Department of Adult Nursing, Kanazawa Medical University, Japan; 4. Faculty of nursing, Osaka Medical College, Japan)

Introduction : To confirm the predictive and content validity of skin maceration as a risk indicator of incontinence-associated dermatitis (IAD). **Method :** We performed a cohort study followed by a cross-sectional study of elderly female patients with fecal and/or urinary incontinence using diapers in Japan. We excluded patients with skin lesions on the buttocks. In the first study, we examined 47 patients for the presence or absence of skin maceration on the buttocks on entry and for IAD over the following six weeks. In the second study, we assessed some physiological and visual characteristics associated with skin maceration and compared all data between the maceration and non-maceration groups. **Results :** We found skin maceration in 36 of 47

patients on their baseline assessment; IAD occurred in 22/36 (61%) of these patients within six weeks. In comparison IAD occurred in 1/11 (9%) of patients without skin maceration within six weeks. Skin maceration accurately predicted development of IAD with a relative risk of 6.7 (95% confidence interval: 1.02-44.36). In the second study, all assessed physiological data were significantly different between the maceration and no-maceration groups. The sulcus cutis interval, erythema index and white index were also significantly different between groups. Receiver operating characteristic analysis to evaluate the discriminatory performance of physiological and visual characteristics for distinguishing skin maceration determined that the erythema index was the most effective of these tools. Conclusion : We have validated skin maceration as a risk indicator of IAD. These data may assist in prevention of IAD. Keywords : Elderly, Incontinence, Skin maceration

PP25 C-234

ACUTE HEART FAILURE IN ELDERLY PATIENTS: DIAGNOSIS OF PRECIPITATING FACTORS IN EMERGENCY MEDICINE. PRELIMINARY RESULTS

Anais CLOPPET¹, Patrick RAY², Eric PAUTAS³, Christiane VERNY⁴, Caroline THOMAS⁵, Agathe RAYNAUD-SIMON¹, Marc VERNY⁶, Anne BORNAND⁷, Eric BOUVARD⁸, Enrique CASALINO⁹, Dominique PATERON¹⁰, Bruno RIOU¹¹, Jacques BODDAERT⁶ (1. Geriatrics, Bichat hospital APHP, Universite Paris 7, France; 2. Emergency Department., Tenon hospital. APHP, UPMC Paris 6, France; 3. Geriatrics, Charles Fox hospital APHP, UPMC Paris 6, France; 4. Geriatrics, Kremlin-Bicetre hospital APHP, France; 5. Geriatrics, Saint Antoine hospital APHP, UPMC Paris 6, France; 6. Geriatric department. Peri-Operative unit., Pitie-Salpetriere hospital APHP, UPMC Paris 6, France; 7. Geriatrics, Pitie-Salpetriere and Charles Foix hospital APHP and UPMC Paris 6, France; 8. Geriatrics, Tenon hospital APHP, UPMC Paris 6, France; 9. Emergency Department., Bichat hospital APHP, Universite Paris 7, France; 10. Emergency Department., Saint Antoine hospital APHP, UPMC Paris 6, France; 11. Emergency Department., Pitie-Salpetriere hospital APHP, UPMC Paris 6, France)

Introduction : acute heart failure (AHF) is a leading cause of hospitalization in elderly patients, but few studies analyzed the weight of precipitating factors especially in emergency medicine of the very old. The aim of our study was to analyze frequency and prognostic of precipitating factors in AHF. Method : retrospective study in Geriatrics (GD) and Emergency (ED) departments of 6 french teaching hospitals. All patients addressed from ED to GD during 2011 with a diagnosis of AHF at admission confirmed during hospitalization were enrolled. All medical data were obtained from ED and GD medical charts, including type of precipitating factor, length of stay, in-hospital mortality and 30-day readmission. Results : 236 patients were included (age 90±6 years, 73 % women) with multiple comorbidities (CIRS score 12±4, heart failure 72%, dementia 50 %). A precipitating factor was identified in 158 patients (67%), mainly represented by infections (69 %), arrhythmias (21%), anemia (13%), poor dietary or medication compliance (9%). From the 158 patients with precipitating factors found in GD, 52 were not diagnosed during ED stay (33%). We found no difference between patients where the precipitating factor was found in ED and GD or only in GD for in-hospital mortality (20 vs 10%, NS) and 30 days readmission (11 vs 12%, NS). Conclusion : Our preliminary results suggest that acute precipitating factors, mainly represented by infections, are frequent in AHF of elderly patients, but diagnosed in 2/3 of patients during emergency management. However, to diagnose or not these factors does not seem to be associated with a poor outcome. Keywords : heart failure, emergency medicine

PP25 C-235

BIOMARKERS FOR DIAGNOSIS OF BACTERIAL INFECTION IN ELDERLY PATIENTS

Anne FOREST¹, Lorene ZERAH¹, Patrick RAY², Marc VERNY¹, Jacques BODDAERT¹ (1. Geriatric department. Peri-Operative unit., Pitie-Salpetriere hospital. APHP. UPMC Paris 6., France; 2. Emergency Department., Tenon hospital. APHP. UPMC Paris 6., France)

Introduction : Usefulness of biomarkers such as procalcitonin (PCT) or C reactive protein (CRP) has been widely discussed in previous studies, but no convincing data has been reported in elderly patients. The aim of our study was to evaluate the diagnostic accuracy of PCT, using the reference TRACE method in the diagnosis of bacterial infections in elderly patients admitted in acute wards. Method : We conducted a 6 months retrospective study in patients aged 75 years and older. Main clinical and biological characteristics including PCT, CRP, leukocytes were obtained at admission. Final diagnosis of bacterial infection was made based on medical charts, microbiological and radiological investigations, by 3 experts unawares of PCT results. Results : One hundred and three patients were included (age 78 ±9 years, comorbidities 3 ± 2, ADL 4 ± 2, sex ratio f:m 3 :1) with a 9 % in-hospital mortality. According to experts, bacterial infection was noted in 40% of patients (pneumonia 76 %, soft tissues 12%, urinary 7%, gastrointestinal 7%). Bacterial infection was significantly associated with CRP (149 [85-211] vs. 26 [8-70] mg/L, p<0.001) and PCT (0.73 [0.22-1.51] vs. 0.09 [0.06-0.17] ng/mL, p<0.001). Using a 0.3 ng/ml cut-off for PCT accuracy in diagnosis of bacterial infection, sensitivity was 76 %, specificity 82 %, with a 74% positive predictive value and 80% negative predictive value (AUC 0.59), compared to 0.63 AUC for CRP. Conclusion : From our study, PCT does not appear to be useful to clinician for bacterial infection diagnosis. A risk stratification strategy requires further investigations. Keywords : procalcitonine, sepsis

PP25 C-236

PROCALCITONIN FOR DIAGNOSIS OF PERIOPERATIVE INFECTIONS IN ELDERLY PATIENTS WITH HIP FRACTURE. PRELIMINARY RESULTS

Anne FOREST¹, Lorene ZERAH¹, Judith COHEN-BITTAN¹, Marc VERNY¹, Bruno RIOU², Jacques BODDAERT¹ (1. Geriatric department. Peri-Operative unit., Pitie-Salpetriere hospital APHP and UPMC Paris 6, France; 2. Emergency Department, Pitie-Salpetriere hospital APHP and UPMC Paris 6, France)

Introduction : Surgery is associated with inflammation, and diagnosis of infection is particularly challenging. The aim of our study was to analyze value of procalcitonin (PCT) for diagnosis of bacterial infection in perioperative conditions. Method : Consecutive elderly patients admitted to our Geriatric Perioperative Unit for hip fracture management with PCT determination during 5 days post-surgery period. The highest value of PCT (PCTmax) was used for study. Diagnosis of infection was retrospectively confirmed by 3 experts unaware of PCT values, using medical charts, biological and radiological data. Clinical and biological data were reported, outcome included in-hospital mortality. Patients were compared according to diagnosis of infection, or PCT level. We present our preliminary results. Results : 203 patients were included (age 86±7 years, women 73%) with numerous comorbidities (median CIRS 8±4, dementia 38%) and dependency (IADL 8±5). Diagnosis of infection was noted in 48 patients (24%), mainly represented by pneumonia (50%) and urinary tract infections (27%). There was no difference for anemia, cardiovascular event, pressure ulcers, urinary retention between

infected and non infected patients, and Cockcroft creatinin clearance was comparable (respectively 49 ± 19 vs 57 ± 24 ml/min). In-hospital mortality was higher in infection group (10 vs 0%, $p=0.0031$). Patients with bacterial infection had higher level of PCTmax (median 0.33 vs 0.2, $p=0.0375$). Patients with levels of PCTmax ≥ 1 $\mu\text{g/L}$ had higher in-hospital mortality compared to others (14 vs 1%, $p=0.0042$). Conclusion : Our preliminary results suggest that perioperative infections and high level of procalcitonin are associated with a poor outcome in elderly patients with hip fracture. Keywords : hip fracture, biomarkers, procalcitonin

PP25 C-237

PRONOSTIC OF PERIOPERATIVE TROPONIN LEVEL IN ELDERLY PATIENTS WITH HIP FRACTURE. PRELIMINARY RESULTS

Helene VALLET¹, Anne FOREST¹, Judith COHEN-BITTAN¹, Alice BREINING¹, Marc VERNY¹, Bruno RIOU², Jacques BODDAERT¹ (1. Geriatric department. Peri-Operative unit., Pitie-Salpetriere hospital APHP. UPMC Paris 6., France; 2. Emergency Department., Pitie-Salpetriere hospital APHP. UPMC Paris 6., France)

Introduction : Cardiovascular diseases represent a frequent comorbidity in elderly patients, and could play a role in hip fracture prognosis. The aim of our study was to analyze the prognostic significance of troponin elevation in post-operative hip fracture surgery in elderly patients. Method : between November 2009 and April 2012, all patients admitted in our dedicated geriatrics post-operative unit (UPOG) after hip fracture surgery with a troponin determination were included. Data were prospectively collected, including comorbidities (CIRS scale) and troponin level. A troponin elevation was defined as a value > 0.15 $\mu\text{g/L}$ during hospital stay. Outcome included in-hospital post-operative events and mortality, and 6 months mortality and autonomy. We present our preliminary results. Results : 211 patients were included (age 86 ± 6 years, male 26%) with a 9 ± 4 CIRS and 8 ± 5 IADL scores, and 97% ability to walk. A history of coronary artery disease was noted in 17%, of heart failure in 18%. A troponin rise was reported in 15% of patients, with ACS diagnosis in 77%, and was associated with acute heart failure (39 vs 14%, $p=0.0034$), haemorrhagic complications (23 vs 7%, $p=0.0106$), ICU referral (13 vs 1%, $p=0.0047$). There was no difference for in-hospital and 6 months mortality (20 vs 15%, NS), but at 6 months, troponin elevation was associated with a lower ability to walk (76 vs 97%, $p=0.003$) and a lower rate of home return (63 vs 84%, 0.0231). Conclusion : Our preliminary results suggest that troponin elevation in hip fracture is not associated with mortality but is associated with a poor functional. Keywords : hip fracture, coronary artery disease

PP25 C-238

RECURRENT HYPOXEMIA AND DIZZINESS ASSOCIATED WITH A PATENT FORAMEN OVALE

Anne FOREST¹, Patrick RAY², Marc VERNY¹, Jacques BODDAERT¹ (1. Geriatric department. Peri-Operative unit., Pitie-Salpetriere hospital. APHP. UPMC Paris 6., France; 2. Emergency Department., Tenon hospital. APHP. UPMC Paris 6., France)

Introduction : Patent foramen ovale (PFO) is a persistent normal fetal communication between the right and left atria, occurring in 20-34% of the population, which majority will never present any complications. However, even in elderly patients, some factors can lead to the opening of a PFO. Method : Case report. Results : We report the case of an 82-year-old man admitted for pneumonia, with a history of left brain abscess 30 years ago, who developed recurrent transient episodes of hypoxemia related dizziness requiring

oxygenotherapy. Right to left shunt was confirmed by a transthoracic echocardiography. A decision of PFO closure was retained for following reasons, including functional limitation, history of recurrent similar episodes possibly implicated in recurrent falls and leading to frequent emergency visits. Moreover, history of brain abscess thirty years ago was probably related to his PFO. A percutaneous procedure of transcatheter device closure was successfully performed and clopidogrel was added to maintain aspirin/clopidogrel association for almost 3 months. Hypoxemia episodes regressed, and outcome was favourable symptom free two months later. Conclusion : In our case, two factors made the PFO symptomatic: an anatomical (association of the PFO with atrial septal aneurysm and mobile Eustachian Valve) and a functional factor (increase in pulmonary blood pressure by cough due to pneumoniae, defecation and rehabilitation). In case of severe unexplained hypoxemia, even in elderly patient, assumption of a right-left shunt through a reopening of PFO should be considered. Keywords : hypoxemia, dizziness, foramen ovale

PP25 C-239

TRANSFUSION IN ELDERLY PATIENTS WITH HIP FRACTURE: RETROSPECTIVE COMPARISON BETWEEN RESTRICTIVE AND LIBERAL REGIMEN. PRELIMINARY RESULTS

Anne FOREST¹, Judith COHEN-BITTAN¹, Alice BREINING¹, Marc VERNY¹, Bruno RIOU², Jacques BODDAERT¹ (1. Geriatric department. Peri-Operative unit., Pitie-Salpetriere hospital APHP and UPMC Paris 6, France; 2. Emergency Department., Pitie-Salpetriere hospital APHP and UPMC Paris 6, France)

Introduction : Hip fracture management frequently requires transfusion in elderly patients. In 2011, an international randomized study reported the safety of restrictive regimen compared to liberal. In our dedicated geriatric perioperative unit, according to these data, we changed our clinical transfusion practice. The aim of our study was to retrospectively analyze the safety of restrictive regimen in our patients. Method : Over a 3 years period, we compared transfusion practice and outcomes before (2009-2011, liberal group (LG)) and after (2012, restrictive group (RG)) modification of transfusion practice, according to international data published in December 2011. All patients admitted with a hip fracture were included. Transfusion performed during surgery was not considered since patients were admitted to our unit after surgery. Main outcomes were in-hospital mortality, acute coronary syndrome (ACS), heart failure and atrial fibrillation. We present our preliminary results. Results : 294 patients were included (age 86 ± 7 , preoperative haemoglobin 12 ± 1 g/dL). There was no difference between LG (n=212) and RG (n=82) for CIRS score (8.2 ± 3.8 vs 9.6 ± 3.9 , NS) or for cardiovascular comorbidities. A transfusion was performed in 74% in LG and 49% in RG. Considering outcomes, this reduction of transfusion between LG and RG was not associated with any difference for ACS (14 vs 18%, NS), heart failure (17 vs 10%, NS), atrial fibrillation (10 vs 7%, NS), and for in-hospital mortality (3 vs 6%, NS). Conclusion : Our preliminary results suggest that restrictive transfusion regimen is as safe as liberal transfusion regimen in elderly patients admitted with hip fracture in our dedicated unit. Keywords : hip fracture, orthogeriatrics, anemia, transfusion

PP25 C-240

UTILITY OF 123I-FP-CIT SPECT FOR DEMENTIA DIAGNOSES AND THERAPEUTIC STRATEGIES IN ELDERLY PATIENTS

Zina BARROU¹, Veronique FAUCOUNAU¹, Marie-Odile HABERT², Sandrine GREFFARD¹, Benedicte DIEUDONNE¹, Jacques BODDAERT¹, Marc VERNY¹ (1. Geriatric department. Peri-

Operative unit., Pitie-Salpetriere hospital APHP, UPMC Paris 6, France; 2. Nuclear medicine unit, Pitie-Salpetriere hospital APHP, UPMC Paris 6, France)

Introduction : Precise diagnosis of dementia is important but challenging, particularly in elderly patients, because multiple causes of cognitive impairment often coexist. Single photon emission computed tomography (SPECT) of the dopamine transporter (123I-FP-CIT) permits diagnosis of nigrostriatal denervation and helps for the diagnosis of dementia with Lewy bodies (DLB). We evaluated its influence on diagnosis and treatment strategies in an elderly population with mild dementia. **Method :** retrospective study of consecutive patients who had 123I-FP-CIT SPECT for suspected DLB. Clinical diagnoses were compared with imaging results. **Results:** 46 patients were included. Clinical diagnoses were probable DLB in 14, possible DLB in 21 and alternate diagnoses in 11. Rates of abnormal imaging in these groups were respectively 71%, 43% and 18%. Overall, diagnoses were revised in 37%. Four patients with probable DLB had normal imaging. The number of core criteria in these patients did not differ from the remainder (2.75 ± 0.5 vs. 2.1 ± 0.6), but hallucinations in 2 patients were not well formed and detailed as usual in DLB. Among 29 patients with parkinsonism, free of antipsychotics, rates of abnormal scans was 36% in patients with questionable parkinsonism, 57% in definite parkinsonism, and 67% in patients with no parkinsonism. Among 9 patients on Levodopa, 6 had normal scans and Levodopa was stopped. **Conclusion :** we show a significant impact of 123I-FP-CIT SPECT on diagnoses, even in cases of definite parkinsonism or probable DLB. In the latter, scarcity of hallucinations, especially if there are not well formed and detailed, should prompt 123I-FP-CIT SPECT. **Keywords :** Dementia, Lewy body, diagnosis

PP25 C-241 EVALUATION OF ADHERENCE TO THE ANTICOAGULATION GUIDELINES IN ATRIAL FIBRILLATION IN PATIENTS OVER 75 YEARS

Laurie Anne BERTHOLON¹, Dragos CIOCAN², Rachid MAHMOUDI³, Jean Luc NOVELLA¹, Moustapha DRAME², Pierre NAZEYROLLAS⁴ (1. Department of Internal Medicine and Clinical Gerontology, Reims Teaching Hospitals, France; 2. EA 3797 Faculty of Medicine, University of Reims Champagne-Ardenne, France; 3. Internal Medicine and Clinical Gerontology, CHU Reims, France; 4. Department of Cardiology, Reims Teaching Hospitals, France)

Introduction : The European Society of Cardiology (ESC) provided in 2010 antithrombotic guidelines for the management of patients with AF. The aim of this study was to evaluate clinicians' adherence to the 2010 ESC guidelines for the management of FA in patients over 75 years and to describe the characteristics of patients according to the anticoagulant treatment. **Method :** A monocentric retrospective study was conducted from March to July 2011 at Reims University Hospital, France and included all patients with AF over 75 years and hospitalised in the geriatrics (GD) and cardiology departments (CD). **Results :** A total of 152 patients were included with a mean age of 83 ± 5 . One hundred and seven patients had an anticoagulant treatment (75% in CD and 51% in GD, $p=0,007$); all had a CHA₂DS₂VASc score >2 . The bleeding risk was higher in patients hospitalised in GD (HASBLED score $3,3 \pm 0,7$ vs. $2,9 \pm 0,7$ in CD, $p=0,01$). Patients with a high bleeding and thromboembolic score (HASBLED >4 and CHA₂DS₂VASc ≥ 5) were all under anticoagulant treatment ($n=13$). Among patients with a higher thromboembolic risk than a bleeding risk ($n=36$), 58% received an anticoagulant treatment; while 70% of patients with a higher bleeding score than a thromboembolic risk score

($n=17$) were under treatment. Factors associated with the absence of anticoagulant treatment were: lack of autonomy, falls, age, dementia and malnutrition. **Conclusion :** Our study shows that, in elderly patients over 75 with AF, anticoagulant treatment is underused when compared to the ESC guidelines and may not be solely based on the data used in the CHADS₂VASC₂ and HASBLED scores. **Keywords :** atrial fibrillation, anticoagulation, elderly

PP25 C-242 STUDY OF MORBID PATTERN AMONG INMATES OF OLD AGE HOME

Drmahesh HEMADRI (Geriatrics, Global Hospital & Resaerch Centre, India)

Objectives : To study balance confidence amongst inmates of old age home. To study vitamin d3 level. To study morbid conditions of inmates of old age home. **Study Design :** Observational study. 35 inmates of an old age home were selected for the study to evaluate balance confidence, by using balance confidence scale. Each inmates were personally interviewed with the scale in which one negative answer was taken as lack of balance confidence in the individual. Vitamin D3 level were also estimated. &number of comorbid conditions were also noted. **Exclusion Criteria :** Bedridden inmates&inmates with history of dizziness. **Inclusion Criteria :** Literate inmates.inmates with walking aids inmates who are ambulatory more than 60 years. Inmates who could hear see&able to comprehend. **Results :** Out of 35 inmates which were studied, lack of balance confidence was predominantly seen amongst the inmates having age more than 70 years Irrespective of vitaminD levels&coexisting comorbid conditions 18 inmates had level of vitamin D3 $<30\text{ng/ml}$, 3 inmates showed levels between 30ng to 50ng/ml, 3inmates showed vitamin D3 level $<11\text{ng/ml}$. 31 inmates showed more than 2comrbid conditions. Both the factors of vitaminD3&balance confidence were found to be significant with Pvalue <0.05 . **Conclusion :** Lack of balance confidence &low vitamin D3 are commonly seen in elderly. As age advances lack of balance confidence is commonly seen. So interventions to correct Vitamin D3 levels&introducing balancing exercises are prerequisites for prevention of falls in the elderly Vitamin D3 levels did not correlate with body mass index. **Keywords :** balance confidence, vitaminD3levels, fallprevention

PP25 C-243 IMPACT OF A THERAPEUTIC EDUCATION PROGRAM FOR ALZHEIMER'S DISEASE PATIENTS AND CAREGIVER ON PATIENT'S QUALITY OF LIFE. THERAD STUDY DESIGN

Amelie PERRIN¹, Audrey ZUERAS¹, Pierre RUMEAU¹, Helene VILLARS¹, Fati NOURHASHEMI², Bruno VELLAS² (1. Geriatric Department, University Hospital, Toulouse, France; 2. Geriatric Department, University Hospital, INSERM Unity 558, University Paul Sabatier, Toulouse, France)

Introduction : THERAD is designed to determine whether a therapeutic education program for both Alzheimer's Disease (AD) patients in community dwelling and their primary caregivers improves patient's quality of life. Secondary endpoints are caregiver's burden (Zarit Burden Inventory) and patients' behavioural and psychological symptoms (NPI) and independence in personal and instrumental daily life activities (ADL and IADL). **Method :** It' a monocentric randomised controlled intervention trial. One hundred and seventy dyads 'patient-caregiver', patient suffering from mild to moderately severe AD (MMSE 11 to 26), in community dwelling with a primary caregiver, will be included during 18 months. The control group ($n=85$) will benefit from routine care. The intervention group ($n=85$)

will benefit in addition from two consultation for the dyad (M0: therapeutic education diagnosis, standard geriatric assessment and assessment of the judgement criteria, and M2: assessment of the response to the educational objectives and of the judgement criteria) and four weekly group sessions of therapeutic education (knowledge of the disease, pharmacological and non pharmacological treatments, risk situations, support services and care pathways) for caregivers only, between M0 and M2. Monitoring will consist of two consultations to 6 and 12 months including assessment of primary and secondary judgement criteria. Results : Intention to treat analysis using linear mixed model will be performed, adjusting for patients, caregiver characteristics and occurrence of life event that may interfere with patient's quality of life. Conclusion : THERAD's objective is to assess the impact of a therapeutic education program on AD patients' quality of life . First results will be available by 24 months. Keywords : therapeutic education, Alzheimer, caregiver

PP25 C-244

THE EFFECT OF ELASTIC BAND EXERCISE ON PHYSICAL ABILITY AND MUSCULAR TOPOGRAPHY IN ELDERLY WOMEN

Jung Won LEE¹, Chang-Hwan KIM² (1. Dept. of Physical & Rehabilitation Medicine, College of Medicine, InHa University, Korea 2. Dept. of Physical & Rehabilitation Medicine, InHa University, Korea)

Introduction : Using elastic band (EB) exercise are widely available, but the effect of exercise in the elderly are not well known. Using anaerobic exercise (AAE) and aerobic exercise (AE) with EB has been applied in old peoples, and we have analyzed the changes of body composition (BC), physical ability (PA), muscular topography (MT). Method : 23 women aged over 65 were divided into AE and AAE Groups (13 people in AAE), 12 weeks EB Exercise was carried out. BC (BWt, BMI, FFM, BFM, Fat%, WHR, and VAF) were measured by bioelectrical impedance. PA were measured by Leg extention power, sitting trunk flexion, Close-eyes foot-balance, Time up to go. And changes of MT was evaluated with Moire measurement equipment on the chest, abdomen, lumbar part, and all parts of the changes. All examination was compared before and after 12 weeks exercise session. Results : Changes in body composition after exercise of BW, BMI, BFM, Fat%, WHR, VAF in the AAE group was significantly lower than the AE group ($p < .001$), FFM was a significant increase Both groups ($p < .001$). Physical Ability factors Leg Extention Power, Sitting Trunk Flexion, Close-Eyes Foot-Balance, Time up to go was significantly increased in both groups ($p < .001$). MT factor the chest, abdomen, lumbar part, and all parts were significantly increased in both groups ($p < .001$). Conclusion : EB Exercise (Anaerobic and Aerobic Exercise) has effectively changes BC, PA, MT. Therefore, to increase the degradation rate of fat and to increase the tenacity of exercise, application of aerobic band exercise is considered to be effective. Keywords : exercise, aged women, topography

PP25 C-245

PREDICTORS OF QUALITY OF LIFE (QOL) IN LOW INCOME OLDER PEOPLE IN BRAZIL - EQ 5D TOOL

Marisa SANTOS¹, Fernanda BORGES², Marcelo GOULART³, Bernardo TURA⁴, Luiz Mauricio PLOTKOWSKI⁵, Jerson LAKS⁶ (1. Epidemiology, Centro de Estudo e Pesquisa do Envelhecimento, Brazil; 2. Nutrition, Centro de Estudo e Pesquisa do Envelhecimento, Brazil; 3. Epidemiologist, Instituto Nacional de Cardiologia, Brazil; 4. Doctor Ph.D. in statistics, Instituto Nacional de Cardiologia, Brazil; 5. Pulmonologist, Centro de Estudo e Pesquisa do

Envelhecimento, Brazil; 6. Psychiatry, Centro de Estudo e Pesquisa do Envelhecimento, Brazil)

Introduction : EQ-5D utilization is limited in low income and low educated older persons. The aim is to assess QoL in a low income older sample. Method : Elderly from primary care were evaluated (APRIL/NOVEMBER 2012). After training, professionals applied EQ-5D descriptive tool (Descript) and Visual Analogic Scale (VAS). We calculated EQ-5D using Brazilian valuation data . VAS assessed subjective QoL. Spearman test correlated VAS and Descript. Median, Interquartile interval, Wilcoxon test evaluated variables eligible to multivariable model ($p \leq 0.25$). Logistic regression model analyzed predictors of low EQ-5D. Results : Of 300 elderly: female (59%), mean age= 70 years (± 7); 42% lower educated, > 3 co-morbidities (76%). 82% from D/E class, 4.3% were excluded due to dementia. 5% showed mild cognitive impairment. VAS was poorly understood: 27/177 respondents reported VAS ≤ 10 . Most frequent comorbidities (18% depressed): Hypertension (88%), dyslipidemia (47%), diabetes (30%). 51.4% and 61.5% completed Descript and VAS, respectively. Most of those who did not complete the EQ-5D were depressed, with mild cognitive impairment, and of low income status. VAS and Descript linear correlated moderately ($\rho = 0.435$). Descript and VAS median: 0.82 (0.69 - 0.88) and 75 (50 - 100), respectively. Risk for EQ-5d < 0.07 ($p < 0.05$): Lawton (OR 3.06 1.38-4.75), >3 comorbidities (OR 4.05 2.42 - 5.68), depression (OR 3.40 1.69 - 5.11). Conclusion : Despite non response rate, EQ-5D may assess geriatric health programs. Comorbidity was the strongest poor QoL predictor. Keywords : older persons, quality of life, EQ-5D

PP25 C-246

EDUCATIONAL PLATFORM FOR THE NON-GERIATRIC HUMAN RESOURCES (FORHUM3)

Victoria ARANGO-LOPERA, Elizabeth CARO-LOPEZ, Luis GUTIERREZ-ROBLEDO (Education in Gerontology and Geriatrics, Instituto Nacional de Geriatria, Mexico)

Introduction : Almost 11 million of elderly subjects are now living in Mexico, and a lack of Geriatricians is one of the problems. In addition, the 70-year or older subjects are growing by 2,000 every day. Mexico has only 400 certificate geriatricians and only 40 acute care units (specialized in elderly). The aim of this study is to elaborate a collaborative strategy to train teams of high impact in long term care, acute care (emergency room), primary care and higher care levels (second and third levels); focused in maintaining functionality and those already who have developed dependency; with an on line technology. Method : The preelimirar results reported in this abstract correspond to a cross-sectional survey that was made to non-geriatric professionals that take care for elderly in long term facilities, of all the country. A questionnaire about needs of training was applied to all these professionals, and with the results, materials for an on line course was done. Results : 120 subjects were interviewed, with different disciplines. The topics that were recognized as the more important by these subjects were: depression, falls, palliative care, prevention, cognitive decline, physical activity and functionality. Educational materials were done and validated for the platform. Conclusion : Training for people who already care for elderly with evidence based contents and systematic methodology is essential for an optimal care of the elderly in all health care levels. Keywords : Education, Non-geriatric professional care, Health care

PP25 C-247

ELDERLY PATIENTS IN EMERGENCY DEPARTMENT WITH POSTURAL HYPOTENSION: WHO REQUIRES

ADMISSION?

Cheng Gek TAN¹, Norhafizah TAJUT DIN¹, Loretta NEO²
(1. Emergency Department, Tan Tock Seng Hospital, Singapore;
2. Emergency, Tan Tock Seng Hospital, Singapore)

Introduction : Postural hypotension (PH) is not uncommon in elderly patients presenting to the emergency department (ED). However, there is a paucity in the literature to aid us in the disposition of these patients. This study aims to identify variables that may help us predict the need for admission in ED elders found to have PH. Method : This was a subgroup analysis of a cross sectional study involving elderly ED patients presenting during office hours with fall, functional decline, giddiness, syncope, or gastroenteritis. We compared PH patients who were admitted vs. those discharged, looking at the following variables: age, gender, degree of drop, presence of reflex tachycardia, number of causes found, history of/ presenting with falls, recent history of giddiness/ syncope/ lower limb weakness, and the reproducibility of PH. Results : 78 of 382 patients (20.4%) had PH, of which 52 (66.7%) were admitted. Univariate analysis found the following to be significantly more common amongst admitted PH patients: median age (80 vs 76; $p=0.042$), increasing number of causes of PH ($p=0.029$), a history of giddiness in the preceding two weeks (81.5% vs 18.5%; $p=0.048$) and giddiness during postural blood pressure (PBP) check (84% vs 16%; $p=0.038$). Conclusion : When managing elderly ED patients with PH, it is important to ask recent symptoms of PH, as well as actively identify likely causes. Advanced age, more than one cause, a recent history of giddiness and experiencing giddiness during PBP check may be predictors for need for admission. Keywords : Geriatric Emergency Medicine, Postural hypotension, Hospital admission

PP25 C-248

PROFILE OF ELDERLY PATIENTS WITH POSTURAL HYPOTENSION IN EMERGENCY DEPARTMENT

Loretta Poh Choo NEO, Chen Chen GAN (Emergency Department, Tan Tock Seng Hospital, Singapore)

Introduction : To determine the prevalence, characteristics, and the likely causes of postural hypotension (PH) in elderly Emergency Department (ED) patients presenting with a fall, functional decline, giddiness, syncope and gastroenteritis. Method : This was a cross-sectional study. Patients aged 65-and-above presenting to the ED during office hours with any of the above five were recruited. Those acutely ill, pre-morbidly non-ambulant, or intolerant of postural blood pressure (PBP) taking were excluded. PBP was taken at 1 and 3 minutes. ED evaluation, management, disposition and likely causes of PH were analysed. Results : Of the 446 patients screened, 382 fit criteria. PH was found in 20.4%. Patients with PH were significantly older (78.9 vs 77.1, $p=0.044$), more likely to demonstrate postural giddiness during PBP taking (32.1% vs 18.8%, $p=0.013$), and more likely to report postural symptoms in the preceding two weeks (57.7% vs 14.8%, $p=0.000$). Majority (88.5%) of postural drop occurred in the 1st minute; 43.6% in the 3rd minute. 30.8% and 43.6% had one and two causes respectively; 25.6% had no obvious causes found in ED. Medication (48.7%) was the biggest suspect, followed by dehydration (34.6%). Admission rates were higher amongst PH patients (66.7% vs 54.3%, $p=0.055$). Conclusion : Postural hypotension is common. Advanced age, active postural giddiness and preceding postural symptoms all suggest its presence. Majority of PH causes may be elucidated in the ED. It is important to perform PBP in above patients because PH suggests these patients are more likely to require admission. Keywords : Geriatric Emergency Medicine, Postural hypotension

PP25 C-249

HEALTHCARE UTILISATION BY ED ELDERS - ED VISIT AS A GERIATRIC SCREENING OPPORTUNITY

Tse Ling TAN¹, Chik Loon FOO¹, Loretta NEO² (1. Emergency Department, Tan Tock Seng Hospital, Singapore; 2. Emergency, Tan Tock Seng Hospital, Singapore)

Introduction : A quarter of Emergency Department (ED) attendance comprises of patients 65-and-above. An ED visit may be an opportunity to provide geriatric screening. This is especially so if ED elders are found to be newcomers to the healthcare system and thus unlikely to have received geriatric screening before. Method : This was a retrospective study of 2000 consecutive ED elderly patients presenting in May 2011. Electronic medical records (EMR) were used to determine patients' healthcare utilisation. 'Newcomers' were defined as no ED visits or hospital admissions in the past year. 'On follow-up' was defined as having two or more visits with two or more prescriptions of similar medications from the Polyclinic or Hospital in the past year. Results : 2000 patients aged 65 and older were included in the study. Of these, 1036 (51.8%) were female. Median age of the patients was 76 years (range, 71-83). 900 (45.0%) of the study were newcomers, i.e. have not visited ED or been admitted in the past year. There were more patients on follow-up with hospital clinics compared to polyclinics (57.9% vs. 51.4%). 18.2% of all patients were not on follow-up with either polyclinics or hospital clinics. Conclusion : Almost half of ED elders are newcomers to the tertiary care system. One-fifth of patients are not even on follow-up at a public outpatient setting. These patients are unlikely to have received geriatric screening in the past year. We recommend that opportunistic screening be offered to these patients before they are discharged and potentially lost to system again. Keywords : Emergency Department, Health services consumption

PP25 C-250

PRELIMINARY VALIDITY OF THE COMPUTERIZED CANCELLATION TEST IN PATIENTS WITH STROKE

Ho-chuan HUANG¹, Tsui-Ying WANG² (1. Department of Information Management, National Kaohsiung University of Applied Sciences, Taiwan; 2. Department of Occupational Therapy, National Cheng Kung University, Taiwan)

Introduction : To introduce the function of the computer-assisted cancellation test (CACT) system and demonstrate how the system works for the visual attention and neglect problems in patients with stroke. Method : A total of 53 participants: 21 post-stroke patients (11 males, 10 females), and 32 normal subjects (13 males and 19 females) with no known neurological, psychological, visual, or motor problems, comparable with age and education were included in this study. Participants were given the computer-assisted cancellation test and behavior inattention test (BIT) to measure the attention performance. Results : The patient group and normal group showed significant differences in correct responses ($p < .005$) and completion time ($p < .001$) on both tests (structured and unstructured) of the CACT. In the three subtests of the BIT, only star cancellation test showed significant difference between the two groups. The symbol test of the CACT showed good concurrent validity and successfully discriminated normal and stroke patients. Conclusion : Computer-assisted assessment becomes a trend for the advantage of time-saving, less biased, more precise, more storage capacity and efficient processing. CACT was validated with good reliability and concurrent validity to measure the visual attention performance of the participants with stroke. Keywords : visual attention, computerized test, stroke

**PP25 C-251
PREDICTORS OF MORTALITY AND
INSTITUTIONALIZATION AFTER OPERATED GERIATRIC
HIP FRACTURE**

Chin Pang Ian CHAN, Y.L. E. CHENG, T.K. YIM, K.Y.E. SHA, C.Y. YUNG, M.F.E. LEUNG (Department of Medicine and Geriatrics, United Christian Hospital, Hong Kong)

Introduction : Optimal delivery of high-quality care of patients with fractured neck of femur was an achievable and rewarding goal of geriatric care. Method : We determined the predictors of mortality and institutionalization at 6 months and 1 year after operated geriatric hip fracture by retrospective multi-variate analysis of the central data bank in Hong Kong (Clinical Data and Reporting System). Results : The total number of operated hip fracture cases was 470. The mean age of the patients was 81.7 (SD 8.0) years. 346 patients (73.6%) were female. 144 (30.6%) patients had Charlson's comorbidity index more than 2. About 40% patients were classified as American Society of Anesthesiologists (ASA) Class III or IV. In-hospital mortality rate was 3.4% (n=16). Mortality rate was 12.3% (n=58) and 17.7% (n=83) at 6 month and 1 year post-fracture. Pre-fracture hip residency (institution) (p=0.029 HR 2.527; p=0.007 HR 2.791) and CCI (p=0.034 HR 1.196; p=0.028 HR 1.169) were risk factors of 6-month and 1-year mortality. Higher MMSE scores and serum albumin level predicted better survival rate (p=0.031 HR 0.915; p=0.002 HR 0.890) at 6-month post hip fracture. Age (p=0.001 OR 1.092) and dementia (p=0.003 OR 3.169) predicted 6-month post-fracture institutionalization. The pre-fracture availability of maid demonstrated protective effect on institutionalization after hip fracture (p=0.005 OR 0.145). At one year after hip fracture, age was the only identified risk factor of institutionalisation (p=0.015 OR 1.075). Conclusion : The recognition of predictors of outcome improves patient care and decreases institutionalization. Age in the community is an achievable goal of the elderly. Keywords : hip fracture, outcome, insitutionalization, mortality

**PP25 C-252
A SURVEY OF ORAL AND SWALLOWING FUNCTIONS
FOCUSING ON SILENT ASPIRATION AMONG DEMENTIA
ELDERLY CLIENTS**

Hirohiko HIRANO¹, Emiko SATO², Yutaka WATANABE³, Ayako EDAHIRO¹, Yuki OHARA⁴, Shiho MORISITA³, Yumi CHIBA¹, Haruka TOHARA⁵ (1. Research team for promoting independence of the elderly, Tokyo Metropolitan Geriatric Hospital and Institute of Gerontology, Japan; 2. Department of Oral Medicine, Oral and Maxillofacial Surgery, Tokyo Dental College, Japan; 3. Oral Disease Research, National Institute for Longevity Sciences, Japan; 4. Graduate School, Section of Behavioral Dentistry, Tokyo Medical and Dental University, Japan; 5. Department of Dysphagia Rehabilitation, Nihon University School of Dentistry, Japan)

Introduction : This survey aimed to investigate oral and swallowing functions among dementia elderly to compare differences between dementia of the Alzheimer type (AD) and a blood vessel dementia (VaD). Method : Total 269 elderly clients hospitalized in chronic period hospitals, nursing homes and dementia group homes were observed or interviewed. Those were Mini Mental State Examination: MMSE, Clinical Dementia Rating: CDR, daily living situations (Barthel Index: BI, Vitality Index: VI) and nutrient state (Alb, Body Mass Index: BMI), and swallowing functions (revision water drinking test and cough test). Under the scores of the revision water drinking test (WT), 1, 2 and 3 are "positive", and 4 and 5 are "negative". Regarding the cough test (CT), the occurrence of cough reflex within

30 seconds can be judged as normal. Silent aspiration: SA can be screened using results of WT and CT. Results : Regarding WT, the worse a dementia level in AD and VaD was, the higher the positive rate was. And the rate of positive in VaD tended to be higher than that in AD. Regarding CT, the positive rate in AD was slightly higher than in VaD. Furthermore, worse score of SA depended on the level of dementia. Especially, the score of SA in the severe level of dementia was the worst significantly (p<.05). The relative risk of SA in AD against VaD was 3.8 times (OR=3.8, p<.01, CI=1.4-10.1). Conclusion : In these results, different characteristics of oral and swallowing functions and SA between AD and VaD were shown. Keywords : Dementia, Silent Aspiration, Cough test

**PP25 C-253
THE RELATIONSHIP BETWEEN BODY MASS INDEX AND
BONE MINERAL DENSITY IN OLDER PEOPLE**

Seyedreza HOSSEINI¹, Parvin SAJJADI², Sahar JAMALI², Hajjighorban NOREDDINI³, Reza GHADIMI⁴, Ali BIJANI⁴, Robert Graham CUMMING⁵ (1. Social Determinant of Health Research Center, Babol University of medical sciences, Iran; 2. Community Medicine, Babol University of Medical Sciences, Iran; 3. Radiology, Babol University of Medical Sciences, Iran; 4. Social Determinants of Health(SDH) Research Centre, Babol University of Medical Sciences, Iran; 5. Department of Epidemiology and Geriatric Medicine, University of Sydney, Australia)

Introduction : Obesity is a risk factor for cardiovascular diseases although it has been supposed that it has protective effect on bone loss. This study was done to determine the relationship between body mass index and bone mineral density in older people. Method : This cross-sectional study has been done on 1000 older people aged 60 and over in Amirkola city, northern part of Iran. Weight, height, waist circumference and hip circumference were measured. Waist to hip ratio (WHR) and body mass index (BMI) were calculated. Bone mineral density (BMD) has been measured by DEXA scan in lumbar spine and femoral neck and the result has been shown by T-Score. Then data analyzed by SPSS18 software. Results : In this study, 55.4% of the participants were men and 44.6% were women. The mean of bone mineral density in both areas was higher in men (p= 0.000). BMI had significant positive relationship with BMD (P=0.000). This relationship was strongest in femoral neck (p=0.000) in both men and women. Central obesity in men had a positive association with bone mineral density in both areas (p=0.000). Overall the strongest relationship of femoral neck BMD was with BMI (r=0.384, p=0.000) and in lumbar spine was with WHR (r=0.209, p=0.000). By controlling age, WHR and waist circumference; regression analyses showed that BMI is effective on femoral neck BMD but in lumbar spine the effect of BMI is covered with those factors. Conclusion : In this study, osteoporosis was reduced by increasing BMI in older people. Keywords : Bone Mineral Density, Body Mass Index, Elderly

**PP25 C-255
PAIN ASSESSMENT IN PEOPLE WITH COGNITIVE
IMPAIRMENT- A CHALLENGING TASK IN HOSPITALS**

Erika Gisela SIRSCH (Witten, German Center for Neurodegenerative Diseases (DZNE), Germany)

Introduction : A sufficient pain therapy for persons with dementia in hospital often fails because their pain is not even recognized. Pain self-assessment should be carried out systematically but because of a restricted ability of verbal expression persons with dementia often do not benefit from this at all or only to a limited extent. It is often unclear which patients are capable of giving self-report and which

require an external assessment. Method : Based on an integrative review was participants' observations and focus group interviews are conducted. Aim was to identify how the decision-making on pain assessment in patients with dementia was performed by nurses. Data were analyzed qualitatively. Results : Semi-structured observation protocols were carried out during early, late and night shifts. Three wards in two general hospitals were included (surgery / internal / special ward for people with dementia). The diagnosis of 'dementia' or specification of dementia has almost not been determined systematically. Even in the ward for people with dementia in half of the cases the diagnosis of dementia was unknown by the staff. The analysis of the hand-over communication revealed that nearly no communication took place about pain. (Facial Expressions (e.g. grimacing/groaning) of pain were often misdiagnosed. Focus group interviews had shown that key phenomena, which are known from the literature, often received no consideration during pain assessment. Conclusion : Key phenomena such as co-morbidity and surrogate reporting have to be taken into account. Advanced knowledge about pain and pain symptoms simplifies the pain assessment in persons with dementia; a pathway for nurses dealing with pain assessment is needed for patients with dementia. Keywords : Dementia, Painassessment, Hospital

PP25 R-001

FATAL ACCIDENTS DESCRIBED BY AGE, GENDER, AND PHYSICAL ENVIRONMENTS IN CALIFORNIA, 2010

Chae Man LEE, Elizabeth DUGAN (*Gerontology, University of Massachusetts Boston, USA*)

Introduction : Older drivers tend to be safe drivers, however when in a crash the risk for serious injury or death is elevated. The purpose of this study is to determine what individuals' characteristics (i.e., gender and age) and physical environments (i.e., road type) are related to fatal car accidents among older people in California (CA), 2010. Method : The Fatality Analysis Reporting System (FARS) dataset, administrated by National Highway Traffic Safety Administration (NHTSA), was used to analyze fatal accidents in CA, 2010. Fatal accidents involving older people age 65 and older was selected. Descriptive statistics were conducted to identify the frequency of fatal accidents. Results : There were 415 fatal accidents among older people and 531 older people involved those fatal accidents in CA, 2010. From those fatal accidents, there were 378 (71.2%) drivers and 153 (28.8%) non-drivers. Older male drivers (70.6%) involved much greater fatal accidents than older female drivers. Older drivers (65 to 74) were involved in a greater number of fatal accidents than other age groups (75 to 84; 85 +) (51.6%, 35.7%, and 12.7% respectively). About 60.6% of fatal accidents happened on major highways or state highways. Also, the majority (96%) of fatal accidents occurred at an intersection. Conclusion : Results showed that older male drivers are more likely than older women to be involved in fatal accidents and most fatal accidents occurred at intersections. Interestingly, fatal accidents appear to happen more on major highways than local streets in CA. Further research is needed. Keywords : Older Driver, Transportation

PP25 R-002

THE INFLUENCE FACTORS OF CONSUMER PURCHASING BEHAVIOR ON TELEHEALTH SYSTEM PRODUCTS

Hailun CHAO¹, Yu-Chih HUANG², Yi-Fan FU³, Ming-Lun HSIEH⁴ (*1. Department of Health Care Administration, Chung Hwa University of Medical Technology, Taiwan; 2. Department of Information Management, Tainan University of Technology, Taiwan; 3. Military Tainan Finance Office, Lieutenant Colonel Chief, Taiwan; 4. Department of Health Care Administration, Chia Nan University of*

Pharmacy & Science, Taiwan)

Introduction : In this study, the Anderson's behavioral model is introduced in three aspects, including predisposing factors, enabling factors, and demand factors to figure out how to effect the decisions of consumers' behaviors with the mediator variable, the purchase intention of intelligence caring watches. Method : Look for the possible development of telehealth systems in the future. The interviews were made in the Yongkang Veterans Hospital, Tainan University of Technology, and Chung Hwa University of Medical Technology by the way of purposive sampling. Results : The result of this study reveals that the influence of the factors such as ages, economic resources, emergency contacts, religion, and whether or not the health aids are used on the purchase intention of products of telehealth systems is partial significant. The influence of the age gap of purposing factors on the requirement levels of products of telehealth systems is more obvious. Besides, the family and social resources of the enabling factors are mostly the subjects themselves and their closest family members or children who are financially independent or under other commercial insurances. Conclusion : To conclude, the construction of telehealth systems should focus on the actual purchase intention of the elder consumers instead of the simple commercial thoughts, to lead up occupying the market without fully considering. This act will cause serious loss and damage the reputation of the whole industry. Keywords : Telehealth Systems, RFID, Health Service Utilizations, Consumer Behavior

PP25 R-003

AGE-FRIENDLY CITIES IN QUEBEC (CANADA): TRANSFERRING KNOWLEDGE INTO PRACTICE

Mario PARIS¹, Suzanne GARON², Marie BEAULIEU², Anne VEIL³, Andreean LALIBERTE² (*1. Gerontology, University of Sherbrooke, Canada; 2. Social Work, University of Sherbrooke, Canada; 3. Research Centre on Aging, University of Sherbrooke, Canada*)

Introduction : In Quebec, Age-Friendly Cities (AFC-QC) has started with seven initial projects in 2008 and there are now (end of 2012) 579 participating communities. The gap between what is known on AFC and what is done by communities has appeared to be a major issue for implementation success. Therefore, our aim is to explain the processes involved in transferring research knowledge into practice settings. Method : Based on a community building approach, the AFC-QC process is divided in 3 main phases: 1) social diagnostic of community resources and older people needs; 2) action plan based on a logic model; and 3) implementation through intersectorial collaborations. In each city, this process is led by a steering committee composed of older people and stakeholders from civic society, administration and political level. A program theory model has been developed and evaluation is based on a realistic approach (Pawson & Tilley, 1997). Results : An AFC practical guide has been developed through collaboration between academic researchers, policy stakeholders and a non-profit organisation. The purpose of the guide is to provide orientation to communities in their development and implementation of AFC. It presents a method for each phase of AFC-QC, with an emphasis on clear definition and practical description. Along with the guide, a website has been developed to provide additional practical tools and examples of best practice. Conclusion : In conclusion, we will highlight several issues regarding knowledge transfer and practical application of the AFC-QC guide such as fostering dynamic interactions between research and communities. Keywords : Age-Friendly, Knowledge Transfer, Best Practice

PP25 R-004

AN ENVIRONMENTAL AGEING STUDY FOR OLDER ADULTS LIVING ALONE TO FACILITATE AGEING IN PLACE

Song Iee HONG¹, Hye-Gyung YOON², Ruzica Bozovic STAMENOVIC³, Chang-Keun HAN⁴, Leng Leng THANG⁵, Gerald KOH⁶, Doina Andreea ILIES⁷, Amanda ZHENG¹, Michelle CHEAM⁸, Denise Zhen Yue CHEN⁹, Philip YAP¹⁰ (1. *Social Work, National University of Singapore, Singapore*; 2. *Dept. of Housing and Interior Design, Yonsei University, Korea*; 3. *Faculty of Architecture, University of Belgrade, Serbia*; 4. *Dept. of Social Welfare, Sungkyunkwan University, Korea*; 5. *Dept. of Japanese Studies, National University of Singapore, Singapore*; 6. *Saw Swee Hock School of Public Health, National University of Singapore, Singapore*; 7. *Dept. of Architecture, National University of Singapore, Singapore*; 8. *CPG Consultants Pte Ltd, Singapore*; 9. *Rehabilitation Services, Khoo Teck Puat Hospital, Singapore*; 10. *Dept. of Geriatric Medicine, Khoo Teck Puat Hospital, Singapore*)

Introduction : In light of the increasing number of older adults living alone in Singapore, we attempted a systematic investigation of bio-psycho-social-environmental needs of older adults living at Studio Apartments. Based on the Lawton's ecological model of ageing (1983), the multidisciplinary gerontological research team has examined personal competency and environmental press to understand older adults' environmental adaptation as a response to environmental press. **Method :** The study consisted of two phases: the first phase implemented 14 home visits at Studio Apartments [SA] specially designed for older adults in Singapore. The environmental hazards from the socio-spatial surroundings were assessed with a standardized tool combined with several home assessment instruments. The second stage has attempted to assess older adults' personal competence and perception of their residential surroundings through social surveys from 924 older residents at SAs. **Results :** The empirical findings from home visits identified socio-spatial hazards on insecurity, disorganized living, insufficient space, cluttering, inappropriate healing environment, and limited application of universal design for merely met function. The social survey found critical issues on utilization of assistive devices, home modification, and social services, self-care, social support and neighbourhood. **Conclusion :** Based on our findings, we suggest a glimpse of the development plan for SA and its implementation for older adults. Our findings are expected to increase a better understanding of these older adults' bio-psycho-social-environmental hazards and provide more practical implications and policy recommendations to promote 'aging-in-place' in the living alone context. **Keywords :** living alone, ageing-in-place, environmental hazards

PP25 R-005 CREATING A 'HEALING' ENVIRONMENT IN HEALTH CARE SETTINGS FOR OLDER PEOPLE

Annette HAYWOOD¹, Hazel MARSH², Mike NOLAN³, Stuart G. PARKER⁴ (1. *School of Health and Related Research, University of Sheffield, United Kingdom*; 2. *Research and Development, Barnsley Hospital NHS Foundation Trust, United Kingdom*; 3. *School of Midwifery and Nursing, University of Sheffield, United Kingdom*; 4. *School of Health and Related Research, University of Sheffield and Barnsley Hospital NHSFT, United Kingdom*)

Introduction : There are global concerns about the quality of hospital care received by older people. In understanding these, recent attention has focused on interactions between older people, families and staff, termed the relational environment. However, the built environment also significantly influences the care experience. **Method :** This poster

describes a study exploring aspects of the built environment seen to contribute to, or detract from, a healing environment from the perspectives of older people, family carers and staff working in differing care environments in the UK. In-depth interviews were undertaken with older people and their family carers and focus groups were held with multidisciplinary staff in 3 contrasting settings. **Results:** Data were analyzed using the principles of grounded theory in order to identify key themes and processes at play and analysis was informed by concepts emerging from a consideration of the literature on the nature of the healing environment. **Conclusion :** Here we consider both those aspects of the built environment that were perceived to be important to the care experience by the multiple groups of participants and the dynamic relationship between the built environment and the relational environment and the contribution that each makes to creating a healing environment. Building on the literature and our analysis we argue that a manifestly superior built environment may count for little if staff practices are poor and that conversely a less than ideal built environment can be compensated for when staff practices are sensitive. **Implications for creating a healing environment for frail older people are identified.** **Keywords :** healing environment; health; older people

PP25 R-006 CASE STUDY FOR DEVELOPMENT OF COMMUNITY CENTER IN THE DEPRIVED ARE SWARMED WITH OLDER PEOPLE

Jaeyeon KIM, Yeunsook LEE, Dongjoo LEE (*Housing and Interior Design, Yonsei University, Korea*)

Introduction : One of the huge characteristics of the deprived area is the fact that the elderly people swarmed to the area and are living in poor conditions without any support for them. Therefore it is essential to develop a community center which can support lives of the residents including the older people in that area. **Method :** First of all, literature study revealed that most elderly welfare facilities in Korea are the facilities for the aged people but current trend indicates that interchanges between generations are more desirable from international viewpoint. On the next step survey was made for the residents in the deprived urban area regarding their necessary facilities, the criteria of facilities from the aspects of public administration and the related facilities in the neighborhood. **Results :** The survey results indicated that this area was entering super aged society and their essential space was elderly welfare facility. However, elderly welfare facility was already built in the neighborhood and the elderly welfare facilities were fully established by the unit of city in terms of provincial administration. For this reason elderly welfare facility cannot be made additionally so that inter-generational community center that is shared by the diverse residents in the community was proposed presenting a desirable direction that satisfies all the merits of exclusive elderly welfare facilities and common elderly welfare facilities. **Conclusion :** With the result of this study, those characteristics will be utilized as an important reference for revision and compliment of the original plan through residents' participation. **Keywords :** community center, older people, deprived area

PP25 R-007 SUCCESS OF CASE MANAGEMENT FOR MEDICAL AID INITIATIVE IN KOREA

Jinjoo OH (*Department of Nursing, Dankook University, Korea*)

Introduction : Overuse of the free medical services has been a major factor for the rising cost in the Korea Medical Aid system. Most of Medical Aid beneficiaries are female, elderly, and low educated -the

most disadvantaged in Korean society-. This cross-sectional study was to determine the effects of case management of Korea Medical Aid. Method : Data from structured interview and claim data from medical institutions to the Korea National Health Insurance Corporation were used. Survey data were collected by questionnaire during September 2008. There were 647 responses out of 1069 (response rate 60.5%), but 260 were excluded from the analyses in this paper because they had received case management for less than 18 months. This left 269 individuals who had received case management services for 18 months continuously and 118 who had received no case management services in the same time period. Results : the satisfaction for the case management was very high. Although there was no difference in terms of health behaviour and QOL between the two groups, the overall ability to handle health problems was higher in the case management group ($P < 0.001$). As for healthcare use, the programme produced a significant reduction in hospital visiting days ($P = 0.034$), and while the mean increase in cost from 2007 to 2008 was 29.1% lower for individuals in the programme, the difference between the groups was not significant ($P = 0.851$). Conclusion : Case management in Korea is only in its beginning stage, and efforts for the development strategy should be exerted. Keywords : Case Management, Health Behaviour

PP25 R-008

POVERTY AND DEPRIVATION IN A DIVERSE OLDER POPULATION: TOWARDS NEW MEASUREMENT APPROACHES

Kieran WALSH¹, Thomas SCHARF¹, John CULLINAN², Caroline FINN¹ (1. Irish Centre for Social Gerontology, National University of Ireland Galway, Ireland; 2. Economics, National University of Ireland Galway, Ireland)

Introduction : In many international contexts, there has been a methodological and conceptual shift towards material deprivation indicators as a means of representing and measuring poverty. However, the framing of deprivation indicators has been shown to influence reported deprivation rates and, consequently, the numbers of older people identified as being in poverty. More importantly, questions persist surrounding the appropriateness of standard deprivation indicators to the lives of older people from different backgrounds. Without addressing these issues, our capacity for meaningful measurement of deprivation and poverty in later life is likely to be compromised, with the risk that inappropriate policy responses arise. Method : Drawing on data from a mixed-method study undertaken in Ireland, this paper explores new directions in understanding and measuring poverty in later life. In particular, we are interested in older people's perceptions of 'necessities of life' and how such perceptions influence assessments of deprivation. First, a secondary analysis of national data on living and income conditions ($n = 1831$) is presented, identifying deprivation trends and information gaps on poverty and ageing. Second, data on poverty, deprivation and necessities of life arising from interviews ($n = 21$) and focus group discussions ($n = 62$) with different groups of older people (e.g. nursing home residents; rural residents; urban deprived residents; those living with a disability; ethnic minorities), are described. Results : The findings are discussed with reference to the relative nature of poverty, the changing dynamics of necessities over the life course, and the appropriateness of current and alternative measurement approaches. Conclusion : The paper concludes with suggestions for both research and policy. Keywords : Deprivation; Measurement; Older People

PP25 R-009

HOW IS HOMECARE WORKERS' PREFERENCE IN PLACE FOR THEIR OWN DYING ASSOCIATED WITH THE

NUMBER OF EXPERIENCE AND CONFIDENCE LEVEL IN THEIR HOME END-OF-LIFE CARE?

Miho SUZUKI¹, Noriko YAMAMOTO-MITANI¹, Yuko OKAMOTO², Ayumi IGARASHI¹, Masakazu NISHIGAKI¹, Maiko WATANABE¹ (1. Graduate School of Medicine, The University of Tokyo, Japan; 2. Department of Gerontological Nursing, Tokyo Medical and Dental University, Japan)

Introduction : For homecare workers providing services for dying clients, one's own preference in death/dying may play a significant role in directing their practice. The purpose of this study was to examine the relationship between homecare workers' preference in place for their own dying and the number of experience and confidence level in their home end-of-life (EOL) care. Method : A cross-sectional correlational design was used. Participants were homecare nurses ($n = 308$, 31% of total subjects), home attendants ($n = 263$, 22%), and care managers ($n = 414$, 35%) working for homecare agencies that were randomly selected from the national database. Data were collected by a self-administered questionnaire. One's own preferred place of dying was asked by a multiple-choice question and recoded into three categories (home, palliative care unit, and others); the number of experience and confidence level were taken as ordinal variables with six and four levels, respectively. Bivariate analyses were performed to examine the association among three variables, by each group of professionals. Results : Preference for dying at home was associated with more EOL care experience ($p < .05$) and higher confidence level in EOL care ($p < .05$) among care managers only. There was a significant positive relationship between experience and confidence in all groups ($p < .001$). Conclusion : Intervening care managers so that they prefer home dying for themselves may improve their home EOL care practices. Further studies are needed to examine the causality between the preference and the numbers and confidence level in home EOL care. Keywords : Home care, End of life

PP25 R-010

ASSESSMENT OF FRAILTY AND PRESCRIBING CRITERIA IN OLDER PEOPLE: A SYSTEMATIC REVIEW

Arjun POUDEL¹, Lisa NISSEN¹, Ruth E HUBBARD², Charles MITCHELL³ (1. School of Pharmacy, Pharmacy Australia Center of Excellence, University of Queensland, Australia; 2. School of Medicine, The University of Queensland, Australia; 3. Centre for Safe and Effective Prescribing, University of Queensland, Australia)

Introduction : Rational prescribing in frail older people is complex and difficult. In this group, there is limited evidence on effectiveness of medication, drug pharmacokinetics and pharmacodynamics differ from younger people and multiple co-morbidities with higher risk of adverse drug events are more likely. Various criteria have been developed to measure irrational prescribing (IP) but their applicability to frail older population is uncertain. The primary aim of this systematic review was to identify studies describing the use of frailty measures for evaluating IP in those aged 65 and older. The secondary goal was to address the missing parameters in the prescribing tools to increase their utility for frail individuals. Method : A search was conducted in PubMed and EMBASE (1990- 2011). Original studies written in English that utilized frailty assessment and criteria to evaluate IP in frail individuals were included. Excluded are: studies of specific drugs or groups of drugs and of particular disease conditions. Results : Ten of 573 studies met the inclusion criteria. All papers measured certain parameters of frailty, such as performance based tests, measures of co-morbidity, etc. Six studies used the Beers criteria to explicitly identify inappropriateness while Medication Appropriateness Index (MAI); an implicit criteria was used by two

studies and combination of both in other two studies. Conclusion : Although some parameters of frailty measurement have been used, there appears a need of more user-friendly and detailed criteria for assessing frailty. Prescribing tools should address both medication and patient related factors such as life expectancy and functional status to minimize IP in frail individuals. Keywords : frailty, irrational prescribing, prescribing criteria

PP25 R-011

LOWER VITAL SIGN ASSESSMENT IN OLDER ADULTS WITH FALLS ADMITTED IN PUBLIC URGENT AND EMERGENCY SERVICES IN A BIG CITY IN BRAZIL

Iride Cristofoli CABERLON¹, Angelo Jose G. BOS² (1. School of Nurse, ULBRA, Brazil; 2. Institute of Geriatrics and Gerontology, Pontifical Catholic University of Rio Grande do Sul, Brazil)

Introduction : Falls in the older adult represent a significant public health problem, facing the process of longevity of the Brazilian population. Vital signs are important parameters to determine the causes, clinical repercussion and prognostic of falls and their complications. Method : Aiming to investigate falls in older adults in Rio Grande do Sul, Brazil we reviewed 6556 charts of older adult patients presenting falls from four units of Public Urgency and Emergency in and around Porto Alegre, Brazil. Results : Among them, 4,664 (71%) were women and 1,892 (29%) were men. More than half of the visits (57%) were performed up to 6 hours after fall. The fall site was NOT reported in 83% of the charts. Only 30% of charts contained information on vital signs. Blood pressure was the most recorded vital sign (28% of charts). The least verified vital signs were pulse and body temperature. The degree of consciousness was mentioned only in 20.4% of the charts. Comorbidity was virtually not reported since history of Hypertension and Diabetes appeared in less than 10% of the revised charts. Conclusion : Thus, we observed structures using inappropriate emergency care routines for the older adult. Little heed seems to have been given to the older adult who felt in order to diagnose the possible causes and consequences of the fall. The biggest challenges for the better care for the older adult in Brazil is specialized health professional training and rational care practice for this fast razing population; particularly in the context of primary and secondary health care. Keywords : Public Health, Elderly Care, Health Care Assessment

PP25 R-012

HOW MARKED THE OLFACTION IMPAIRMENT IN PATIENTS WITH LEWY BODY DEMERNTIA IS ? PRELIMINARY RESULTS

Clovis FOGUEM, Gerard BRAND (CSGA, UMR 6265 CNRS - UMR 1324 INRA - University of Bourgogne - Dijon, France)

Introduction : The presence of olfactory deficits has been well established in both Alzheimer disease and Parkinson disease. As in Parkinson's disease central olfactory areas (i.e., olfactory bulb) appear to be among the first brain regions affected in LBD and furthermore, cognitive impairment present in DLB contributes to olfactory dysfunction. The purpose of this study is to evaluate the deficits in odour detection performance in Elderly with DLB and determine the clinical utility of odour detection tests in the antemortem diagnosis of DLB. Method : Five patients with diffuse LBD aged over 65 years old and five carefully matched with patients with PD and healthy controls were administered an odour detection test using three odours: Phenyl Ethylic Alcohol (PEA) [activating only olfactive (CNI) system] and N- butanol [activating both olfactive (CNI) and trigeminal (CNV) systems], and Pyridine [activating only trigeminal (CNV) system] for

odours thresholds. Results : Patients with diffuse LBD performed significantly worse than patients with PD and controls on the odours identification test. Conclusion : Odour detection deficits may be more prevalent and severe in people with LBD. Keywords : Olfactory dysfunction; Levy body dysfunction

PP25 R-013

OLFACTORY DYSFUNCTION IN ELDERLY WITH PARKINSON'S DISEASE: INTERACTIONS BETWEEN TRIGEMINAL (CV) AND OLFACTIVE (CI) SENSITIVITIES - PRELIMINARY RESULTS

Clovis FOGUEM¹, Anne DOE DE MAINDREVILLE², Jean Clement NWATCHOK³, Mylene KACK³, Gerard BRAND¹ (1. CSGA, UMR 6265 CNRS - UMR 1324 INRA - University of Bourgogne - Dijon, France; 2. Neurology Department, 'Maison Blanche' Hospital -CHU de Reims, France; 3. Department of Acute Geriatric, Auban Moet Hospital, France)

Introduction : Olfactory dysfunction is a prodromal and prevalent nonmotor symptom of Parkinson's disease (PD) and an appealing biomarker for PD because of the high prevalence (>90%) among PD patients and the relative ease of testing, as compared to other putative biomarkers (neuroimaging of the dopamine system...). Olfactory dysfunction of PD involves deficits in odour detection, discrimination and identification. The aim of this study is to evaluate the deficits in odour detection in Elderly with PD and suggests that trigeminal sensitivity dysfunction is less severe that olfactive sensitivity in elderly with PD and could contribute to the PD diagnosis accuracy. Method : Olfactory detection test using two odours: Phenyl Ethylic Alcohol (PEA) [activating only olfactive (CN I) system] and N- butanol (BUT) [activating both olfactive and trigeminal (CN V) systems] for odours threshold were performed on twenty five patients aged over 65 years old with PD and carefully matched healthy controls. Neuropsychologic evaluations were done as well as stage of PD estimations. Results : Patients with PD had impaired olfaction detection ability (mean PEA threshold: 16.7; mean BUT threshold: 13.04) compared with control subjects (mean PEA threshold: 18.28; mean BUT threshold: 14.2), independent of age and stage of PD. The PEA and BUT thresholds were correlated for patients with PD (p<0.02) and for controls (p<0.008). Conclusion : Our patients with PD have a moderate olfactory deficit than controls, but not yet statistically significant. The inclusion of patients continues. The olfactory detection test can be useful for diagnosing PD and for discriminating between PD and control subjects. Keywords : Olfactory dysfunction; Parkinson disease; Elderly

PP25 R-014

ANALYSIS ON THE SATISFACTION LEVEL ON SEOUL DEMENTIA MANAGEMENT PROJECT SERVICE

Mi Ra SUNG¹, Dong Young LEE², Jin Ha KIM³, Jae Young YANG³ (1. General, Ph.D, professor, Seoul Metropolitan Center for Dementia. Kyung-in women's college, Korea; 2. Director, Professor; Department of neuropsychiatry, Seoul Metropolitan Center For Dementia, Seoul National University Hospital, Korea; 3. Research Team, Seoul Metropolitan Center For Dementia, Korea)

Introduction : This study aimed to determine the satisfaction level of users who visited Seoul centers for dementia over the last three years from 2010 to 2012 and figure out the influential factors in order to provide fundamental data for improving the operational efficiency and the quality of service. Method : After conducting (1:1) individual interview with a well-structured tool that Seoul Metropolitan center for dementia had developed by itself, analyse the collected data by using

SPSS win 18.0 based on 11,716 people data in a database. Results : Regarding the level of satisfaction on services rated on a 5 point Likert scale, it is showed that the average level of satisfaction on all service areas in the center for dementia was 4.53 points, and the service with the highest level of satisfaction was the cognitive health program recording 4.60 points, followed by 4.54 points of dementia related counselling services, 4.53 points of caregiver support services including care training and 4.53 points of financial assistance for medical care and inspection expenses. The most satisfactory items were kindness of staffs rated at 4.48 points, expertise of staffs at 4.42 points, hygiene of the center at 4.42 points, appropriateness of time at 4.29 points, convenience of use at 4.10 points and location at 3.87 points. Conclusion : Considering the necessity for developing various education materials at customized services classified by dementia stages and the relatively lower level of satisfaction on location and convenience of use, it is required to improve the system and prepare appropriate measures. Keywords : Satisfaction, Seoul Dementia Management Project Service

PP25 R-015

CAREGIVER BURDEN IN DEMENTIA: ANALYSIS OF LARGE COMMUNITY DATA IN KOREA

Myonghwa PARK¹, Sun Kyung KIM¹, Mira SUNG², Dong Young LEE³ (1. College of Nursing, Chungnam National University, Korea; 2. Department of Nursing, Seoul Dementia Center Kyung-In Women's College, Korea; 3. Department of Neuropsychiatry, Seoul Dementia Center Seoul National University, Korea)

Introduction : This study describes caregiver burden according to patient and caregiver characteristics by using a large community dataset. There is little comprehensive information available in Korea about what are the main contributors to caregiver burden, since caregiver burden has been either only partially investigated or studies on this topic used only small sample. Method : The sample consisted of 10,399 dementia patients and 9,965 primary caregivers in 25 dementia centers in a metropolitan city. The database included sociodemographic and caregiving profile of the caregivers. Results : The findings indicated that cognitive impairment, behavior problems, and activities of daily living and instrumental activities of daily living dependency showed relatively high correlations with caregiver burden ($r = .48, .50, .44$ and $.52$, $p < .001$) than other variables. Caregiver burden scores differ significantly with disease progression and appearance of symptoms of dementia that patients with either low MMSE or higher CDR score imposed a higher caregiver burden. With regard to caregiving factors, co-residence, frequent contact, number of hours spent on caregiving and years of caregiving duration were identified as increasing the burden, while having a secondary caregiver and maintained economic activities reduced caregiver burden. Conclusion : The results suggest that the disease-specific factors are closely related to caregiver burden. It is therefore crucial to develop interventions that take these into account. * This work was supported by research grant of Seoul Dementia Center and Basic Science Research Program through the National Research Foundation of Korea (NRF) funded by the Ministry of Education, Science and Technology (No. 2010-0024922). Keywords : Dementia, Community data

PP25 R-016

COMPLIANCE WITH TRIAL REGISTRATION IN FIVE HIGH IMPACT GERIATRIC JOURNALS: A SURVEY OF PUBLISHED RCTS FROM 2008 TO 2011

Eva MANN¹, Gabriele MEYER² (1. General Practice and Institute of General Medicine, Family Medicine and Preventive Medicine, Paracelsus Medical University, Salzburg, Austria; 2. School of

Nursing Science, University of Witten/Herdecke, Germany)

Introduction : Since 2005 the International Committee of Medical Journal Editors postulates prospective trial registration as a precondition of publication to guarantee transparency of trial reporting. The aim of our study was to analyse compliance with trial registration of randomised controlled trials (RCTs) in a register approved by the WHO in five high impact geriatric journals. Method : We included all RCTs published from 2008 to 2011 in Age Aging, JAGS, AJPG, JAMDA, and Int Psychogeriatr, which reported on therapeutic or diagnostic interventions. One reviewer data extracted all RCTs and the second blinded reviewer a random selection of 30% using a piloted 13-item standardised data extraction sheet. Disagreement was solved by discussion. Results : A total of 192 RCTs were identified, $n=19$ did not meet the inclusion criteria, thus, $n=173$ were analysed. Agreement of reviewers on data extraction was excellent. A total of 55 RCTs (32%) were registered, but only 5 before patient enrolment. The most often registry used was Clinical Trial (35/55). 10 registered trials reported on all endpoints listed in the registry or the published study protocol, whereas the rest reported on selected outcomes only without referring to other or planned publications. Conclusion : Our study revealed that only one third of RCTs in geriatric journals was registered, the vast majority after patient enrolment. The publications suffered from selective outcome reporting. Our results confirm earlier analyses and should challenge editors and reviewers once more to consider investigators' compliance with trial registration in the process of decision making about paper's acceptance for publication in renowned geriatric journals. Keywords : Biomedical journals, trial registration, geriatric medicine

PP25 R-017

NURSES' KNOWLEDGE ON THE ELDERLY AND THE EDUCATION NEED DEGREE OF NURSING FOR THE ELDERLY

Kim Hyejung KIM¹, Lee Busep LEE¹, Lee Jeongeun LEE¹, Yun Hyunjeong YUN¹, Seo Jonghee SEO¹, Kim Jonghee KIM¹, Park Jeeun PARK¹, Lee Hwan LEE¹, Jung Hyunji JUNG¹, Choi Yong Hee CHOI¹, Lee Mikyoung LEE¹, Park Kyungmin PARK¹, Park Kyungsook PARK² (1. Graduate School of Chung-Ang University, Korea; 2. Red Cross College of Nursing, Chung-Ang University Professor, Korea)

Introduction : This study was to examine the relation of nurses' knowledge and the education need degree of nursing for elderly patient in hospitals. Method : The participants were 216 nurses from 5 an upper-scale grade general hospitals and general hospital in Seoul and the Capital area. Data were collected with self-administrated questionnaires and analysed by t-test, ANOVA, Pearson's correlation coefficient were used with SPSS/Win 18.0 version. Results : The mean of score for knowledge was average correct-answer ratio at 50.54%, and the average of 12.63 ± 2.73 and education need was the average of 124 point. There were significant difference in education needs according to marital status, final academic background, experience of residence with the elderly. The correlation between knowledge on elderly and geriatric nursing education needs was positively value. Conclusion : The finding of study indicate that the continuous practice education is necessary to improve the nurse's knowledge through developing practice education programs which were considered nurses' education need degree for the elderly. Keywords : nurse, the elderly, knowledge, education need degree on nursing

PP25 R-018

FACTORS RELATED OF EMPLOYMENT WILLINGNESS

AMONG STUDENTS IN GERONTOLOGY AND SERVICE RELATED DEPARTMENTS

Liang-Ju CHEN (*Department of Health Business Administration, Hungkuang University, Taiwan*)

Introduction : In 2006, the Ministry of Education in Taiwan encouraged universities and colleges to establish departments related to long-term care services in order to provide sufficient human resources to the senior-care industry. This study investigated the willingness of students to take care-industry jobs and the factors influencing their willingness. **Method :** The intended study participants are juniors and seniors in gerontology and social service related departments at colleges. 552 copies of questionnaires were distributed to the study participants. We conducted a structured questionnaires including demographic characteristics, family factors, educational factors, attitudes toward the care manpower, and perceptions of work value. We used SPSS 19.0 statistical software to perform factor analysis, descriptive analysis, and statistical analysis. **Results :** Our data showed that the willingness were substantially different from group to group, such as demographic characteristics, family factors, educational factors. Besides, students with higher score of cooperation and trust personality, positive attitudes toward the care manpower, higher support from parents, mother with lower education were higher willingness to take care-industry jobs. Students were concern the learning to match work, welfare system, stability of job, and promotion of being a care helper. **Conclusion :** The results will help colleges offer career planning assistance to students who intend to work in the care services industry. Further, colleges can cooperate with care facilities and introduce the students to the workplace and career opportunities. The study results will help policy makers to understand the factors influencing employment willingness in students and assist graduates in finding appropriate employment. **Keywords :** Employment Willingness, Attitudes towards the Elderly, Employment Recognition

PP25 R-019

AN APPLICATION OF OCCUPATIONAL THERAPY INTERVENTIONS FOR AN OLDER PATIENT WITH BURN AND STROKE

Mitsuru UCHIDA¹, Seiichi IWAYA¹, Hiromi NAKAMURA-THOMAS² (*1. Occupational Therapy, Eisei hospital, Japan; 2. Occupational Therapy, Saitama Prefectural University, Japan*)

Introduction : There are few studies that reported patients with complications of stroke and burn. This case report addresses an application of occupational therapy interventions for an 80 year old woman with complications of stroke and burn. **Method :** The patient took a hot bath, which temperature was 85 Celsius degrees, because of dementia. She suffered a grade 2 deep dermal burn on her buttocks, genital region and thighs, and thus, underwent a skin grafting operation. She had a cerebral hemorrhage in her left frontal lobe 5 days after the accident. Her burns had crusts and chronic bleeding with strong pain. She was paralyzed on her right side and had dysfunction in her left leg due to nerve Fibula paralysis. Her daily activities were restricted within her bed. She repeatedly complained about pessimistic thoughts because of the pain and immobile status. Occupational therapy practices were provided to alleviate pain, improve independent status in daily activities, reduce bed-ridden time and maintain psychological and cognitive stability. **Results :** She left the hospital 10 months later when our rehabilitation goals were achieved. Effective occupational therapy interventions for this patient were alleviation of common characteristics of burn and stroke, for instance, contracture, movement limitation and fear and to increase independent level in

daily activities. **Conclusion :** This care study proposes an application of occupational therapy interventions, which contributed to improvements in physical functions, physical environments and psycho-social aspects for an older patient with burn and stroke. **Keywords :** complications of stroke and burn, occupational therapy, an older woman

PP25 R-020

THE CONTENT ANALYSIS OF EDUCATIONAL GERONTOLOGY ACADEMIC THESIS IN TAIWAN

Shu-Hsin KUO (*Department of Adult and Continuing Education, National Chung Cheng University, Taiwan*)

Introduction : With the dramatic shift in the population as the baby boom generation ages. In 1993, the older population in Taiwan was seven percent, and the Council for Economic Planning and Development predicts that by 2025 one in five Taiwanese will be over the age of 65. The first elderly educational institution had been founded in 1978 and the practical of elder education works has been increased. In 2006, the Ministry of Education announcement a new White Paper entitled Toward to aged society: Policies on education for older people. These important events motivated the studies and practices of educational gerontology in Taiwan, so more and more master and doctoral program students have been paying attention on educational gerontology academic research. **Method :** A content analysis examine the incorporation of educational gerontology academic thesis on the National Library Taiwan Repository knowledge System since 2006 through 2012 and selected four key words, including “elder”, “senior”, “education” and “learning”. The total number consisted of 176 researches. **Results :** The findings were as follows: (1) Policy and demographic affect the trend of researches; (2) Most of researches were using quantitative methods and to get master's degrees; (3) These researches were seldom to concern the elder education for public; (4) Most of researches were focused on needs and motivations but lack of aging knowledge. **Conclusion :** Based on the result, there were some conclusions: (1) the government should encourage students to join gerontology education academic research; (2) students should use both quantitative and qualitative methods; (3) students should focus on public elderly issue; (4) follow up studies could concern the aging knowledge. **Keywords :** Elderly Education, Aging Education, Academic Research

PP25 R-021

STUDY ON THE CONSCIOUSNESS STRUCTURE OF THE PARTICIPANTS IN COMMUNITY COMPREHENSIVE HEALTH CARE SYSTEM BASED ON CONFUCIUS THOUGHT

Wenzhen SHI¹, Junichi YOKOYAMA², Masahiro NAGAI³, Masaru YAMAMOTO⁴ (*1. Graduate School of Business Administration and Computer Science, Aichi Institute of Technology, Japan; 2. Department of Civil Engineering and System Management, Nagoya Institute of Technology, Japan; 3. Graduate School of Information Science and Technology, Aichi Prefectural University, Japan; 4. Department of Management, Aichi Institute of Technology, Japan*)

Introduction : The concept of Community Comprehensive Health Care System (CCHCS) has recently been proposed in Japan. To help the people involved in CCHCS have a clear idea on how and what to do, it is necessary to provide a model of consciousness structure for all the participants. On the other hand, Confucius thought has been influencing the everyday life, actions, values of people in the Orient for 2,500 years. **Method :** In this paper, in order to explicit the model of consciousness structure, we applied Confucius Systems Approach

to CCHCS and deliberated the model that consists of four sides; 'Ren', 'Shu', 'Xue', and 'Le'. In addition, we demonstrated the model of consciousness structure by analyzing the citizen's survey carried out in Toyota-city. Results: The survey results showed that the model of consciousness structure based on Confucius thought is effective for CCHCS where people support each other. In particular, philosophy of 'Ren' meaning "personal social responsibility" is the most indispensable one in CCHCS. Conclusion: In the construction and management of the human-network in CCHCS, the collaboration and cooperation of participants is essential. In order to achieve that, there is a need for innovative consciousness of participants. The main conclusion we came to was that we proposed a model of consciousness structure based on Confucius thought for the innovative consciousness. Keywords: Confucius thought, CCHCS, consciousness structure

PP25 R-022
INTERVIEWS AS A RESEARCH METHOD AMONG PATIENTS WITH MEMORY DISORDERS

Jaana KOSKENNIEMI¹, Maija HUPLI², Minna STOLT², Riitta SUHONEN², Helena LEINO-KILPI² (1. Nursing Science, University of Finland, Finland; 2. Nursing Science, University of Turku, Finland)

Introduction: This study aims to improve the quality of research in the field of patients with memory disorders (PwMD) by analyzing experiences of interviewers. The data were collected in connection with a multi-national, EU-funded RightTimePlaceCare project (FP7-Health-F3-2010-242153). Method: Experiences of interviewers (N=15) of PwDs were asked with open ended questions about factors affected the realization of interviews and analysed with thematic content analysis. Results: There are many factors affecting to the realization of interviews with PwMDs, all of these having also a special ethical challenge. Factors related to PwMDs are: a) patients' attitudes to the study and to the interviewer, b) stage of memory disorder, and c) physical strength. Factors related to significant others (SO) of the PwMDs are SOs' a) attitude to the study and to the interviewer, b) relationship with the PwMD, c) intervening to PwMD's responses, d) hurry and e) physical condition. Factors related to organisation are: a) nurses' attitudes towards the research, b) their workload and c) lack of rooms for interview. Factors related to the researcher are: a) researcher's attitude to the study and to the interviewee b) preparation to the interview c) interview skills d) knowledge about memory disorders and e) ability to create a confidential reciprocal relation. Conclusion: Research, especially interviews, among PwMD, requires special skills of researchers. These skills need to be included into the basic education of researchers and in the orientation of new researchers in the project. By skillful interviews, it is possible to give voice to these vulnerable patients. Keywords: interview, memory disorder, patient

PP25 R-023
FACTORS AFFECTING CAREGIVERS' WILLINGNESS TO PARTICIPATE IN CAREGIVER BETTERMENT PROGRAMS

Chen-Fen CHEN (Department of Social Welfare, Chinese Culture University, Taiwan)

Introduction: Caregiver betterment programs, including education and training as well as support groups, are an important tool for improving the ability of caregivers; however, many caregivers do not participate. This study is based upon the conceptual framework of the Andersen model to examine the factors of caregivers' willingness to join betterment programs. Method: Data was collected from a survey of 922 caregivers of long-term care clients in Taiwan. The chi-square test and logistic regression model were applied for analysis. Results:

Female and younger caregivers were more likely to participate. Those with higher education levels were also more likely to attend. As previous studies have stated, the care load and care knowledge of caregivers are important factors of participation. Our research results also indicate that duration of caregiving is strongly correlated with participation: "new" caregivers prefer to attend education and training programs, while "older" caregivers prefer support groups. After controlling for predisposing and need factors, the enabling factor is the most important predictor of caregiver participation. In other words, it is necessary that all caregivers participating in betterment programs receive respite care alongside. Conclusion: To increase caregiver participation, respite care needs to be included in betterment programs. Keywords: Caregiver, Train program, respite care

PP25 R-024
FEELINGS REGARDING CARE AMONG PARTICIPANTS IN SUPPORT GROUPS FOR FAMILIES CARING FOR FAMILY MEMBERS WITH DEMENTIA - FOCUSING ON DISCUSSIONS DURING GROUP MEETINGS

Keiko MATSUMOTO¹, Jiang BO² (1. Nursing, Kawasaki University of Medical Welfare, Japan; 2. Social Work, Kawasaki University of Medical Welfare, Japan)

Introduction: We conducted a qualitative exploratory factor analysis focusing on participants at such meetings for the purpose of identifying their feelings regarding dementia and caring for family members with dementia. Method: The subjects were provided with an explanation of the purpose of the study and a written explanation of ethical considerations prior to holding the meetings. After acquiring the consent of all participants, the contents of the meetings were recorded over a predetermined time period to retain a written record of the proceedings. A qualitative exploratory factor analysis was then conducted based on the resulting data. Results: There were 31 participants including family members currently caring for family members with dementia. As a result of analysis, six categories were extracted consisting of 'learning about providing care is different from actual care', 'desire get along with spouse', 'conflict over placing in an institution', 'concerned about husband's well-being', 'feeling happiness is the same for everyone' and 'no choice but to make the best of the situation'. Conclusion: The feelings mentioned by participants related to actual difficulties encountered when providing care and conflict when having to place a spouse in an institution. In contrast, participants that had similar experiences expressed sympathy, and indicated that they had reached the feeling of having no choice but to make the best of the situation. In addition, participants currently caring for demented family members indicated feelings of their desire to get along with their spouse by taking advantage of what they had learned about dementia. Keywords: Participants, Support Groups, Family Members with Dementia

PP25 R-025
A STUDY ON THE PARTICIPATION OF A FOREIGN CARER IN FAMILY CARE FOR DISABLED ELDERERS

Yi-Wen CHIU (Social Welfare and Service Management Department, Tatung Institute of Commerce and Technology, Taiwan)

Introduction: This study is aimed at the understanding of foreign carers participating in family care for disabled elders. The purpose was to explore the practical caring work of foreign carers, the assistance and life change to family primary caregivers, and the condition and quality of family care. Method: This qualitative research study applied the face-to-face in-depth interview method to data collection, from a total of 17 primary family caregivers and 17 foreign carers. Results:

(1) The practical caring work of foreign carers included: (a) life attendance and medical care, (b) housework and cleaning, (c) recreation participation and company, and (d) miscellaneous work. (2) The assistance and life change to family primary caregivers was: (a) the reduced work and physical load, (b) the increased spare time, (c) life with regularity, and (d) the changed psychological burden. (3) The condition and quality of family care was maintained on the average. Conclusion : The caring ability and skill of foreign carers met standards; however, daily water and nutrients intake quantity for disabled elders was below the requirements. Certain nursing techniques needed further training and more practice. The researcher also made respective recommendations for family primary caregiver, medical and long-term care workers, social work practice, and social welfare policies. Keywords : Foreign carer, Disabled elders, Family care

PP25 R-026

USE THE BUNDLE CARE TO DECREASE THE AGED PATIENTS' URINARY TRACT INFECTION RATE: A STUDY IN NEUROSURGICAL DEPARTMENT OF CGMH, CHIAYI BRANCH

Yu Wen YEN¹, Yi-Cheng CHEN², Ya-May WANG³ (1. Neurosurgical Ward, Chang Gung Memorial Hospital, Taiwan; 2. Neurological Ward, Chang-Gung Memorial Hospital, Taiwan; 3. Ward, Chang-Gung Memorial Hospital, Taiwan)

Introduction : The aim was to explore predictors for urinary tract infection (UTI) in hospitalized aged patients and to set up strategies to reduce the incidence of UTI. Method : From April to July 2012, we evaluated data prospectively to compared the UTI rate before and after bundle care. 30 aged patients (age-65 years, sex was equal) with foley catheterization were included and the staffs followed the criteria of care bundle (perineum care daily, sterile technique, maintain a sterile closed drainage system, position bag below the waist, assess daily necessity of indwelling foley). The end point was to observe UTI rate after performance of care bundle. Results : From January 2011 to April 2012, 27 patients had UTI in neurosurgical department of our institution. 20 patients with UTI were aged patients (<65 years) and 80% were male and 20% were female. All patients with UTI had experience of catheterization over 10 days. 16 patients (60%) were ever transferred to intensive care unit. The infection control team and doctors joined clinical nursing staffs for this issue and then care bundle for another 30 aged patients with catheterization was induced since April 2012. The observation interval was 6 months. The infection rate was down to zero after the induction of bundle care 4 months later. Conclusion : The staffs can detect UTI and to think adequate timing of foley removal through care bundle. After induction of care bundle 6 months, in the latest 2 months, no more UTI happened in aged patients with foley catheterization in our neurosurgical ward. Keywords : Urinary Tract Infection, Aged, Bundle Care.

PP25 R-027

THE ROLE OF THE ENVIRONMENT IN ELDER ABUSE

Yuliya MYSYUK, Rudi WESTENDORP, Jolanda LINDENBERG (Leyden Academy on Vitality and Ageing, Leyden Academy on Vitality and Ageing, Netherlands)

Introduction : The increasing frequency of older people who have experienced abuse draws more attention to different behaviours expected from older people and the position of the elderly in society at large. Environmental factors can play an important role in elder abuse and the ways professionals and older people themselves perceive occurrences of abuse influence helping and help-seeking behaviour.

Understanding these perceptions is therefore vital to explain the circumstances around it. Method : Eight focus groups and more than 30 interviews with professionals that were conducted as part of a qualitative study on perspectives on elder abuse. The topics that were discussed were aimed at defining elder abuse and the necessary, subsequent actions that should be performed to prevent or intervene in the problem. We included different professional groups, experts, policy makers and the elderly themselves. We analyzed how they viewed elder abuse, and what factors influenced their attitudes, perceptions and expectations. Results : Our findings confirmed that environmental factors such as social arrangements and factors on the systemic level of health care appeared important in framing and understanding of elder abuse. These factors showed how elder abuse was framed as a social or a health problem. Conclusion : We argue that understanding the ways in which different people interpret abuse influence their views on prevention and intervention in elder abuse and are therefore vital for research, policy and practice in elder abuse. Keywords : elder abuse, perspectives, framing, environmental factors

PP25 R-028

EFFECTIVENESS OF MULTI-PURPOSE ACTIVITIES ON HAND FUNCTION OF THE ELDERLY

Hulya YUCEL (Physiotherapy and Rehabilitation, Bezmialem Vakif University, Faculty of Health Sciences, Turkey)

Introduction : Suitable hand activities chosen according to the demands and needs of the elderly aim to increase the skills of daily living. This study was planned with the aim of showing the effects of handicrafts on hand functions of the elderly who reside in the nursing home. Method : 34 subjects were included in the study. They were voluntary in activities and did not have any physically or mentally problems that might hinder the performance of the activities. Jebsen hand function test were used. Handicrafts such as ornament design, cloth-glass painting, knitting, lace, making book braces-vase base plates, arts, pastry, woodwork activities were performed two days a week for twelve weeks, with each section lasted forty five minutes. Paired student t test was used for hand function and Wilcoxon rank test for writing velocity for the comparison of before and after the activities. Results : The mean age was 74,5±7,59 years (60-85). Twenty (61,8%) of them were women. All participants were right handed and were not doing any leisure time activities. Jebsen hand function test score was 40,91±8,19 and writing time was 151,3±57,66 minutes before the activities. The scores were 40,33±10,46 and 145,15±55,56 after the activities (p>0.05). Conclusion : This study indicates the need of considering other factors besides activities in the elderly who reside in an institute. In this study, it was very difficult to maintain continuity of practice because of illnesses, hospital visits etc. These factors were potentially important for not achieving statistical significance. Keywords : elderly, activity, hand dexterity

PP25 R-029

GERONTOLOGY IN HUNGARY

Imre SEMSEI (Gerontology Science Coordination Center, Faculty of Health, University of Debrecen, Hungary)

Introduction : Hungary, among the other European nations, is a graying (aging) society characterized by all the symptoms and consequences of such societies. There are more and more aged people and even the ratio of elderly is constantly increasing. Because of the deformation of the structure of the society the ratio of active to inactive people has been decreasing. Besides, there are more and more ill old people not to mention that the ratio of women increasing between the elderly. Therefore we acquire more and more serious

problems and tensions in our societies regarding share of work, roles in the society moreover concerning pensions, health and social care as well. Conclusion : In order to solve these problems the European societies develop strategies and programs e.g. the White Book or in Hungary the National Strategy of Aging Matters. The European Year 2012 with the motto: "Active Ageing - Solidarity between Generations" would like to help in reaching an "age-friendly Europe" by the year of 2020. This presentation aims going to show all the programs, events, ect., which was carried out in Hungary during the EY 2012 in order to solve the problems originated from the aging of the Hungarian societies. The problems are pressing; nevertheless, we can hardly see "the light at the end of the tunnel". Keywords : aging societies, active aging, solidarity between generations

PP25 R-030

SOCIOECONOMIC STATUS, SOCIAL NETWORK, AND COGNITIVE FUNCTION AMONG MIDDLE-AGED AND OLDER ADULTS IN KOREA: A LIFE COURSE APPROACH

Moonhee SUNG, Hongsoo KIM (*Health Services Research & Gerontology Lab, Graduate School of Public Health, Seoul National University, Korea*)

Introduction : The purpose of this study was to investigate the associations between socioeconomic status, social networks, and cognitive function among adults in Korea using a life course approach. Method : Data from the Korean Longitudinal Study of Aging (KLoSA) were analyzed. The study sample includes 4,121 middle-aged (50-64 years) and 3,224 older adults (over 65). The dependent variable was cognitive function measured by MMSE-K. The key independent variables were family and social networks as well as educational attainment, primary lifetime occupation, and income, representing previously acquired socioeconomic inequalities. Multivariate regressions were performed, controlling for demographic- and health-related covariates. Results : Educational attainment and primary lifetime occupation were significantly associated with the current cognitive function of both middle-aged and older adults. People with blue-collar work as their primary lifetime job and people with no high school degree had lower cognitive function than their counterparts (compared to those with white-collar work and those with high school degrees). Income was positively associated with cognitive function among middle-aged adults only. With regard to social networks, the associations of current job status and social participation with cognitive function were dissimilar between middle aged and older adults. Family networks, measured by marital status and number of family members, were not associated with cognitive function. Conclusion : Socioeconomic inequalities acquired earlier in life and social networks in later life may affect cognitive functions in later life, suggesting the need of a lifecourse approach to research and policy to promote cognitive function for the entire population. Keywords : socioeconomic status, cognition, a life course approach

PP25 R-031

AN INTERVENTION APPLYING A PALLIATIVE CARE APPROACH IN RESIDENTIAL CARE - EFFECTS ON CARE PROVISION AND CARING CLIMATE

Ingela BECK¹, Ulf JAKOBSSON², Anna - Karin EDBERG¹ (*1. Department of Health and Society, Kristianstad University and the Swedish Institute for Health Sciences, Lund University, Sweden; 2. Center for Primary Health Care Research, Lund University, Sweden*)

Introduction : The palliative care approach aims to integrate psychosocial and existential aspects as well as relationship aspects in

the care and can be used in all care contexts. In residential care, nurse assistants (NAs) are the ones who are closest to the residents, but have limited prerequisites to work in accordance with the palliative care approach. We aimed to investigate the effects of an intervention applying a palliative care approach in residential care, on NAs' experience of care provision and caring climate. Method : In this quasi-experimental study we evaluated the intervention involving NAs (n=75) and their leaders (n=9), focusing on emotional, existential and relationship aspects within the palliative care approach, in comparison with controls (n=110). Data consisted of a questionnaire that the NAs answered at three time points. Results : In the intervention group, effects were seen concerning the NAs reports of the care provision in that they focused more on to ease for residents to narrate about their lives, and on communication with residents in what gives them meaning in life. In the intervention group also effects were seen, in that the NAs rated the residents' medical and nursing care needs being less met at the facility directly after the intervention. No effects were seen concerning the caring climate or the possibilities to provide a more person-centered care. Conclusion : The intervention seemingly facilitated for the NAs to focus on relationship aspects with the residents. However, in spite of the leaders' involvement, the intervention seemed not to be sufficient to change the organizational prerequisites for the staff to provide a more person-centered care. Keywords : palliative care approach, residential care facilities, Intervention

PP25 R-032

RESEARCH ON THE INFLUENCING FACTORS BETWEEN THE LEADERSHIP OF MANAGEMENT AND EMPLOYEES' LOYALTY IN THE LONG-TERM CARE FACILITY

Lin-Chiung CHEN¹, Meilan CHEN¹, Ying-Tsun HUNG² (*1. Institute of Health Industry Management, Ching Kuo Institute of Management and Health, Taiwan; 2. Department of Senior Citizen Service in Management, Ching Kuo Institute of Management and Health, Taiwan*)

Introduction : The population of the elderly is up to 7% in Taiwan since 1993. The Taiwanese society had been formally ageing. Currently, for senior citizen's population is continuously going up, and elders' lives have been paid more attention to. Besides, the change of society pattern will be the major factors for causing the growth of long term care service marketing. The loyalty of the employees significantly influences the service quality. The leader's management ability is especially important in the long-term care facility. Method : In the study, the quantitative studies analysis implement is interview. By recording seven employees' viewpoint toward their leader's management methods in the long-term care facility, the researcher analyzes the interview data. Results : The research's goal is to find out the must-be-solved problem between the leader's ability of management and employee's loyalty by the interview. Since the long-term care service will impact on the elderly's satisfactory of living in the facility, by research on employees feeling, the relationship between the leader and employees will be improved. Therefore, it also can promote service quality after integrating the improvement. Conclusion: The study analyses indicated that the promotion of the working efficiency of the employees is significantly related to the loyalty toward the leader of the facility. With NPO management skill improvement, the improved leadership will lead the long-term care home to a high satisfactory and home-like facility. Keywords : Leadership, Employees' loyalty, Long-term care facility

PP25 R-033

LONG-TERM CARE MINDSET: COMPONENTS OF

'KAIGONOKOKORO'

Minjeong CHO¹, Toshiyo TANIGUCHI¹, Kazuaki TANIKAWA², Kaori HARANO¹, Miki MATSUDA¹ (1. Department of Health and Welfare Science, Okayama Prefectural University, Japan; 2. Department of Social Welfare, Kansai University of Social Welfare, Japan)

Introduction : The concept of 'KAIGO' (long-term care) originated in Japan. However, little empirical research has been conducted on the value of this concept. Therefore, this study aimed to clarify the components that comprise 'KAIGONOKOKORO' (Long-term care mindset). **Method :** A self-administered questionnaire survey was conducted on 385 professional caregivers at 51 welfare facilities for the elderly in Japan. The questionnaire consisted of 66 items about 'KAIGONOKOKORO' based on previous research and items on basic individual attributes. Responses were given on a 4-point Likert scale. The response rate was 31.6%. **Results :** Collected questionnaire data were subjected to an exploratory factor analysis using the least squares method with promax rotation. After excluding factors with loadings less than 0.45, three factors (with eigenvalues >1) were extracted from the remaining 58 items. The factors were as follows: (1) Values of symbiosis with human beings, (2) Consciousness of oneself as a professional, and (3) Viewpoint of hope for the client. The reliability of these three factors ranged from moderate to excellent ($\alpha=0.81$ to $\alpha=0.88$). **Conclusion :** These findings represent the first conceptualization of 'KAIGONOKOKORO'. These findings suggest that 'KAIGONOKOKORO' consists of three components. Future investigations should comprehensively examine the various variables related to 'KAIGONOKOKORO'. **Keywords :** KAIGONOKOKORO, professional caregiver, factor analysis

PP25 R-034

ACTIVITIES PLANNING AND LIFE SATISFACTION FOR NURSING HOME RESIDENTS IN TAIWAN

Suchu WANG¹, Tsuann KUO² (1. Community Services Department, Sheng Te Hospital, Taiwan; 2. Medical Sociology and Social Work, Chung Shan Medical University, Taiwan)

Introduction : Taiwan has become one of the fastest aging countries in the world. In many nursing homes, the lack of planned activities often contributes to lower life satisfaction, more falls and injuries, higher depression, and a higher mortality rate. The purpose of this paper was to examine whether a series of activities were effective in increasing residents' wills to engage in social activities and life satisfaction. **Method :** 52 participants in a 74-bed nursing home in Taichung, Taiwan were the subjects of this research. The nursing home underwent an intensive planning process for activities. The participants were invited to join activities for at least one hour per day and the activities consisted of fitness exercises, horticultural activities, reminiscence groups, and music activities. The participants were asked to fill out one questionnaire before and after a two-month period of planned activities. The activities consisted of fitness exercises, horticultural activities, reminiscence groups, and music activities. **Results :** Results showed that participants were on average 77 years old with 31% having cardiovascular and cerebrovascular diseases as well as 57% having a medium-level dependency. After two months, 96% of the participants had a significant improvement on participating in activities, nearly 50% were chatting and about 25% starting walking. The overall satisfaction about the activities increased from 15% to 71%. **Conclusion :** Despite many older adults are dependent, careful planning of activities can significantly increase social interactions and quality of life in nursing homes. The process of effective planning on activities will be discussed in details. **Keywords :**

Nursing Home, Activities Planning, Taiwan

PP25 R-035

FACTORS ASSOCIATED WITH HOME CARE SERVICE UTILIZATION PATTERNS AMONG THE SEVERELY DISABLED ELDERLY: A COMPARISON BETWEEN LONG-TERM COMMUNITY DWELLERS AND NURSING HOME RESIDENTS

Takashi ISHIZUKI¹, Junko WAKE² (1. Social Welfare, Tohoku Fukushi University, Japan; 2. Social Welfare, Tokyo Metropolitan University, Japan)

Introduction : The purpose of this study is to examine the factors associated with service utilization patterns among the severely disabled elderly under the Public Long-term Care System, in Aichi, Japan. **Method :** Elderly people with severe disabilities living in their homes for three years or longer (n = 325) were compared with those who recently entered nursing homes (n = 102). The Andersen model was used, with multiple regression analysis. The pattern of "in-home service use" was used as a dependent variable. **Results :** For the long-term home living group, "number of medical treatments" (OR = 1.68, P < .05), and "degree of self-reliance in daily life" (OR = 1.43, P < .01) showed positive impacts. For the nursing home group, "caregiver's age" (OR = 6.13, P < .05), "number of chronic diseases" (OR = 1.76, P < .05), "number of medical treatments" (OR = 4.80, P < .01), and "caregiver's physical burden" (OR = 3.58, P < .05) showed positive impacts. In addition, "caregiver's mental burden" (OR = 0.25, P < .05) showed a negative impact. **Conclusion :** The medical care needs predict in-home service use in both groups. However, both groups showed different factors associated with in-home service use. The long-term home living group, with less self-reliance in daily life, would use in-home service. For the nursing home group, their uses of in-home services are based on the caregiver's higher age, physical burden and a lower mental burden. Based on these results, measures to support the severely disabled elderly in their community were discussed. **Keywords :** Service utilization pattern, Home care, Elderly

PP25 R-036

YEARLY INCOME, TURNOVER INTENTION AND WORK ENGAGEMENT AMONG JAPANESE EMPLOYEES AT LONG-TERM HEALTH CARE FACILITIES

Toshiyo TANIGUCHI¹, Etsuko FUKUOKA², Jiro TAKAKI³, Kumi HIROKAWA⁴, Min-Jeong CHO¹ (1. Department of Welfare System and Health Science, Okayama Prefectural University, Japan; 2. Nursing School, Niimi College, Japan; 3. Department of Public Health and Occupational Medicine, Mie University Graduate School of Medicine, Japan; 4. Department of Nursing, Baika Women's University, Japan)

Introduction : The work of professional caregivers in long-term care health facilities in Japan are many reasons why employees leave their jobs. The purpose of the present cross-sectional study was to investigate whether a difference in work engagement or turnover intentions exists between professional caregivers for the elderly and other employees. **Method :** A total of 881 employees at long-term care health facilities were surveyed using a self-administered questionnaire including the turnover intention scale, the Utrecht Work Engagement Scale (UEWS-9), and the Job Content Questionnaire as a measure of worksite social support. Data were analyzed using an ANCOVA. The study design and protocol were approved by the Research Ethics Committee of Okayama Prefectural University. **Results :** Turnover intention scores were significantly higher among caregivers than other employees (p<.05). Turnover intentions scores were significantly

higher among respondents with a low to moderate yearly income than those with a high yearly income ($p < .01$). Work-engagement scores were significantly higher among the other employees than caregivers ($p < .05$). Conclusion : Among respondents with a low income, working as a caregiver was associated with a higher turnover intention. Overall, 73.5% of respondents with a low income were caregivers. However, while a low income was found to increase turnover intention, the long-term care insurance system in Japan is unlikely to increase pay. Work engagement is related to the type of job, but is unrelated to yearly income. Negative feelings and low sense of fulfillment among caregivers may negatively affect the well-being of the professionals and quality of care they provide. Keywords : turnover intentions, professional caregivers for elder, yearly income

PP25 R-037

THE CHINESE FORMATION OF THE "CREDIT SYSTEM": DISPARITIES BETWEEN URBAN AND FARM VILLAGE

Zhao QIAN¹, Zhang TIANMIN², Hiroshi SUMII¹, Yang YANG², Mingjun WANG¹, Mai KONDO¹ (1. Health and Welfare Sciences, Prefectural University of Hiroshima, Japan; 2. Comprehensive Research Department, Hiroshima University, Japan)

Introduction : Since the reform, China has been achieving a remarkable economic development, but on the other hand a gap society among the people, especially between the urban area and the farm village, which became a serious problem to determine the Chinese society stability. The difference is not the only the income inequality, but the absurd difference between the urban area and farm village related to the Social Security Project. Therefore, in this study for a comprehensive establish of welfare, we analyzed the both sides of the Chinese society. Method : From the beginning of the 90's, Endowment Insurance, Medical Insurance, Unemployment Insurance, Minimum Life Insurance of the urban Security System have been fully incremented. On the other hand, in rural areas, there is a limit guarantee by the Chinese government. All the farmer's family have to take the burden of the old age person's pension. For this reason, the Social Security System for them are not yet equally established. Results : Referred as the 'Credit System', a 'unit' of organizations that carry out social activities of the government-managed and universities as well as the state-owned enterprises and local government. Employees who were hired not only pay a wage but the 'credit' such as Social Security and Medical Educational are provide as free of charge. Conclusion : In this way, the household registration system combine with the Credit System have been playing a role by immobilizing the enlargement disparity of the society. Keywords : Social security, Credit system, Aging

PP25 R-038

LONG-TERM CARE IN EUROPE THE CONTEXT OF POPULATION AGEING

Zofia SZWEDA-LEWANDOWSKA (Unit of Demography and Social Gerontology, University of Lodz, Poland)

Introduction : The amount of government spending on care for elderly persons as well as the forms and modes of support vary greatly across EU countries, depending on the ageing rate, economic situation, socio-economic development, history, ideology, values shared by the majority of the society, and the prevalent family model. With these factors in mind, Esping-Andersen classified particular countries into three welfare state regimes: liberal, conservative and social democratic. Method : The aim of the poster is to present the typology of long-term care systems in different welfare regimes in Europe. To achieve this aim the desk research and cluster analysis have been

conducted. Results : There are 5 major factors influencing the need to enlist the help of unrelated third parties in everyday life: age/stage of life cycle, cultural resources, family status, health status, economic status. Taking into consideration these factors European countries can be divided into 5 regimes. Conclusion : Each of these regimes implies a different approach to social services and a different degree of the state's involvement in providing assistance to senior citizens. At the same time, in the majority of countries systems of care for the elderly seem to have been developed without a clear agenda that would ensure coherence and efficiency. To make matters worse, in the absence of a systemic regulatory framework it is difficult to draw a line between services provided by the health care and social care systems. The lack of explicit eligibility criteria for the various forms of assistance results in inefficient and provisional solutions. Keywords : long-term care, welfare regimes

PP25 R-039

HYPODERMOCLYSIS AS AN ALTERNATIVE OF ARTIFICIAL REHYDRATION IN GERIATRICS WARDS

Stephen Shing-Fai WONG, Eva LO, Vivian YEUNG, Sim Heung YEUNG, Yu Pak CHAN, Shu Kin LI (Medicine, Hospital Authority, Hong Kong)

Introduction : There are problems in using intravenous (IV) fluid as rehydration therapy for older adults: they may have difficult venous access, potential serious complication like bloodstream infection, and physical discomfort. Hypodermoclysis (HDC, or subcutaneous hydration) could be an alternative method in providing artificial rehydration in eligible patients. Method : Patients in geriatrics convalescent wards who had mild to moderate dehydration or were at risk of developing dehydration were eligible for HDC. Patients who had severe hypovolemia, severe electrolytes imbalance, coagulopathy, generalized edema or severe emaciation were excluded. Results : Fifteen patients were recruited from October 2009 to March 2010. Their average age was 82.6. Sixty percent of patients had received HDC for more than 48 hours, and 53% did not develop adverse events. There was no significant difference in the mean of serum sodium, potassium and creatinine before and after administration of HDC. General condition was improved in 60% of patients while oral feeding was improved in 53%. Sixty percent of patients did not develop pain at the site of HDC, and 80% of patients accepted HDC as an alternative of artificial rehydration to IV fluid. Conclusion : Hypodermoclysis could be a safe and effective alternative of artificial rehydration in eligible older adults, and it could be used in settings like palliative care or long-term care facility. Keywords : hypodermoclysis, artificial rehydration

PP25 R-040

IMPROVING FOOD SECURITY AND HEALTHY AGING IN LOW-INCOME OLDER ADULTS: EXPERIENCES FROM GEORGIA, USA

Jung Sun LEE (Foods and Nutrition, University of Georgia, USA)

Introduction : Food insecurity, lack of food, is a hidden but persistent problem in older adults associated with deleterious effects on nutrition, health, and well-being. Older adults in Georgia are at increased risk of food insecurity due to heightened burden of poverty, chronic diseases, and disability; however, little is known about the status of food insecurity among them. Method : Since 2007, a series of research projects have been conducted to better understand the nature, extent, and prevention of food insecurity in older Georgians based on strong collaborations between university researchers and aging services providers in Georgia using innovative approaches. Results : The

Georgia Advanced Performance Outcomes Measures Project, longitudinal self-administered mail surveys conducted in low-income older Georgians, provided first-ever statewide food insecurity data that are comparable to the federal data, and unique needs and utilization patterns for nutrition assistance and healthcare services of food insecure older Georgians. The resulting findings were used to develop 1) procedures and infrastructure of the state and local client information system to monitor food insecurity and performance of aging and nutrition services in Georgia, and 2) programs and policies to enhance coordination, access, and participation of nutrition assistance programs for eligible older Georgians. Conclusion : Our experiences showed that understanding of the extent and nature of food insecurity as well as continued collaborative efforts among researchers, policy makers, and frontline administrators provide an essential basis to enhance the capacity of nutrition research, nutrition assistance, aging services, public health, and communities to promote food security and healthy aging in vulnerable ever-increasing older population. Keywords : Food insecurity, healthy aging, low-income older adults

PP25 R-041

MUSIC THERAPY FOR PATIENTS WITH DEMENTIA: SYSTEMATIC REVIEW AND META-ANALYSIS

Tomomi UEDA¹, Yoshimi SUZUKAMO¹, Mai SATO¹, Shin-Ichi IZUMI² (1. Department of Physical Medicine and Rehabilitation for the Physically Disabled, Graduate School of Medicine University of Tohoku, Japan; 2. Department of Physical Medicine and Rehabilitation for the Physically Disabled, Graduate School of Medicine, Graduate School of Biomedical Engineering University of Tohoku, Japan)

Introduction : Behavioral and psychological symptoms of dementia (BPSD) are common problems for patients and caregivers. Although music therapy is considered a non-pharmacological intervention for the management of BPSD, its effectiveness unclear. This study aimed to investigate the effects of music therapy on BPSD, cognitive function, and activities of daily living in patients with dementia. Method : A literature search was conducted in the following database: MEDLINE, CINAHL, PsychINFO, and Igaku Chuo Zasshi. We elected the studies, including randomized controlled trials, controlled clinical trials, cohort studies, and controlled trials, and conducted a meta-analysis. We performed random effects meta-analysis using standardized mean differences (SMD). In addition, we investigated the differences in effect size based on the type of interventions, the type of disease, and the intervention period. Results : Of 842 total studies found, 19 studies met inclusion criteria. The results showed that music therapy had moderate effects on anxiety [SMD, -0.64; 95% confidence interval (CI), -1.05 to -0.24; p=0.002] and small effects on behavioral problems (SMD, -0.44; 95% CI, -0.79 to -0.10; p=0.01). In studies of duration >3 months, music therapy had large effects on anxiety (SMD, -0.93; 95% CI, -1.72 to -0.13; p=0.02). Conclusion : The present systematic review and meta-analysis suggests that music therapy is effective for the management of BPSD. However, our results retained the potential of unknown bias because of the low methodological quality. Future trials should be designed with methodology, including study design and evaluation methods. Keywords : dementia, music therapy, meta-analysis

PP25 R-043

HELPING PEOPLE STAY HEALTHY IN COMMUNITY: A PROGRAM OF INTEGRATED CARE MODEL FOR COPD PATIENTS IN HONG KONG

Wai Yi TSANG, T.C. SIM, K.Y. SHA (*Medicine & Geriatrics, United*

Christian Hospital, Hong Kong)

Introduction : Chronic Obstructive Pulmonary Disease (COPD) was ranked second of hospitalization (14.6%) and inpatient bed-days (20.5%) among common respiratory diseases in Hong Kong. Program of Integrated Care Mode (ICM) for COPD was established since October 2011. It focuses on transitional care from hospital to community, symptoms early detection and prompt intervention to reduce the need for intensive hospital care. Review aims to evaluate the effectiveness of Integrated Care Mode on reducing these patients' avoidable healthcare utilization. Method : The ICM for COPD was established in October 2011 who were hospitalized & high risk score could be recruited. The model was run by multidisciplinary profession staff with Case Management training. The key components as follows: 1.High Risk Elderly Score established by Hospital Authority for elderly patient have systematic screening. 2.Case Management include Case Manager home visit, multidisciplinary assessment, risk factor reduction and exacerbation COPD care in community. 3. Empowerment with the knowledge and skills for self-care management of COPD patient. 4.Hotline for patient improves the health access and advices, triage for early follow up as appropriate. Results : There were 184 COPD patients recruited. Mean age was 80.9. They have case manager home visit 6 times after discharge in 2 months. It was significant showing that the number of A&E attendance was reduced by 33% (p<0.001), the average numbers of unplanned admission by 35.68% (p<0.001) and the length of stay by 44.66%. Conclusion : The COPD patients were significantly reduced A&E attendance & unplanned admission rate after they were under the care of Integrated Care Model. Keywords : Integrated Care Mode . COPD.

PP25 R-044

HOW CINDERELLA CARES PATIENTS WITH COPD IN COMMUNITY

Wai Yi TSANG, T.C. SIM, K.Y. SHA (*Medicine & Geriatrics, United Christian Hospital, Hong Kong*)

Introduction : Chronic obstructive pulmonary disease (COPD) was ranked second cause of hospitalization (14.6%) in 2010. In order to provide structured and proactive care for the COPD patients, a program of Integrated Care Mode (ICM) has been launch since 2011 in a Medicine & Geriatric unit of a district hospital. Method : The Integrated Care Model with approach of "CINDERELLA" has been launch with key components as follows: 'C'linical high risk elderly score established by Hospital Authority for elderly patient have systematic screening and early risk assessment. 'I'ndividualized care plan for COPD patients to recognize in early symptoms of exacerbation and non-pharmaceutical and pharmaceutical management. 'D'E'cision support with protocol & evidence-based for case manager to care COPD patients. 'R'e'cruit for home support service that engages with Non Government Organization provides timely home care support to COPD patient. 'E'nhanced sub-acute services with coordination of multi-disciplinary service across the acute, sub-acute and community setting. Hot'L'ine for COPD patient improves health access and advices, triage for early follow up as appropriate. 'A'lliance with other disciplines Multi-disciplinary approach could integrate and optimize care for COPD patients. Results: There were 184 COPD patients recruited. Mean age was 80.9. They have case manager home visit 6 times after discharge in 2 months. It was significant showing that the number of A&E attendance was reduced by 33% (p<0.001), the average numbers of unplanned admission by 35.68% (p<0.001) and the length of stay by 44.66%. Conclusion : The Integrated Care Mode with CINDERELLA approach to COPD patients were significantly reduced A&E attendance &

readmission rate. Keywords : Integrated Care Mode. CINDERELLA. COPD.

PP25 R-045

STUDY ON THE INFLUENCE OF THE APPROVAL MOTIVATION ON THE WORKAHOLISM OF SOCIAL WORKERS IN SENIOR WELFARE CENTERS IN KOREA: FOCUSING ON THE MEDIATED EFFECTS OF FAMILY COHESION AND ADAPTABILITY

Eunju LEE¹, Jungdon KWON² (1. Department of Public Policy, Director, Graduate School of Mokwon University, Seoul Dobong Senior Welfare Center, Korea; 2. School of Social Work, Mokwon University, Korea)

Introduction : The possibility that employees will become workaholics has been increased by the Korean culture that has cherished the value of labor and the higher average number of working hours per week than OECD countries. As the welfare services for the elderly have been expanded due to the aging of population, the social workers have experienced work-related stress and exposed to the risk that they will become workaholics. However, workaholism has hardly been discussed or studied by Korean Society until now. Therefore, the studies are needed to be conducted to determine the causes of workaholism of social workers and to prevent workaholism among them. Method : A quantitative research was conducted using a structured questionnaire for 451 social workers in senior welfare centers in Seoul. The data were analyzed with structural equation modeling. Results : The results of the study showed that two-fifth of the subjects has experienced workaholism, even though the overall level of workaholism of social workers was medium; 29.5% were mild workaholics; and 11.5% were severe workaholics. In results of testing research model, it was found that the family cohesion & adaptability have partially mediated between approval motivation and workaholism. Conclusion : It is meaningful that this is the first study that deals with the workaholism of Korean social workers by proving that the workaholism has reached the risky level. To prevent or ease the workaholism of social workers, personnel evaluation system of social welfare organization and family system as well as the stress management of each person need to be comprehensively improved simultaneously. Keywords : workaholism, social worker, approval motivation, family cohesion & adaptability

PP25 R-046

SHORTAGE OF HEALTH WORKFORCE IN GREATER TOKYO

Hiroo IDE, Katsuhiko TAKABAYASHI (Division of Healthcare Policy in Aging Society, Chiba University, Japan)

Introduction : It is expected that highly aged society will appear in urban areas throughout the world around the middle of this century. In Greater Tokyo, population aged over 60 years will reach thirteen million in 2035, which will be about 12% of the whole population in Japan. It is not hard to imagine that there will be a huge demand for healthcare services by these elderly people. Method : We examined geographical dynamics of physicians using micro data of physicians' career acquired from a government survey. Also, we conducted a survey among nurses to find out when they change or quit their job or retired nurses to reenter a job. Based on these analyses, we estimated the number of healthcare workers in the future. Results : Although the numbers of healthcare workers will increase in Greater Tokyo, those of per population there (except Tokyo metropolitan city) will be the lowest among all areas in Japan. Unless this circumstance changes, there will be a shortage of health workforce in the most populated

area. Conclusion : It seems difficult to provide sufficient healthcare services to these elderly people in Greater Tokyo. Policy makers or stakeholders there need to consider luring healthcare workers to the area in addition to preventing them from quitting a profession and training new workers. Using the results of the analyses, we will propose what policies Greater Tokyo should devise to avert or mitigate the problem. Keywords : workforce, urban area, healthcare services

PP25 R-047

COMMUNITY PARTICIPATION AND LIFE SATISFACTION IN OLD AGE:WHO GETS MOST FROM PARTICIPATING AT SENIOR CENTERS?

Pau-Ching LU (Graduate Institute of Social Work, Chengchi University, Taiwan)

Introduction : The effects of community participation on the subjective wellbeing of older adults have been well documented in the existent literature. However, the effects may vary with participation type. The aim of this study was to investigate the associations of senior center participation and life satisfaction. Two indicators of participation were analyzed: actual participation behavior and subjective perception of participation benefits. Method : This study collected data from an interview survey of senior center participants. We interviewed 400 older adults from 20 senior centers. Hierarchical regression analysis was applied to capture the effect of perceived benefits on life satisfaction. Results : 1.The benefit respondents perceived gaining from participation can be categorized into the following two dimensions: "socializing" and "self growth". 2.The regression analysis of perceive participation benefits showed that: women reported more benefits from participating at senior center than men did. In addition, respondents with higher education, more competencies in social skills, and greater involvement (measured by participation frequency and more types of activity) perceived greater benefits than their counterparts did. 3.Greater perceived participation benefits were positively related to life satisfaction; whereas greater involvement in participation, per se, is not significantly related to life satisfaction. Conclusion : These results support the importance of subjective assessment of their community participation experiences of older adults. The staff in senior centers should take such "participants' view" issue into consideration, when they design and Keywords : community participation, senior center, life satisfaction

PP25 R-048

EVALUATION SYSTEM ON LIVABLE COMMUNITY FOR ELDER PERSON IN URBAN CHINA

Shan LI (Public Management and Social Science College, Dalian Maritime University, China)

Introduction : he percentage of persons age 65 and over is about 14% in 2010 mainland China, while the ratio in urban area is much higher. Aging in place and the quality of life make community more and more important for elder person to evaluate their happiness and living conditions. What are the requirements for livable and sustainable community toward aging in China? In this research, the residential evaluation model was established mainly by means of subjective and objective methods. Method : We conducted a questionnaires survey on subjective satisfaction toward current community, with about 3200 valid elder person sampling in the urban area of Dalian city (a coastal city in east China with over 6.7 million residents), and also collected the objective index from 121 communities. Results : Community participation, convenience of mobility, spatial amenity, supply for elderly service, comfort of nature environment, fitness of building, supply of medical care service, and all the seven factors showed

statistic significance on evaluating livable community. Conclusion : The results highlight the main factors that urban elder residents most cared for their current dwelling place. To most of the urban elder people, social conditions on community participation, convenience of mobility, space amenity, supply of elder service, comfort environment, fitness of building, and supply of medical care service are the main factors affecting elders' subjective happiness toward current community. Keywords : livable community, age-friendly, urban China, evaluation system

PP25 R-049

POSSIBILITY OF TELECONSULTATION FOR DIABETES: ANALYSIS OF CONVENTIONAL DIABETES CONSULTATIONS

Farhad FATEHI¹, Len GRAY², Anthony RUSSELL³ (1. Centre for Online Health, The University of Queensland, Australia; 2. Centre for Research in Geriatric Medicine, The University of Queensland, Australia; 3. Diabetes and Endocrinology Department, Princess Alexandra Hospital, Australia)

Introduction : In response to growing demand for care with decreasing availability of personnel, telehealth strategies have potential for improving accessibility to health care services and lowering costs. This study evaluated the possibility of providing specialty consultation remotely for people with diabetes by analysing the conventional diabetes consultations to assess their suitability for substitution with a telehealth encounter. The suitability of this approach for older patients was assessed. Method : A questionnaire was distributed to all five endocrinologists at Princess Alexandra Hospital in Brisbane to explore the procedures, findings, and recommendations made for patients with diabetes. The opinion of endocrinologists also was surveyed on possibility of each patient to be consulted remotely. Results : A total of 50 consultation questionnaires were collected and analysed. Physical examination was not performed in 30% of consultations. The patient's current management plan was confirmed in 74% of the cases. The most frequent recommendations made for the patients were General Advice (88%) and Ordering lab tests (84%). In 86% of consultations, the clinicians believe that it would have been possible to provide that consultation remotely via telehealth. 19 (38%) patients were ≥ 60 y/o (range = 60~87). No significant difference was observed between recommendations made for this group and those of less than 60 years old. Conclusion : A significant proportion of in-person specialist consultations for people with diabetes can be substituted with remote consultation using telehealth solutions. No relationship was observed between the age of the patients and opinion of the endocrinologists on possibility of remote consultation using videoconferencing. Keywords: Telemedicine, Diabetes

PP25 R-050

DIGITAL TECHNOLOGY USE WITHIN AND BETWEEN UNITED STATES GOVERNMENT AGENCIES IN AGING

Marie A; BERNARD¹, Ralph PAXTON², Robert HORNYAK³ (1. National Institute on Aging, National Institutes of Health, USA; 2. Office of Research Development, Department of Veterans Affairs, USA; 3. Administration on Aging, Administration for Community Living, USA)

Introduction : United States federal agencies provide significant funding for research and services for the aged. Highlighted is digital and other technologies (DGT) at three of the leading federal agencies in aging - the National Institute on Aging (NIA), National Institutes of Health; Department of Veterans Affairs (VA); and Administration on Aging (AoA), Administration for Community Living. Method : Senior

staff surveyed ongoing research and service projects utilizing DGT. Identified projects were reviewed for their impact on older Americans Results : NIA DGT projects: Health and Retirement Study digital survey; Center for Research and Education on Aging and Technology Enhancement; Oregon Roybal Center Living Laboratory; real time cardiac monitoring for high risk patients ineligible for ICD; monitors - shoe insert for falls and gait mechanics, daily physical activity, self-selected gait speed with transmission capability to clinicians; national exercise campaign; clinical trials locator. VA - replaces and restores function to central nervous system injury and illness through electrical neural prostheses, robotics, and implantable devices; the creation of a single research database from hundreds of separate databases and millions of individual health records; Million Veteran campaign merging electronic medical records with genetic data; Home Telehealth allows distance care; My HealtheVet allows prescription refills, tracking labs, appointments. AoA - web-based system to assist older adults and persons with disabilities locate community organizations (eldercare locator), has an on-line presence and pre-assessments for services. Conclusion : Federal agencies support DGT projects that range from research (NIA and VA) to service (VA and AoA). Many of the programs may be replicable in other countries. Keywords : research, government, digital technology

PP25 R-051

ACCURACY OF MARGINAL FIT OF CROWN PREPPED BY PREP-GUIDE

Ui-Jung CHIN¹, Hee- Yong AHN², Oh-Dal KOWN³, Sang-Wan SHIN¹ (1. ICDR, Korea University, Korea; 2. Ahn Hee Yong Dental Clinic, Korea; 3. Dentapia Dental Clinic, Korea)

Introduction : CAD/CAM technology has been widely used in the fabrication of conventional dental prostheses including zirconia and metal crowns, and partial dentures. In this study, we evaluate KKOD's Digital Prep Guide which enables 3-D simulation of crown preparation prior to actual preparation. The desired amount of tooth reduction and gingival margin shape and form are decided and prepared virtually. A prep guide is fabricated using rapid prototyping and the tooth is prepped using this guide. Method : 1.Using KKOD's Digital Prep Guide the dimensional criteria for the tooth to be prepped is determined and set. The axial wall taper is set to 2 degrees. A model of the prepped tooth and the prep-guide is produced using rapid prototyping. 2.The guide is placed on the tooth to be prepped. Actual preparation of the tooth is carried out by a specially designed handpiece and the tooth is reduced 1mm in width 3.The crown margin is evaluated using a measuring microscope (100 x magnification) in buccal, lingual, mesial. Results : Results show that the largest marginal gap detected was 80 microns. A maximum fit average of 55 microns and a minimum fit average of 8 microns. The marginal gap was measured to be less than 30 microns mostly, which is less than the marginal discrepancy of zirconia crowns reported in current literature. Conclusion : Using Prep-Guide not only allows for the controlling of the amount of tooth reduction but also allows for various marginal formations, thereby it may offer minimally invasive prosthodontic therapy and prostheses to geriatric patients with systemic conditions. Keywords : CAD/CAM, Prep-Guide, Marginal accuracy, crown

PP25 R-052

A PROPOSAL FOR CALF CIRCUMFERENCE CUTOFF POINTS IN THE MINI NUTRITIONAL ASSESSMENT SHORT-FORM FOR ELDERLY JAPANESE

Kazue KUNO¹, Masako TSUJI², Seiji SAKEMOTO³ (1. Department of Health and Nutrition, Nishikyushu University, Japan; 2. Department of Health and Nutrition, University of Human Arts and Science,

Japan; 3. Department of Nutritional Science, Minami Kyusyu University, Japan)

Introduction : The Mini Nutritional Assessment Short-Form (MNA-SF) is used to screen for malnourished elderly individuals in the community. Measuring calf circumference (CC) can be easier than measuring height in elderly individuals, who may be stooped with aging. This study examined potential cutoff points for CC corresponding to cutoff points for body mass index (BMI) in the MNA-SF. **Method :** MNA-SF scores were measured for 602 individuals (age range, 19-96 years) living in southern Japan. **Results :** Estimated BMI for individuals ≥ 65 years (n=279) was calculated using the regression line between BMI and CC for individuals < 55 years old (n=190): $\log \text{BMI} = -0.5975 + 1.2553 * \log \text{CC}$. Significant positive correlations were found. Using this equation, CC cutoff points corresponding to BMI cutoff points in the MNA-SF were defined. CC 31.3 cm, 33.8 cm, and 36.3 cm corresponded to BMI 19, 21, and 23, respectively. Revised cutoff points for the Japanese population are: 0, < 31 cm; 1, > 31 to 34 cm; 2, > 34 to 36 cm; and 3, > 36 cm. In our 279 elderly participants, 13.2% were at risk of malnutrition, 1.0% were malnourished and 82.2% showed adequate nutrition. Mean MNA-SF score was 12.9 ± 1.4 . The same result was achieved using BMI cutoff points. **Conclusion :** We propose CC cutoff points for the MNA-SF to suit Japanese elderly populations. **Keywords :** elderly, mini nutritional assessment, Japanese

PP25 R-053

THE BURDEN OF HIP AND KNEE ARTHROPLASTY IN ELDERLY POPULATION IN KOREA

Seung-Mi YOO¹, Jeong-Hoon AHN², Eun-Jin JANG², Yun-Jung KIM², Yea-Ji JUNG² (1. School of Public Health, Seoul National University, Korea; 2. Office of Health Services Research, National Evidence-based Healthcare Collaborating Agency, Korea)

Introduction : Due to rapidly aging population, the rate of hip and knee arthroplasty is increasing in Korea. This study aims to estimate the surgical loads and economic burden of hip arthroplasty in Korean elderly population. **Method :** We analyzed the insurance claim data of National Health Insurance Corporation in Korea for 5 year period of 2007-2011. Elderly was defined as age group over 60 years old. Arthroplasty is divided further as primary total, primary elective, revision total and revision elective following by ICM description. Data analysis includes number of patients and surgery, length of hospital stay, total hospital visits and total cost. We also analyzed each criterion by gender. **Results :** Number of patients per 100,000 population increased from 192.1 to 223.0 (hip), 485.7 to 621.9 (knee) over 5-year period. The major part of surgery was the primary elective replacement in hip arthroplasty and primary total in knee. Length of hospital stay ranged between 342,466 and 414,519 days (hip), 771,097 and 1,078,913 days (knee). Total hospital visits ranged between 499,203 and 636,841 days (hip), 771,097 and 1,103,554 days (knee). Total cost related with hip arthroplasty increased from 901 billion won to 1239 billion won and 2420 billion won to 3698 billion won in knee arthroplasty. Women represented the majority of patients undergoing both types of arthroplasty. **Conclusion :** The change in socioeconomic burden of arthroplasty in Korea is remarkable. As the demand of arthroplasty is expected to increase continuously, it is necessary for policymakers to set the new healthcare plan reflecting this trend. **Keywords :** Arthroplasty, burden, cost

PP25 R-054

GRANDPARENTS CARING FOR ORPHAN GRANDCHILDREN IN THE ERA OF HIV AND AIDS IN

BOTSWANA

Sheila SHAIBU (School of Nursing, University of Botswana, Botswana)

Introduction : Background: Botswana has an HIV prevalence of 17.6 and an estimated 137805 orphans in a population of approximately two million people. Many of these orphans are cared for by their grandmothers, who struggle with caring for orphans suffering from a disease they know very little about. **Method :** Purpose: The purpose of the study was to identify the experiences of the grandparents who were taking care of orphan grandchildren in Botswana. **Design:** A descriptive qualitative design was used to interview 12 grandmothers aged 60 and above in a semi urban village in Botswana. **Content analysis** was used to analyze the data. **Results :** Findings: The ages of the grandmothers interviewed ranged from 60 to 80 years, whilst the number of orphans under their care ranged from one to nine. Most were illiterate. The themes that emerged included: it's doable if they are not sick, adherence issues, HIV related stigma, silence on communication of sexuality issues, and the paradox of adolescent pregnancies. Cultural beliefs prevented them from talking about sexuality and in some cases, accepting HIV as the cause of death. **Conclusion :** Conclusion: Grandmothers were challenged by HIV related illnesses of orphans, and their lack of knowledge of the diseases and cultural beliefs must be addressed to improve adherence and communication about HIV. HIV programs need to address older persons as some are sole caregivers of HIV positive orphans. **Keywords :** HIV and orphans, Grandparents, Botswana

PP25 R-055

RESEARCH PARTNERSHIPS: OWNERSHIP AND FUNDRAISING: THE IMPLICATIONS FOR NGOS IN DISSEMINATING INFORMATION

Susan HOWELL, Karen BOROCHOWITZ (Management, Dementia SA, South Africa)

Introduction : NGOs have a wealth of knowledge and can showcase this knowledge with the objective of sharing and learning through human rights based research combined with scientific input and methodologies. As Dementia SA is an organisation advocating for person centered care for those with dementia, their families and their communities, partnership for the scientific and medical research components is essential. This presentation will attempt to show good practise is research partnerships and the policy and procedures that ensue through what could otherwise be conceived as an unequal partnership. **Method :** The initial pilot project undertaken by Dementia SA and various tertiary institutions in South Africa will be a 'real case' methodology looking at the development of policy through collaborative research. The research will be based on a study and development of materials assessing dementia in a rural Xhosa community in the Eastern Cape, South Africa. **Results :** The results will be: 1. A sample of good practice policy highlighting the anticipated areas of difficulty and the methods used to overcome such challenges; 2. Real case samples showing why good practice policy is necessary; 3. How procedures support policy; 4. How a small NGO can partner large internationally recognised tertiary institutions to achieve scientific research and be equal partners. **Conclusion :** The conclusion will deal with the partnership aspect of research and collaboration and the real case outcomes as to the possibility of equal partnership among very different stakeholders. **Keywords :** Partnership Research Collaboration

PP25 S-001

CHILEAN NONAGENARIANS

Chung Bin YU¹, Luis VILLARROEL², Pedro Paulo MARIN³ (1. *Acute Geriatric Hospitalization Unit, Instituto Nacional de Geriatria, Chile*; 2. *Public Health, Department of Family Medicine, Faculty of Medicine, Pontificia Universidad Catolica de Chile, Chile*; 3. *Geriatrics and Gerontology, Internal Medicine Department, Faculty of Medicine, Pontificia Universidad Catolica de Chile., Chile*)

Introduction : The objective of this study is to compare the biomedical and social results obtained in a representative national sample of nonagenarians, data obtained from the Chilean National Health Survey, from the years 2003 and 2010. **Method :** Study the varied parameters of an expanded sample of nonagenarians. N(2003) = 26, N(2010) = 25. **Results :** The average weight (kgs), height (cm), IMC, and abdominal circumference (cm) was of 60, 147.2, 27.1, and 93.4 for the year 2003, and 53.4, 147.8, 24.1, and 85.1, for the year 2010. 2.8% of the nonagenarians in the year 2003 exercised once a week, while the rest did no exercise. In the year 2010, all were sedentary (p = 0.403). The total cholesterol (mg/dl), fasting blood sugar level (mg/dl), systolic and diastolic arterial pressure (mmHg) were 180.6 (7.3)*, 101.3 (7.4), 162.2 (11.9), and 90.2 (11.4), for the year 2003, and 200.4 (21.6), 93.7 (4.2), 152.9 (7.1), and 71.4 (2.2), for the year 2010. The results for the MMSE and Pfeffer were 7.7 (1.5), 23.1 (3.1), for the year 2003, and 13.2 (1.0), and 25.2 (3.7), for the year 2010. (Max score MMSE = 19, Pfeffer = 33) 8.5% of the nonagenarians received 8-12 years of education, in the ENS 2003. The rest had received less than 7 years of education. 21.7% studied in school for 8-12 years, and 3.8% had received 13+ years of schooling in the year 2010 (p = 0.303). **Conclusion :** There were no statistically significant differences in the studied parameters. **Keywords :** nonagenarians

PP25 S-002

RELATIONSHIP BETWEEN FRAILTY AND CO-MORBIDITY AND SOCIO-DEMOGRAPHIC CHARACTERISTICS IN COMMUNITY-DWELLING OLDER MEXICANS

Elva Dolores ARIAS MERINO¹, Neyda Ma. MENDOZA-RUVALCABA², Jazmin CUEVA-CONTRERAS¹, Martha Judith ARIAS-MERINO², Rosa Martha MEDA-LARA³, Genaro Gabriel ORTIZ⁴ (1. *Public Health, CUCS, University of Guadalajara, Mexico*; 2. *Health Science, CUTONALA, University of Guadalajara, Mexico*; 3. *Basic Psychology, CUCS, University of Guadalajara, Mexico*; 4. *Centro de Investigacion Biomedica de Occidente, Instituto Mexicano del Seguro Social, Mexico*)

Introduction : Frailty is a geriatric syndrome that places older adults at risk for adverse health outcomes such as functional impairments, falls, multiple medical co-morbidities, hospitalization, institutionalization, and death. Frailty has been mainly studied from physical and physiological aspects, although social and psychological domains of frailty have been recognized as critically important and also require research. The prevalence and correlates of frailty in Mexico are still unknown. **Objective:** To describe the correlation between frailty status and co-morbidity and socio-demographic characteristics in community-dwelling older Mexicans. **Method :** Design: Data were used from the Health, Wellbeing and Aging Study (SABE) in Jalisco and Colima, Mexico (FONCICYT/COECYTJAL). **Setting:** Jalisco and Colima States, Mexico. **Participants:** 2082 non-institutionalized Mexicans 749 (36%) men and 1332 (64%) women, of 60 years and older. Frailty was defined as: Unintentional weight loss (>3 kg in the last year), Weakness (Grip string), Slow walking (Mobility), Self-reported-exhaustion (Depressive symptoms), and Low physical activity level (Basic Activities of Daily Living). Information about socio-demographic factors, cognitive function, depressive symptoms, health conditions, functional and nutritional status, was obtained

through a comprehensive gerontological assessment. **Results :** A total of 309 (14.8%) persons with frailty were found. the factors of being female, low education, malnutrition, cognitive impairment, depression, IADL, hypertension, diabetes mellitus, heart, lung and cerebral vascular disease and arthritis are related. Falls, urinary and fecal incontinence are related as well. **Conclusion :** Our results of frailty are higher than in other studies, and we found a clear relationship between frailty and co-morbidity and socio-demographic characteristics. Longitudinal studies are needed to establish predictors. **Keywords :** frailty, cognitive function, SABE Project,

PP25 S-003

VULNERABILITY AND AGING: A PROSPECT IN THE CITY OF SAO PAULO - SABE STUDY

Flavia De Oliveira Motta MAIA¹, Yeda Aparecida De Oliveira DUARTE², Maria Lucia LEBRAO³ (1. *Hospital Universitario, Universidade de Sao Paulo, Brazil*; 2. *Escola de Enfermagem, Universidade de Sao Paulo, Brazil*; 3. *Faculdade de Saude Publica, Universidade de Sao Paulo, Brazil*)

Introduction : This research is part of a project called Health, Well-being and Aging ("SABE Study"). The aims was to identify and describe the living and health conditions of elderly physical and socially vulnerable in the city of Sao Paulo-Brasil and verify association with the outcomes: functional decline, frailty and death, six years later. **Method :** The sample was composed by the 2.143 elders interviewed in 2000 of which 1.115 were reevaluated in 2006. Rao-Scott tests weighted to account for sample design effects were used to evaluate associations of the variable origin with the independent variables considering the level of confidence of 95%. Multiple Regression with stepwise forward technique was used to analyse the outcomes. **Results :** The physical vulnerability was presented in 38,1% of the elders in 2000 and 52,7% in 2006. Most of the elders lived in a context of very low and low social vulnerability (71,9%). The physically vulnerable elders presented higher distribution in the medium, high and very high social vulnerability category (43,1% in 2000 and 60,1% in 2006). The physically vulnerable elderly has risk to become frail (2,61; p=0,000), to suffer functional decline for basic (2,48; p=0,001) and for instrumental (1,46; p=0,051) activities of daily living and has risk of social vulnerability(1,50; p=0,005). The socially vulnerable elderly has risk of death (1,58; p=0,024) and risk to become physically vulnerable (1,54; p=0,005). **Conclusion :** These findings suggest the importance of understanding the vulnerability in elderly, allowing the identification and prioritization of resources for the monitoring of those with higher possibility of adverse outcomes. **Keywords :** Aged. Vulnerability. Aging. Death.

PP25 S-004

PROTECTIVE FACTORS FOR SUCCESSFUL AGING OUTCOMES IN OLDER ADULTHOOD

Jae Won CHANG, Jun Sang LEE (Department of Social Welfare, Daegu University, Korea)

Introduction : The purpose of the present study was to identify psychosocial attributes that promote successful aging outcomes in later life and to examine the mechanism through which this process occurs. In general, it is hypothesized that there are two sources of resilience, personal factors and family/community support factors. This model was based on the notion that individuals who outcome the risks and challenges associated with aging and an increased number of life experiences may have important resources or protective attributes that promote more optimal outcomes in later life. **Method :** The study subjects were 650 elderly persons over 65 living in Daegu city, and the

survey was done in community centers and elderly social welfare centers. The actual measures used in this study were perceived stress, self-esteem, optimism, hardiness, social support, family environment, community support, life satisfaction, depression, and self-reported health. The data were analyzed by PASW 18.0 and AMOS 20.0, and P values less than 0.05 were significant. Results : Perception of stress did not have a direct effect on successful aging outcomes, whereas perceived stress exerted a negative effect on family/community support and family support. In contrast, family/community support and family support promoted successful aging outcomes in older adulthood. To further examine the intervening effect of family/community support and family support on successful aging outcomes, bootstrapping analysis was performed. Conclusion : The data showed that higher perception of stress significantly decreased the family/community support and family support and this had important implications for intervention strategies for successful aging outcomes in elderly individuals. Keywords : successful aging outcomes, resilience, protective factors

PP25 S-005

INTERGENERATIONAL TRANSMISSION OF SMOKING BEHAVIOR ACROSS THE LIFE COURSE

Joohong MIN¹, Tara GRUENEWALD², Merril SILVERSTEIN³
(1. Davis School of Gerontology, University of Southern California, Korea; 2. Davis School of Gerontology, University of Southern California, USA; 3. Maxwell School, Syracuse University, USA)

Introduction : Background: Previous research indicates consistent intergenerational transmission of smoking behavior. However, less research has been devoted to understanding the mechanisms through which smoking behavior is transmitted or not from parent to child and the persistence of this influence into adulthood. The current study capitalizes on the availability of dyadic reports of parent and child smoking behavior and attitudes to explore the role of behavioral modeling and socialization processes in the intergenerational transmission of smoking behavior. Parents' smoking behavior during the target child's childhood and parents' attitudes toward smoking were examined as predictors of the target child's smoking behavior in adulthood. Method : Data: Data came from the year 2000 wave of the Longitudinal Study of Generations (LSOG). Multinomial logistic regression in 531 parent-child dyads (parents mean age=72; child's mean age = 47) was used to examine parent's smoking behavior and parent's permissive attitude towards smoking as predictors of the odds of adult children's smoking behavior. Results : Results: The odds of adult children's regular smoking (OR = 2.837, $p < .05$) were greater in children of parents who were regular smokers. Parent's permissive attitude towards smoking also predicted greater odds (OR = 2.218, $p < .01$) of adult children's regular smoking. However, when we examined concurrently, only parent's attitude was a significant predictor of child's smoking in adulthood. Conclusion : Findings suggest that both parents' modeling and attitudes toward smoking may shape children's smoking behavior in adulthood, with a potentially greater influence of parental attitudes. Keywords : smoking , Transmission

PP25 S-006

EVIDENCE BASED PRACTICE: AROMATHERAPY AS PAIN RELIEF FOR OLDER ADULTS

Mimi TSE (School of Nursing, The Hong Kong Polytechnic University, Hong Kong)

Introduction : Objective: To review the effectiveness of aromatherapy in reducing pain. Method : Data Sources: The PubMed (2001 to January 2012), Ovid (2001 to January 2012) and CINAHL (2001 to

January 2012) databases were accessed to search for aromatherapy, nursing, complementary medicine and pain literature. Selection Criteria: studies related to the effect of odor and the perception of pain, and the use of aromatherapy as pain relief. Results : Main Results: There were 5 studies that fit the inclusion criteria. Laboratory-Based Studies: Participants in good health without any history of respiratory diseases were recruited. Pain was induced by hot water (46-48°C), contact thermode (36-47°C) or cold water and ice (3-4°C) until participants expressed pain. Pleasant and unpleasant odors were diffused by an odor generator. Pleasantness of the odor and pain were rated on a visual analog scale by each participant. Lower pain scores were reported after smelling pleasant odor in heat-induced pain. And higher pain scores were reported in both heat- and cold-induced after smelling unpleasant odor. Community-Based Studies: Community-dwelling older persons received massage with essential oils on their painful knee joints (30- to 35-minute for 6 times over a 3-week). Upon completion of the program, pain was reduced, with better physical functioning. Fibromyalgia patients received massage with essential oils to their painful body areas also reported lower pain scores and improved physical function after 12 weeks of intervention. Conclusion: Conclusions: Given the high prevalence of pain among older adults, the use of aromatherapy should be an appealing pain relief strategy. Keywords : aromatherapy, pain, elderly

PP25 S-007

COMMUNITY-DWELLING ASSESSMENT: THE OARS AS AN INTEGRATED MODEL FOR PLANNING CARE

Rogério Manuel Clemente RODRIGUES, Luis Manuel Jesus LOUREIRO, Silvia Manuela Dias Tavares SILVA, Zaida Aguiar Sa AZEREDO, Sandrina Sofia Silva CRESPO, Cristiana Filipa Ribeiro SILVA (UICISA-E, Escola Superior de Enfermagem de Coimbra, Portugal)

Introduction : The progressive aging of the population in contemporary societies leads to the necessary adjustment to the responses of health care services. The project "The Oldest Old: Coimbra aging study" (PTDC/CS-SOC/114895/2009) assess an elderly population enrolled in Health Centers of Coimbra-Portugal. The QAFMI/OARS (Questionario de Avaliacao Funcional Multidimensional para Idosos/Older Americans Resources and Services) is recognized as the first elderly multidimensional assessment instrument. Method : Objectives: Assess the use and need of health services and social support by the elderly, related with their functional status in five areas (physical health, mental health, activities of daily living, social and economic resources). Methodology: Quantitative methodology using the QAFMI/OARS. The sample consisted of individuals aged 75, or more, randomly selected, to achieve 10% of the population. Results : Preliminary results showed that there is a decline in population over the different age groups, most evident in males. In the areas of the physical health, activities of daily living and economic resources there are significant differences between age groups. In the area of mental health, there is a significant difference classification between gender, with a tendentiously lower scores in women. In the area of social resources, there is a significant difference classification between gender and age group. Conclusion : All the work developed with OARS lead us to consider this instrument very useful to define the functional status of the elders in specific evaluation areas and needs, becoming right to the planning of older care services. Keywords : assessment, community-dwelling, functional status

PP25 S-008

THE MUSICAL EFFECTS ON THE SPIRITUAL HEALTH IN

THE SOUTHERN TAIWAN ELDERLY

Su-Feng TSENG¹, Yong-Huei YANG², Pai-Lin LEE³, Chung-Chieh LEE⁴, Jia-Yi ZOU⁴, Cherng-En JIANG⁴, Yi-Hsin HO⁴ (1. Department of Senior Citizen Service Management, Chia-Nan University, Taiwan; 2. Department of Hospital and Health Care Administration, Chia-Nan University, Taiwan; 3. Department of Educational Psychology and Counseling, National Pintung University of Education, Taiwan; 4. Department of Senior Citizen Service and Management, Chia-Nan University, Taiwan)

Introduction : Although it is known that music can comfort people's mind, what we know so far about the effect of music on our spiritual level is limited. The purpose of the study focused on the elder's spiritual health, aiming at exploring the influence of music on the elder's lives and spiritual health. **Method :** The subjects of the study were people over 50 years old in southern Taiwan. Moreover, the qualitative interview was conducted as the instrument to collect data. The researcher used the scale to measure the participants' spiritual health, life meaning, and sense of self-esteem. Besides, the samples of the study. **Results :** The average age of the participants in this study was 65.2. Furthermore, 68.3 % of the participants were the females, and 37 % of the participants reached the educational level of high school degree. Besides, the participants averagely contact music 2 or 3 times a week (42.0%), and 30 minutes each time (39.0%). The research results stated that the more times people contact music, the higher spiritual health they would have. **Conclusion :** The research findings demonstrated that music can comfort and ease the elder's mind. Therefore, we should enhance the music activities in the elder's communities in order to improve their quality of lives. **Keywords :** music, spiritual health, aging

PP25 S-009

EXPECTATIONS FOR END OF LIFE: PERSPECTIVES OF OLDER ADULTS IN JAPAN

Sumie IKEZAKI¹, Shigeko IZUMI², Hiroko NAGAE³, Chihoko SAKURAI³, Mariko MASUJIMA⁴, Mariko TANIMOTO⁵ (1. Health Science, Graduate School of Nursing, Chiba University, Japan; 2. School of Nursing, Oregon Health & Science University, USA; 3. End of Life Care in Nursing, Graduate School of Nursing, Chiba University, Japan; 4. Adult Nursing, Graduate School of Nursing, Chiba University, Japan; 5. Gerontological Nursing, Graduate School of Nursing, Chiba University, Japan)

Introduction : The number of older adult population (>75 years old) is growing rapidly in Japan. Although some of them may stay relatively healthy, they are expected to face physical and/or cognitive function decline within next 10 years as they enter end-of-life phase of their lives. In order to prepare and support them to have quality end of life, it is critical to understand their values, needs, and expectations for their end of life. The purpose of this study was to describe older adults' and their family caregivers' perspectives about their end of life. **Method :** Nine older adults (mean age=88.8: male=5) who lived in nursing homes or homes and 5 family caregivers were interviewed. Although some older adult participants had communication difficulty due to hearing problems, they did not have cognitive impairment limiting the conversation with the interviewer. Qualitative content analysis was conducted. IRB approval was obtained from researchers' institution. **Results :** While both older adults and their families stated that they had lived long enough, none of them acknowledged the end of their life. None had clear or concrete advance care planning about their end-of-life care. Because they have been relatively healthy and did not have life-threatening illness experiences, they assumed that the older adult's life would continue as it is, and they could not imagine

how the decline towards death could happen. **Conclusion :** Further studies are necessary to explore their needs and care to assist the older adults to be prepared for their end of life. **Keywords :** frail older adults, end-of-life care, advance care planning

PP25 S-010

RELATIONSHIP BETWEEN SUBJECTIVE HEARING AND QOL IN INDEPENDENT ELDERLY

Tomoko KOBAYASHI¹, Norikazu KOBAYASHI² (1. Department of Speech, Language and Hearing Therapy Faculty of Health Sciences, Mejiro University, Japan; 2. Graduate School of Human Health Sciences, Tokyo Metropolitan University, Japan)

Introduction : Similar to the deterioration of physical functions, deterioration of hearing caused by aging can be a factor in reducing the quality of life (QOL) of the elderly. While audiometry is generally used for examining hearing state, we consider that self-consciousness of hearing by a subject, that is "subjective hearing," is also important in the relationship between hearing state and QOL, which is subjective to the subject. In the present study, we conducted audiometry for elderly living independently and investigated the state of subjective hearing in their ordinary lives, their health-related QOL, and interest in activities. **Method :** The subjects were 50 elderly living in Saitama Prefecture (31 men and 19 women; mean age, 69.4 ± 4.8 years) . We used standard pure tone audiometry (air conduction only) and questionnaires to study their subjective hearing, interests, and other parameters. **Results :** Average hearing level of the ears of the 50 subjects with better hearing was 3-35 dB. In addition, average total score of subjective hearing was 77.3. SF-36 showed results of 56.1 for vitality, and 49.7 for social role functioning, which are near the average levels for the Japanese. In the interests and concerns checklist, the average number of items a subject was interested in was 62.4. **Conclusion :** Since it was only subjective hearing and SF-36 that showed significant interactive correlation, subjective hearing rather than the audiometry-determined hearing level of the subjects in the present study appears to influence their QOL when we consider the relationship between their hearing and QOL. **Keywords :** independent elderly, subjective hearing, quality of life

PP25 S-011

THE EFFECTS OF THE FEEDING-SWALLOWING TRAINING PROGRAM OF CHOPPED UP FRENCH STYLE MEALS FOR JAPANESE ELDERLY SUFFERING FROM DYSPHAGIA

Yasuyo TANAKA¹, Mizue SUZUKI² (1. CEO of Nursing Home Kinoto, Nursing Home Kinoto, Japan; 2. Faculty of Nursing, Hamamatsu University School of Medicine, Japan)

Introduction : The purpose of this study is to clarify the effects of the Feeding- Swallowing Skills Training Program of chopped up French style meals. **Method :** Ten elderly patients with chronic dysphagia due to bulbar paralysis or pseudobulbar paralysis received the Feeding-Swallowing Skills Training Program of chopped up French style meals gradually for 16 weeks. **Results :** Evaluations were conducted every two weeks and at the end of the 16th week. According to results, an increased proportion of chopped food could induce better mastication, which could also help decreasing food boluses within the oral cavity were found. The average length of swallowing reflex response was shortened. The numbers of aspiration was decreased and the amount of food consumption was also increased. The average weight gain and BMI increased. Four out of six patients who had gastrostomy or esophagostomy tube were removed their tube. Two elderly patients started to eat solid food; however, they didn't develop aspiration

pneumonia. In the Barthel Index, scores were significantly improved. Conclusion : Based on the results described above, the chopped up French style meal can be used as a reasonable method to improve feeding and swallowing skills, since it can induce physiological activities such as improved masticatory function and salivary secretion, which can also help in forming and transferring a food bolus. These functions also help avoid aspiration. Ability to use limbs also improved during the recovery process of feeding behaviors. It is suggested that mastering the feeding behavior could also improve other functions as well. Keywords : chronic dysphagia, feeding-swallowing skills, Chopped up French style meals

PP25 S-012

THE RELATIONSHIP BETWEEN LIFE SATISFACTION AND LEVELS OF SOCIAL FUNCTIONING IN ELDERLY

Makbule SENYURT, Huriye GUN, Meral DEMIRALP (*School of Nursing, Gulhane Military Medical Academy, Turkey*)

Introduction : This descriptive study aims to determine the relationship between life satisfaction and levels of social functioning in elderly. Method : The sample of the study is consisted of 115 individuals who lives in a district of Aydin between January-March 2012 and who are volunteer to participate the study. The data were obtained from Sociodemographic Data Collection Form, Social Functioning Scale (SFS) and the Life Satisfaction Scale (LSS). Results : 57.4% of the participants were women and 52.2% of them were between the ages of 65-70. The mean LS total score of men were higher than women ($X=10.1 \pm 3.7$). There was a statistically significant relationship between total score of Life Satisfaction Scale and the subscales of Social Functioning. A statistically significant difference were found between age and interpersonal functioning, independence-competence, independence-performance subscales of SFS ($X_{\text{age}} = 11.584$, $p = 0.003$, $X_{\text{independence-competence}} = 14.988$, $p = 0.001$ and $X_{\text{independence-performance}} = 20.190$, $p = 0.00$ respectively). Unlike the male, life satisfaction scores were increased in females if leisure time activities were increased ($z=3.445$, $p=0.001$). There was a positive correlation between interpersonal functionality and life satisfaction score ($r=0.188$, $p=0.045$) in elderly. Interpersonal functioning and business-professional scores were lower in the individuals who were using the auxiliary devices (respectively $X_{\text{interpersonal}}=12.405$, $p=0.03$ and $X_{\text{business-professional}}=25.674$, $p=0.00$). The individuals who live alone were more socially withdrawn than the others ($X_{\text{alone}} = 41.289$, $p = 0.00$). Conclusion : Life satisfaction and social functioning in elderly were affected from each other in high levels. It is important to do further in-depth researches about this subject. Keywords : Elderly, Social function, Life satisfaction

PP25 S-013

PHYSICAL AND FUNCTIONAL PROFILE OF INSTITUTIONALIZED ELDERLY WOMEN FROM A BRAZILIAN NURSING HOME

Jhonatam BERNARDI¹, Indaiara FELISBINO¹, Eduardo L. WAMSER², Elisângela V. RODRIGUES², Leticia A. Alves DA SILVA³, Jessica Alves DE PAULA⁴, Darla SILVERIO⁴, Silvia VALDERRAMAS⁵, Maria Eliana Madalozzo SCHIEFERDECKER⁴, Anna Silveira GOMES⁶ (*1. Physiotherapy, Federal University of Parana, Brazil; 2. Physical Education, Federal University of Parana, Brazil; 3. Physiotherapy, Faculdade Dom Bosco, Brazil; 4. Nutrition, Federal University of Parana, Brazil; 5. Physiotherapy, Faculdade Dom Bosco e Faculdade Evangelica do Parana, Brazil; 6. Physiotherapy and Physical Education, Universidade Federal do Parana, Brazil*)

Introduction : It has been described that most institutionalized elderly

people have a low level of physical activity however it is not well known which physical and functional aspects are impaired. Aim: Evaluate the physical and functional profile of institutionalized elderly women from a Brazilian nursing home. Method : It was assessed the following variables from 7 elderly women: Age; Time living in the nursing home (TLNH); Cognitive status (MiniMental State Examination-MMSE); body mass (Kg); height (m); Body mass index (BMI); dominant calfcircumference (cm); Human Activity Profile (HAP); Lequesne's Algofunctional Questionnaire for Knee and hip; functional mobility (Timed "Up & Go"); Falls Efficacy Scale; International (FES-I) to evaluate the fear of falling; balance and risk of falls (Berg Balance Scale-BBS) and walking speed (WS-10m). Results: Elderly women ($n=7$, 71 ± 14 years old); TLNH 22 ± 21 years; MMSE 19 ± 5 ; height 1.51 ± 0.11 m; body mass 74 ± 27 Kg; BMI 32 ± 11 ; calfcircumference (35 ± 8 cm); HAP 47 ± 18 ; Knee's Lequesne 6 ± 6 ; Hip's Lequesne 3 ± 3 ; TUG 25 ± 27 s; FES-I 27 ± 10 ; BBS 42 ± 9 ; WS 0.73 ± 0.27 m/s. Conclusion : The mental status of the institutionalized elderly women was preserved; the BMI were overweight; physical level of activity was inactive and moderate functional level of impairment for knee and lower for hip. Therefore, instead they were not sarcopenic it was found low balance and functional mobility, risk for falls, and fear of falling. Keywords : Health of Institutionalized Elderly; Physical performance; Homes for the aged.

PP25 S-014

THE EXTENT OF DEMENTIA AMONG COMMUNITY BASED OLDER ADULTS

Nutthita PETCHPRAPAI (*Institute of Nursing, Suranaree University of Technology, Thailand*)

Introduction : Dementia is one of the most common diseases among older adults that lead them to depend on health care professions and caregivers. Early detection of brain abilities is a better to screen and plan for proper management. Method : This study was aimed to explore the extent of brain abilities among older adults who lived in community setting. The Mini Mental State Examination (MMSE) Thai version was used. Data were collected by face to face interview at the subjects' home. Results : Eighty-one older adults were interviewed, most were female (53.1%), not working (55.6%), underwent compulsory school (63%) and lived without their spouses (53.1%). Only 2.5% reported a family history of dementia, some reported a history of head injury (11.1%), smoking (30.8%) and drinking alcohol (7.3%). Data revealed that Mini Mental State Examination (MMSE) scores were 7-30, with the average of 21.09 (SD=5.67) and 17 were at risk of dementia. The average scores were significantly lower among the subjects who never attend school (mean = 16.55, SD=5.64). Proportion of Risk of dementia were higher among subjects who never attend school (5:15) compare to 8:44 among those who completed compulsory school. Conclusion : It is recommended that conducting dementia screening by using MMSE should be trained to elderly caregivers in order to monitor risk of dementia every few months. Keywords : dementia; MMSE

PP25 S-015

NATIONAL STUDY OF PERFORMANCE-BASED ASSESSMENTS AND PERSONAL CARE IN JAPANESE OLDER PEOPLE

Hiroyuki SHIMADA¹, Takao SUZUKI², Megumi SUZUKAWA³, Hyuma MAKIZAKO¹, Takehiko DOI¹, Daisuke YOSHIDA¹, Kota TSUTSUMIMOTO¹, Yuya ANAN¹, Kazuki UEMURA¹, Tadashi ITO¹, Sangyoon LEE⁴, Hyuntae PARK⁴ (*1. Section for Health Promotion, National Center for Geriatrics and Gerontology, Japan; 2. Research Institute, National Center for Geriatrics and Gerontology,*

Japan; 3. Faculty of Health Sciences, Department of Rehabilitation, Course of Physical Therapy, University of Human Arts and Science, Japan; 4. Section for Physical Functioning Activation, National Center for Geriatrics and Gerontology, Japan)

Introduction : Measures of physical performance may identify older persons with a preclinical stage of disability. However, which performance test and cut-point are the most useful to screen for risk of functional dependence in Japanese older people is not clear. The purpose of this study was to identify appropriate clinical tests for determining the demand for personal care in Japanese older people. **Method :** Ten thousand three hundred fifty-one individuals aged 65 years or older (6,791 with and 3,560 without personal care) participated the study. Physical performance tests included grip strength, chair stand test, walking speed at a comfortable pace, and timed up-and-go test. **Results :** Individuals who had received personal care showed significantly poorer performance than those without personal care on all physical performance tests. Gait speed had the greatest utility of the physical performance tests to determine the demand for personal care (AUC: men; 0.92, women; 0.94, sensitivity: men; 86, women; 90, specificity: men; 85, women; 85). After adjustments for age, sex, cognitive impairment, and other physical tests, all physical performance tests were individually associated with the demand for personal care. Slow gait speed (<1.0 m/s) was more strongly correlated with the demand for personal care than other performance measures (odds ratio 5.9, 95% CI 5.0 to 6.9). **Conclusion:** Clinical tests of physical performance were associated with the demand for personal care in older people. Preventive strategies to maintain physical independence may be needed in older adults who show gait speed slower than 1.0 m/s. Further research is necessary to confirm these preliminary results. **Keywords :** Physical test, Activities of daily living, Gait speed

PP25 S-016
CONTEMPORARY EPIDEMIOLOGY OF GOUT AND HYPERURICEMIA IN COMMUNITY ELDERLY IN BEIJING

Xiaolan LU (Department of Geriatrics, Beijing Institute of Geriatrics, Xuanwu Hospital of Capital Medical University, China)

Introduction : To evaluate the prevalence and risk factors of gout and hyperuricemia in an elderly community cohort in Beijing. **Method :** A total of 10,039 individuals aged 50 years or older participated in the study, based on the Beijing Longitudinal Study on Aging II (BLSA II) Cohort in 2009. All participants were asked for a Gout Assessment Questionnaire under the guidelines of the American College of Rheumatology (ACR). The prevalence of gout and hyperuricemia were evaluated. The potential risk factors for gout and hyperuricemia were analyzed by logistic regression. **Results :** In our BLSA II Cohort, the prevalence of gout and hyperuricemia were 2.8% and 18.1%, respectively. The traditional risk factors (age and body mass index, BMI) were significantly associated with the risk of both gout and hyperuricemia (age: OR 1.4, 95%CI 1.3 - 1.6 for hyperuricemia; OR 1.6, 95%CI 1.3 - 2.0 for gout; BMI: OR 1.6, 95%CI 1.4 - 1.9 for hyperuricemia; OR 2.1, 95%CI 1.5 - 2.8 for gout). The family history was strongly associated with an increased risk of gout (OR 6.4, 95%CI 3.5 - 11.6). In addition, the metabolic syndrome was also found to be a high risk factor for both hyperuricemia and gout (OR 2.1, 95%CI 1.9 - 2.4 for hyperuricemia; OR 2.5, 95%CI 2.0 - 3.3 for gout). **Conclusion :** Our study showed that the prevalence of both gout and hyperuricemia in Beijing remains substantial. The age, BMI, family history and metabolic syndrome were strong risk factors for gout and hyperuricemia in China. **Keywords :** gout, hyperuricemia, epidemiology

PP25 S-017
THE RELATION BETWEEN PERCEIVED QUALITY OF END OF LIFE CARE AND REFLECTIONS ON THE CARE EXPERIENCES AMONG NURSING HOME STAFF MEMBERS

Chiho SHIMADA¹, Fuki HORIUCHI², Ryo HIRAYAMA¹, Ryutaro TAKAHASHI¹ (1. Human Care Research Team, Tokyo Metropolitan Institute of Gerontology, Japan; 2. Department of Nursing, Saku University, Japan)

Introduction : Our aim in this study is to examine whether and how nursing home (NH) staff members' perceptions of the quality of their end of life (EOL) care might be related to their reflections on the care experiences. **Method :** Respondents were care workers (n=286) and nurses (n=96) in 11 NHs who engaged in EOL care. All respondents answered a self-administered questionnaire within one month after the residents died. Each respondent rated the quality of the care provided in their workplaces. Regarding reflections, respondents also answered (a) how much the residents' family members were seen as satisfied with EOL care provided in the NHs; (b) how much they considered the residents' preferences in providing EOL care (i.e., level of respectfulness); (c) perceived facial expression of the residents; and (d) their adherence to the individual care plan. **Results :** Reflected experiences that were significantly related to perceived quality of the EOL care involved perceived family satisfaction, facial expression of residents in the end of their lives, level of respectfulness, and adherence to the care plan. Such perceptions, however, did not differ significantly either by whether residents used tube feeding before death or by respondents' job title (nurse or care worker). **Conclusion :** The results suggest that NH staff members evaluate the quality of their EOL care in reflecting on their experiences. Further research is necessary to clarify whether these results can be generalized. **Keywords :** end of life care, nursing home, reflection

PP25 S-018
INITIATING ADVANCE CARE PLANNING WITH ELDERLY BY PHYSICIAN IN ASIAN CULTURE

Hui-Wen CHANG¹, Chia-Chen LU², Yi-Hown LAI¹, Yi-Jun CHEN¹ (1. Family Medicine, Changhua Christian Hospital Erhlin Branch, Taiwan; 2. Changhua Christian Hospital Erhlin Branch, Family Medicine, Taiwan)

Introduction : Advance care planning (ACP) is a process which involves the patient, in consultation with physician, families and important others. Unlike Western cultures, Asians ask their parents directly about end-of-life (EOL) care treatment preferences would be considered un-filial and disrespectful. The role of physician in initiating the conversation about EOL care with older adults is recommended. **Method :** A cross-sectional design was used from September 2010 through September 2011. Sampling was from outpatients of Family Medicine department at Changhua Christian Hospital a large teaching hospital in Taiwan. If the participant who was incompetent, cognitive impairment or unable to communicate was excluded. The questionnaire was designed to delineate participants' preferences, attitudes toward ACP, fear of death, preferences for information disclosure, things being worried after the death. **Results :** 54.2% of elder participants had willingness to prepare formal ACP. The results of the study indicate that: 1) aged patient's attitude toward refuse ACP preparing had much fear of death; 2) awareness of poor prognosis making elderly patient's attitude toward refuse life-sustaining treatment; 3) preferences for information disclosure by professional staff; 4) preference toward refusing life-sustaining treatments had less concern about how others will deal with his remains. **Conclusion :** From our survey, the elder want to discuss their

future care with physician. Some elderly were comfortable with such discussions but they preferred to leave such decisions to their families. For those who wanted to hold discussing and refused formal ACP preparing, wait for another appropriate timing and enough mental support should be arranged. Keywords : Advance care planning

PP25 S-019

DIFFERENT INVOLVEMENT SITUATIONS AT THE END OF LIFE IN LONG-TERM CARE

Jean Correll MUNN, Hyejin KIM (*College of Social Work, Florida State University, USA*)

Introduction : Although one fourth of the deaths of U.S. older adults occur in long-term care (LTC) settings, research regarding end of life in LTC is rare. In particular, examining the experiences of social workers, who are generally tasked with dealing with end of life issues, is needed. Using a comprehensive survey, we examined the involvement of social workers and administrators with residents and their families at the end of life in LTC. Method : We mailed the survey package (study information, survey instrument, and consent form) to 139 potential LTC participants (59 social workers and 80 administrators) in four U.S. states. The survey instrument addressed several areas of involvement (e.g., situations, initiation, barriers, training) and demographic information. Results : Respondents (n = 23[15 social workers; 8 administrators]) were largely white (87%) and female (65.2%). Almost all respondents (over 90%) reported they were involved with residents at the end of life in advocating for residents' care preferences, arranging meetings regarding end-of-life issues, assessing a residents' emotional well-being, providing emotional support to residents, referring residents to hospice, and attending funerals for dead residents. However, more than half of respondents reported that they were never involved in helping residents plan funerals, holding support groups, and discussing with residents about what to expect at the end of life. Conclusion : While limited by a small sample size, this study contributes to knowledge regarding current social work roles in end-of-life care in LTC communities to guide future research, especially various situations of both high and low involvement at the end of life. Keywords : involvement at the end of life, long-term care, social work involvement

PP25 S-020

FAMILY CAREGIVERS' EXPERIENCES WITH FRAIL OLDER ADULTS LIVING AND DYING IN NURSING HOMES

Katsumi NASU¹, Hiroki FUKAHORI², Megumi SHIMO³ (*1. Institute of Biomedical & Health Sciences, Hiroshima University, Japan; 2. Graduate School of Health Care Sciences, Tokyo Medical and Dental University, Japan; 3. Formerly Nursing Department, The Valley Private Hospital, Australia*)

Introduction : In Japan, the number of elderly people dying in nursing homes is increasing. Nurses and other health care professionals must support the caregiving family members of dying residents for providing quality end-of-life care. However, little is known about family caregivers coping with bereavement. This study aimed to explore family caregivers' experiences with frail older adults living and dying in nursing homes in Japan. Method : Two to 12 months after the death of elderly residents in two nursing homes, semi-structured interviews with caregiving family members were conducted. These interviews were audiotaped, transcribed, and qualitatively analyzed using the phenomenological approach. This study was approved by the Ethical Committee for Epidemiology of Hiroshima University. Results: The participants included 15 family caregivers of 11 elderly nursing home residents. Seven themes that characterized family

caregivers' experiences with frail older adults living and dying in nursing homes were identified: "Feeling of bonding with the resident," "looking for care that can be self-provided," "getting along with the staff and other residents," "decision-making regarding the resident's medical procedures," "selecting the place of death for the loved one," "staying with the dying resident," and "giving significance to the resident's death and care.". Conclusion : Caregiving by family members to frail older adults living and dying in nursing homes is a process by, which a feeling of bonding with the resident enhances caregivers' efforts in providing quality end-of-life to the loved one. In addition, the process includes caregivers' reflection of their caregiving experiences after the loved one's death. The caregivers gave significance to the resident's death and care through this process. Keywords : end-of-life care, nursing home, family caregiver

PP25 S-021

COMMUNITY END-OF-LIFE CARE AMONG CHINESE OLDER ADULTS LIVING IN NURSING HOMES

Leung-Wing CHU (*Department of Medicine, Queen Mary Hospital, The University of Hong Kong, Hong Kong*)

Introduction : Chinese older people living in nursing homes are commonly admitted to the hospital during their end-of-life period. This study investigated the proportion of nursing home residents who would accept end of life care in nursing homes rather than hospitals and the trade off that they are willing to make. Method : 1600 residents from nursing homes were recruited and interviewed face-to-face. Four hypothetical questions were asked to explore preferences for end-of-life care. Using a discrete choice approach, specific questions explored acceptable trade-offs between three attributes: availability of doctors on site, attitude of the care staff and additional cost of care per month. Results : Around 30% of respondents prefer end-of-life care in hospital, while 35% of respondents prefer the nursing home and 23% of them would consider it in a better nursing home. A good attitude of staff was the most important attribute of the care site. Older adults were willing to pay an extra cost of HK\$38 per month for more coverage of doctor's time and HK\$376 for a better attitude of staff in the nursing home. Older adults who were on Comprehensive Social Security Allowance Scheme valued the cost attribute more highly, as expected, validating the hypothesis that these residents would be less willing to pay an additional cost for end-of-life care. Conclusion : Our findings indicate that approximately one-third of the nursing home residents would accept end-of-life care provided in their nursing homes. The most important attribute was the attitude of care staff. Keywords : end-of-life care, nursing homes, preference

PP25 S-022

DEVELOPMENT OF EDUCATIONAL PROGRAMS FOR THE NURSING STAFF TO SUPPORT END-OF-LIFE CARE IN NURSING HOMES

Tayo NAGAHATA, Chitose MATSUDA, Kae YAMAUCHI, Kyoko EGUCHI, Kayo YAMAJI (*School of Nursing, Osaka Prefecture University, Japan*)

Introduction : A surge in end-of-life care in nursing homes is expected in Japan along with the super aging society, and it is urgent to ensure the care quality of such facilities. This study is intended to develop an education program through creating a list organizing end-of-life care practices in nursing homes. Method : We prepared a list of end-of-life care practices based on group and individual interviews with the nursing leaders of nursing homes, validated it with a mail survey, and created a 'Nursing Practice Review Sheet.' A training program using this sheet was developed and implemented and its efficacy and

adequacy was evaluated by a survey to 18 nursing staffs participating from 16 facilities. Each survey and training program was implemented under the permission of the Research Ethics Committee of our university. Results : The training program consisted of three workshops and related tasks. The tasks required participants to extract problems in end-of-life care using the Nursing Practice Review Sheet and tackle them with their colleagues. The participants exchanged information and provided peer support to complete the tasks within their group. Fourteen of the 16 participant facilities worked on the tasks. The questionnaire showed that all participants received useful information through the goal-oriented program and that 80% or more of them found the program was useful for their work. Conclusion : This program was practical because effective activities for each facility were identified through the tasks and also because useful communication was established among the facilities. Keywords : end-of-life care, nursing home, educational program

PP25 S-023

OCCUPATIONAL STRESS MANAGEMENT OF A VISIT NURSE PRACTICING AT-HOME END-OF-LIFE CARE

Tomoko MIZUMA¹, Masami KOBAYASHI², Akemi KARIYA³
(1. Faculty of Health Science, Prefectural University of Hiroshima, Japan; 2. Nursing Department, Kurashiki Municipal Hospital, Japan; 3. Faculty of Health Science, Prefectural University of Hiroshima, Japan)

Introduction : For visit nurses engaged in at-home end-of-life care, it was performed an interview investigation using the semiconstitutive questionnaire. Sense of accomplishment, sense of fulfilment and stress level in the temporary nursing at home was analyzed, resulting in stress reduction. Method : The qualitative contents were analyzed with supervisors and researchers, regarding the conceptualized and analysis performance using the stress coping theory. Results : By the intervention of the nurse the case treatment medical was solved, providing a sense of accomplishment and a sense of fulfilment for client and family. The nurse was able to improve the nursing technique and mental growth. On the other hand, in the terminal care the nurse found a dilemma and feeling of ineffectualness. The content of the stress between the doctor and nurse was hard gap operation. In particular way, there were not constructive hesitation of the decision, the client and a family and also the relationship of mutual trust cooperation with other types of job. Conclusion : We suggest four stress coping measurement: 1) knowledge and nursing skill development (Training and clinical practice); 2) Bond human relation; 3) Development medical knowledge and 4)Health insurance system reform (Grief care). Keywords : end-of-life care, visit nurses, stress

PP25 S-024

CAUSES OF POST STROKE FALLS ALONG THE CARE CONTINUUM: IMPLICATIONS FOR IMPROVING PATIENT SAFETY

Mona MADADY¹, Aleksandra ZECEVIC¹, Alan SALMONI¹, Bryan YOUNG², Eileen BRITT³
(1. Faculty of Health Sciences, Western University, Canada; 2. Department of Clinical Neurological Sciences, London Health Sciences Centre, Canada; 3. Stroke Rehabilitation Program, Parkwood Hospital, St. Joseph's Health Care, Canada)

Introduction : According to the World Health Organization 15 million people worldwide and almost a million North Americans suffer a stroke every year. While information about the incidence and risk factors of falling among stroke survivors is available, considerably less is known about the actual causes of falls and the circumstances surrounding these adverse events. The purpose of this project was to

identify systemic causes of falls in stroke survivors as they transition through continuum of care. Method : A total of 30 stroke survivors were followed for six months post stroke as they transitioned from acute care to rehabilitation hospital, and to home or long-term care facility. Their first fall at any stage of the care continuum was investigated using Systemic Falls Investigative Method (SFIM). Comprehensive data were collected through multiple interviews, document reviews, environmental scans, re-creation of events and was entered into the SFIM Database to produce falls reports. The guiding framework in data reduction and analysis was the Swiss Cheese Model of Accident Causation. Summary tables of contributing factors from all falls reports were organized using NVIVO and coded to identify dominant themes and patterns specific for falls of stroke survivors. Results : Results indicate that physical and behavioral characteristics of stroke survivors combine with broader supervisory, organizational and healthcare system influences as contributors to falls. Conclusion : When considering falls prevention programs in post-stroke rehabilitation and community re-integration, it is important to address not only stroke-specific health causes, but also challenge latent system-wide components that affect stroke survivor's safety. Keywords : stroke, falls, patient safety

PP25 S-025

FALLS SCREENING AND ASSESSMENT TOOLS USED IN ACUTE MENTAL HEALTH SETTINGS: AN ANALYSIS OF POLICES IN ENGLAND AND WALES

Venkat NARAYANAN¹, Angela DICKINSON², Charles SIMPSON², Caroline GRIFFITHS¹, Deborah HUMPHREY¹, Christina VICTOR³
(1. Older Adults, Oxford Health NHS Foundation Trust, United Kingdom; 2. Centre for Research in Primary and Community Care, University of Hertfordshire, United Kingdom; 3. School of Health Sciences and Social Care, Brunel University, United Kingdom)

Introduction : There is an urgent need to improve the care of older people at risk of or who experience falls in mental health settings. Falls are the most frequently reported patient safety incident. NICE Guidelines recommends the use of multidisciplinary fall risk assessment during individualised treatment and in prevention care plans for older people at risk of falls (NICE, 2004). This poster outlines work underway to explore the policy guidance issued by NHS Mental Health Trusts in England and Health Boards in Wales. Method: We requested fall policies and other relevant documentation from NHS mental health trusts in England (56) and healthcare boards in Wales (6). Policies are being subjected to a quantitative content analysis to explore guidance given to clinical staff and managers. Results : We obtained falls policies from 42 mental health trusts in England, and 2 from healthcare boards in Wales. 30 policies were publically available on the internet. 1 Trust told us they did not have a fall-prevention strategy. 1 was currently reviewing their policy. Analysis of fall risk assessment tools show variation in the number of risk-variables included. Few Trusts used validated tools such as STRATIFY, FRASE, MORSE, and MHOA, others used customised falls risk assessment tools. Conclusion : A wide variety of screening and assessment tools are in use, however, the most commonly used are those developed by individual Trusts, or which focus solely on the external environment, with no screening/assessment of individual patients. Use of invalidated tools raises questions of reliability and effectiveness. Keywords : Falls policy

PP25 S-026

CORRELATION AMONG TIME UP AND GO TEST (TUG), AGE AND BODY MASS INDEX IN ELDERLY SOUTH OF BRAZIL

Graziela Morgana Silva TAVARES¹, Maria Gabriela Valle GOTTLIEB², Vanusa MANFREDINI³, Fabiane Moreira FARIAS³, Jacqueline Da Costa Escobar PICCOLI³ (1. *Physical Therapy, Federal do Pampa University, Brazil*; 2. *Post - Graduate Biomedical Gerontology, Pontifical Catholic University of Rio Grande do Sul, Brazil*; 3. *core studies and research in aging, Federal of Pampa University, Brazil*)

Introduction : Falling is a major cause of loss of autonomy and functional independence of older people, which directly affects the quality of life of these subjects. Furthermore, studies have suggested that older age and body mass index (BMI) are associated with loss of mobility in elderly. **Objective:** To verify if exists a correlation among the time of displacement in Time up and go test (TUG), age and BMI in the elderly. **Method :** Cross sectional study. We selected 125 elderly people [27 (21,6%) men and 98(78,4%) women]. They answered an evaluation form with identification data, anthropometric and thereupon the TUG test was performed. Data analysis was performed using descriptive statistics, correlation analysis and ANOVA Person. The level of significance was set at $p < 0.05$. **Results :** The mean age was 73.8 ± 6.7 years (minimum 60 years and maximum 88 years. Mean BMI was 28.5 ± 5.9 kg/m² and TUG was 11.8 ± 4.4 seconds. Was found a weak correlation between age and TUG ($r = 0.20$, $p = 0.02$) and BMI and TUG ($r = 0.27$, $p = 0.03$). ANOVA showed that there are significant differences between the mean TUG among older age groups of 60-69 years (10.5 ± 4.5 seconds) and 80-89 years (13.3 ± 3.5), $p = 0.038$. **Conclusion :** age and BMI are correlated with TUG test and that elderly over age 80 years has a longer shift the TUG test. **Keywords :** mobility, body mass index, tug test

PP25 S-027

ASSOCIATION AMONG SEX, MARITAL STATUS, FAT THICKNESS AND FUNCTIONAL DEPENDENCE OF THE ELDERLY IN SOUTHERN BRAZIL

Luciana VELHO¹, Graziela Morgana Silva TAVARES², Rodolfo Herberto SCHNEIDER³, Camila JACONDINO³, Cristiane ALVES¹, Gustavo Heiman SANDRI⁴, Rafael BAPTISTA⁴, Maria Gabriela Valle GOTTLIEB⁵ (1. *College of Biological Sciences, PUCRS, Brazil*; 2. *Physical Therapy, Federal do Pampa University, Brazil*; 3. *Graduate Program in Biomedical Gerontology, IGG - PUCRS, Brazil*; 4. *Faculty of Physical Education and Sport Science, PUCRS, Brazil*; 5. *Graduate Program in Biomedical Gerontology, IGG PUCRS, Brazil*)

Introduction : Increased fat mass in older adults is a finding inherent to the aging process. This increase may cause functional limitations resulting in loss of autonomy and independence, decreased strength and balance increasing the risk of falls and fractures in the elderly. **Objective:** To investigate the association between sociodemographic, functional dependency and fat thickness in the elderly. **Method :** Cross-sectional study with 75 older adults (14 men and 61 women), from the Department of Geriatrics, Hospital Sao Lucas, Brazil. They were randomized in two groups: dependent elderly ($n = 28$) and independent ($n = 47$). Variables investigated were: sociodemographic, activities of daily living (scale Kats), lower limb strength (Sitting-rising test) and fat thickness of triceps brachial, vastus lateralis and medial gastrocnemius muscles (ultrasound). **Results :** The average age of the elderly independent group was 74.04 ± 6.97 and $72.14 \pm$ dependent group was 6.84 ($p = 0.25$). An association between functional dependency and sex was observed ($p = 0.048$). It was also found an association between marital status and autonomy ($p = 0.011$), where 12 (42,9%) were elderly dependents widowed. Significant difference was observed between the average of the fat thickness of

the triceps brachial (dependent: 17.76 ± 7.18 and independent: 14.29 ± 5.30 , $p = 0.03$), vastus lateralis (dependent 17.67 ± 11.50 and 11.01 ± 5.183 independent, $p = 0.03$) and medial gastrocnemius muscles (dependent: 11.21 ± 5.528 and independent: 7.94 ± 2.770 , $p = 0.01$). No significant difference was found between groups with respect to the Sitting-rising test ($p = 0.908$). **Conclusion :** Sex, marital status and fat thickness are associated with loss of functional independence in the elderly. **Keywords :** Aging, autonomy, fat thickness,

PP25 S-028

THE ROLE OF TRUNK MUSCLE PERFORMANCE UNDERLING THE PHYSICAL FUNCTION IN OLDER PEOPLE: A STRUCTURAL EQUATION MODEL

Hikaru IHIRA¹, Atsushi MIZUMOTO¹, Keisuke YASUDA¹, Keitarou MAIKNO¹, Takeshi SASAKI¹, Mika KIMURA², Hyuma MAKIZAKO³, Taketo FURUNA¹ (1. *School of Health Science, Sapporo Medical University, Japan*; 2. *International Life Sciences Institute JAPAN, ILSI, Japan*; 3. *Department of Health and Medical Care, Center for Development of Advanced Medicine for Dementia, National Center for Geriatrics and Gerontology, Japan*)

Introduction : Deterioration of trunk muscle performance is associated with poor physical functions in patients with low back pain. However, the relationships between trunk muscle performance and physical function in community-dwelling older people have not been investigated. The purpose of this study was to determine the interrelationships between muscle strength, balance, gait and trunk muscle performance in older people using structural equation modeling. **Method :** We evaluated data on 106 community-dwelling older people (63 women and 43 men; age: 65 to 85 years; mean age: 75.4 years). We measured trunk muscle strength and pelvic walking test as trunk muscle performance. Trunk muscle strength was measured maximum torque of trunk flexion and extension by using Biodex. In pelvic walking test, we instructed to go forward as fast as possible during 10 seconds, rotating trunk at sitting position with cross arms. We measured the distance of between right lateral malleolus during 10 seconds. The other outcome measures were the physical functions, including performance in the knee extension power, grip power, one-leg standing test, functional reach test, 5m walk test and the timed up-and-go test. **Results :** In a structural equation model, performance in the trunk muscle contributed significantly to balance and gait function, low trunk muscle performance was significantly and directly associated with low balance and gait function in community-dwelling older people. **Conclusion :** The results suggest that trunk-specific strength exercise as well as general function training should be important exercise programs designed to maintain the physical function in community-dwelling Japanese older people. **Keywords :** trunk function, trunk strength, pelvic walking

PP25 S-029

EFFECTS OF A MULTIFACTORIAL FALL PREVENTION PROGRAM ON FALL INCIDENCE AND PHYSICAL FUNCTION IN COMMUNITY-DWELLING ELDERLY WITH RISK OF FALL

Hsuei-Chen LEE¹, Ku-Chou CHANG², Jau-Yih TSAUO³, Sang-I. LIN⁴, Yu-Ching HUANG², Jen-Wen HUNG⁵ (1. *Physical Therapy and Assistive Technology, National Yang-Ming University, Taiwan*; 2. *Division of Cerebrovascular Diseases, Department of Neurology, Kaohsiung Chang Gung Memorial Hospital, Taiwan*; 3. *School and Graduate Institute of Physical Therapy, National Taiwan University, Taiwan*; 4. *Physical Therapy, National Cheng Kung University, Taiwan*; 5. *Rehabilitation Medicine, Kaohsiung Chang Gung Memorial Hospital, Taiwan*)

Introduction : This study aimed to evaluate the effects of a multifactorial fall prevention program on fall incidence and physical function in community-dwelling elders identified with risk of fall. **Method :** This multi-center randomized controlled trial was conducted in Taipei, Tainan, and Kaohsiung of Taiwan from Jan. 2008 to June 2010. Eligible subjects were randomly allocated into intervention group (IG) and control group (CG) stratified by Physiological Profile Assessment (PPA) fall-risk level. IG received a 3-month multifactorial intervention program including 8-week exercise training, health education, home hazards evaluation/ modification, along with medication review and ophthalmology/other specialty consult. CG got health education brochures, referrals and recommendations without direct exercise intervention. Primary outcome was fall incidence within 1-year. Secondary outcomes were PPA battery (overall fall-risk index, vision, muscular strength, reaction time, balance and proprioception), timed up-and-go (TUG), Taiwanese-International Physical Activity Questionnaire, EuroQoL-5D, Geriatric Depression Scale (GDS), and Fall Efficacy Scale at 3 month after randomization. **Results :** There were 616 participants with 76±7 years, including low risk 25.6%, moderate risk 25.6% and marked risk 48.7%. The cumulative 1-year fall incidence was 25.2% in IG and 27.6% in CG (HR=0.90, 95% CI 0.66-1.23). IG improved more favorably than CG on overall PPA fall-risk index, reaction time, postural sway with eyes open, TUG, and GDS, especially for those with marked fall-risk. **Conclusion :** The multifaceted fall prevention program improved functional performance at 3-months for community-dwelling elders with risk of fall. Fall incidence might have been decreased simultaneously in both groups by heightened awareness engendered during assessments, education, referrals, and recommendations. **Keywords :** Accidental falls; Prevention; Elderly

PP25 S-030

VARIATION OF BALANCE AND DISPLACEMENT OF CENTRE OF MASS IN AGED PERSONS WITHOUT DEMENTIA AND WITH MILD AND MODERATE DEMENTIA
Isabela Oliveira AZEVEDO TRINDADE, Gustavo De Azevedo CARVALHO (*Physical Therapy, Universidade Catolica de Brasilia, Brazil*)

Introduction : This research compares the variation of balance and displacement of the centre of mass in groups of aged persons without dementia, with mild dementia and moderate dementia, and the relation with the risk of falls. **Method :** A transversal research was performed in 54 persons of both genders, aged 60-80 years old, divided into those three groups. Such persons were submitted to stabilometry, Performance-Oriented Assessment of Mobility (POMA) test and the Timed Up and Go Test (TUG). **Results :** The results show that relevant differences among the three groups were identified in relation to POMA, with the group that suffers from moderate dementia having the worst results. Relevant differences between the groups of mild dementia and moderate dementia, and the groups of persons without dementia and with moderate dementia, were observed in relation to TUG; however, this test presented no meaningful difference between the groups of persons without dementia and with mild dementia. Likewise, no relevant differences were identified among the three groups in stabilometry, but differences of the displacement course of the pressure centre in male patients were discovered. **Conclusion :** This research suggests that aged persons with dementia, particularly moderate dementia, present more balance constraints than aged persons without dementia, and thus are subject to increased risk of falls. In what concerns gait and mobility, aged persons with mild dementia may have similar results when compared to aged persons without dementia, but the evolution of the disease adversely affects

and deteriorates gait and mobility. **Keywords :** Elderly. Dementia. Balance.

PP25 S-031

LIVING WITH HOME-BASED SENSOR TECHNOLOGY: OLDER ADULTS' PERCEPTIONS

Jane CHUNG¹, Blaine REEDER¹, Amanda LAZAR², Hilaire J. THOMPSON¹, George DEMIRIS¹ (*1. Department of Biobehavioral Nursing and Health Systems, School of Nursing, University of Washington, Seattle, USA; 2. Division of Biomedical and Health Informatics, School of Medicine, University of Washington, Seattle, USA*)

Introduction : Home-based technologies are widely used to help older adults live independently by assisting them in coping with various health issues. However, there still remains a challenge in understanding and facilitating technology acceptance among older adults, which is critical for successful implementation of home-based technologies. We sought to explore older adults' attitudes toward and acceptability of home-based sensor technology during a 6-month deployment. **Method :** Eight participants (ages: 79-86) living in a retirement community were recruited. We installed a sensor system consisting of passive infrared sensors, an Internet gateway and a Web portal in every participant's apartment to assess mobility patterns. Face-to-face interviews were conducted at 3-month and 6-month time points to examine user perceptions related to the sensor technology. Here we report initial findings from the 3-month interviews analyzed using qualitative content analysis. **Results :** Most participants reported few privacy concerns related to obtrusiveness; some participants reported privacy concerns related to sensors in bathroom areas. Participants expressed a willingness to disclose the presence of the sensor technology to visitors and other residents. Older adults in the study did not have any aesthetic concerns regarding the in-home sensors; however, a few had misperceptions of how the technology works. Some participants perceived the sensors as useful as health risk increases. **Conclusion :** Older adults living with in-home sensors reported more positive than negative attitudes about its use. Although the generalizability of this study is limited because a convenience sample was used, this study provides insight into factors that can increase older adults' technology adoption. **Keywords :** Sensor Technology, Technology Acceptance, Obtrusiveness

PP25 S-032

A FALL DETECTOR IN SPECIAL CARE UNIT FOR ALZHEIMER'S PATIENTS

Aurelie LESAGE-LAPOSTOLLE, Nelly WAKSMANN, Cecile PONS-PEYNEAU, Olivier DRUNAT (*Service de Psycho-geriatrie, APHP HUPNVS - Bretonneau, France*)

Introduction : Inpatients of a psycho-geriatric department are exposed to a high risk of falling. The gerontechnology can help reducing this risk. The purpose of the study is to evaluate the experience of a video-surveillance system to detect falls and its integration into a Cognitive-Behavioral Unit (CBU). **Method :** We conducted a 4 months longitudinal observational study collecting all night falls occurring in the CBU whether identified by the video-surveillance system or by other fall reporting systems used in the hospital (risk management software and physician care book). In addition, we interviewed caregivers, patients and their families to assess their experience of the system, its acceptability and its integration into care. **Results :** 29 alerts have been triggered by the video system-surveillance, of which 76% were justified (actual falls or fall risk behaviors). Half of them led to a change in the management of patient care. The probability that an alert

is triggered in case of a fall is 58.3% and the events are not detected by the device in 1 case out of 5. The perceived usefulness (effectiveness and efficiency), the perceived ease of use, and thus the acceptability of the system by caregivers appear to be good. No patient or patient relative said he was embarrassed by the presence of cameras, and a large majority felt secured. Conclusion : The measured efficiency of the system is in line with the effectiveness as perceived by caregivers. This efficiency is good. A rigorous information and training improves the acceptability of this gerontechnology and its integration into care. Keywords : fall, gerontechnology

PP25 S-033

EFFECTS OF BODY MASS INDEX AND MUSCLE STRENGTH ON MOBILITY LIMITATION IN OLDER ADULTS: A ONE-YEAR FOLLOW-UP INVESTIGATION

Songee JUNG¹, Noriko YABUSHITA², Miji KIM³, Satoshi SEINO¹, Miyuki NEMOTO¹, Yosuke OSUKA¹, Yoshiro OKUBO¹, Kiyoji TANAKA² (1. Graduate School of Comprehensive Human Sciences, University of Tsukuba, Japan; 2. Faculty of Health & Sport Sciences, University of Tsukuba, Japan; 3. Research Team for Promoting Independence of the Elderly, Tokyo Metropolitan Geriatric Hospital and Institute of Gerontology, Japan)

Introduction : The aim of this study was to assess the effects of body mass index and muscle strength in older adults on mobility limitation. Method : This Longitudinal study included pooled data of 269 older Japanese women without mobility limitation (ML), 65 to 87 years of age (mean age 72.8 ± 5.3 years). Muscle strength was measured by hand-grip strength (HGS). Main outcome was ML assessed by self-reported data (ability to walk 400 m or climb one flight of stairs). Participants were categorized as overweight (BMI: ≥ 25 kg/m²) with high HGS ≥ 22.5 kg, overweight with low HGS < 22.4 kg, normal weight with high HGS (reference) and normal weight with low HGS. Multivariate logistic regression analysis was performed to determine the combined associations using age, exercise habit and medications as covariates. Results : During the follow-up period, 41 of 269 participants (15.2%) developed ML. In the overweight, only low HGS was associated with a significantly increased risk of ML (odds ratios 5.54, 95% confidence interval, 1.97 to 15.60). The overweight with low HGS showed a higher risk of mobility limitation to a greater extent than overweight with high HGS and normal weight with low HGS. Conclusion : The results suggest that BMI and muscle strength at one time point are more predictive of ML than 1-year changes and that low strength and high BMI are particularly powerful risk factors of ML. Keywords : Key words: mobility limitation, body mass index, muscle strength

PP25 S-034

INFLUENCE OF HOMEBOUND ON PHYSICAL AND COGNITIVE FUNCTIONS LIVING IN A SNOW-FULL AREA IN HOKKAIDO

Takeito FURUNA¹, Atsushi MIZUMOTO¹, Hikaru IHIRA¹, Keisuke YASUDA¹, Keitaro MAKINO¹, Takeshi SASAKI¹, Yoko MIYABE¹, Tomomi AKANUMA², Eri YOKOYAMA², Hiroyuki SHIMADA³, Shigeyuki SAITO⁴, Hirofumi OHNISHI⁵, Seiji YASUMURA⁶, Takao SUZUKI³ (1. Department of Physical Therapy, Sapporo Medical University, Japan; 2. Community General Support Center, Bibai City Office, Japan; 3. Center for Gerontology and Social Science, Research Institute National Center for Geriatrics and Gerontology, Japan; 4. Department of Nursing and 2nd Department of Internal Medicine, Sapporo Medical University, Japan; 5. Public Health and 2nd Department of Internal Medicine, Sapporo Medical University, Japan; 6. Department of Public Health, School of Medicine, Fukushima

Medical University, Japan)

Introduction : To examine an influence of homebound during winter season on the old-old residents living in a snow full area, we designed a new cohort study named 'Population-based and Inspiring Potential Activity for Old-old Inhabitants (PIPAOI)'. The purpose of this study is to introduce the outline of this research project and to report some results of its first wave investigation. Method : Two hundred and seventy-two aged 75 years and over living in Bibai city of Hokkaido pref. were participated in this study. The participants received health-medical examinations included blood test (not report here), physical performance tests, cognitive status tests and social functions in November 2012 (and again will be received the same examinations in February 2013). After above examinations, remarkable parameters as for aging effect were analyzed by correlation analysis. An effect of homebound to some functions was also examined by one-way ANOVA. Results : Aging effect was observed in all functions measured except for total score of WHO-5, GDS, Social Support 6 and TMIG-IC in cognitive-social domain, and the number of falls in physical domain. With regard to homebound, main effects were observed in muscle strength, body sway, walking function, TMIG-IC and GDS. Conclusion : We completed the first wave of new cohort study and reported some results of it. The aging effect of all functions was observed among the old-old participants. A tendency toward low physical functions among homebound-participants was also confirmed. At the IAGG Congress, we will show the results including the second wave. Keywords : function, homebound, winter

PP25 S-035

AN EXPLORATORY STUDY OF CHARACTERISTIC OF PHYSICAL ACTIVITY BY CRITERIA OF GAIT STEPS IN DAY-CARE SERVICE USERS ON THE ELDERLY

Tomonori NOMURA¹, Toshiko FUTAKI² (1. Faculty of Medical Technology, Niigata University of Health and Welfare, Japan; 2. Human Health Sciences, Graduate School of Medicine, Kyoto University, Japan)

Introduction : The aim of this study was to clarify characteristic of physical activity in elderly day-care service users based on the number of gait steps. Method : The subjects were 30 frail elderly (10 in the high gait steps group and 20 in the low gait steps group) who regularly used a day-care service. An accelerometer was used to measure the amount of physical activity, and physical activity, as measured by the number of steps, was compared between the two groups. Results : The high gait steps group was observed to have lower physical activity and fewer steps on days that they were using the day-care service than on non-use days. The low gait steps group showed no significant difference in the amount of physical activity between day-care service use and non-use days; the number of steps on day-care service non-use days was related to fear of falling and the amount of physical activity. Conclusion : Fear of falling affected physical activity in the low gait steps group. These results suggest the need for interventions to change the number of gait steps. Keywords : Day-care service, Gait, Physical activity

PP25 S-036

THE ADDITIONAL VALUE OF THE FALL RISK INDEX AS AN INDICATOR OF SELF-RATED HEALTH FOR COMMUNITY-DWELLING ELDERLY AMONG THREE TOWNS IN JAPAN

Yoriko KASAHARA¹, Yasuko ISHIMOTO¹, Yumi KIMURA¹, Eriko FUKUTOMI², Wenling CHEN³, Hissei IMAI⁴, Taizo WADA¹, Mayumi HIROSAKI⁵, Masayuki ISHINE⁶, Michiko FUJISAWA⁷,

Ryota SAKAMOTO¹, Kiyohito OKUMIYA⁸, Kuniaki OTSUKA⁹, Kozo MATSUBAYASHI¹ (1. Center for Southeast Asian Studies, Kyoto University, Japan; 2. Department of Field Medicine, Graduate School of Public Health, Kyoto University, Japan; 3. Field Medicine, Graduate School of Public Health, Kyoto University, Japan; 4. Field Medicine, School of Medicine, Kyoto University, Japan; 5. Faculty of Health and Well-being, Kansai university, Japan; 6. Field medicine, Yasugi Clinic, Japan; 7. Wildlife Research Center, Kyoto University, Japan; 8. Field medicine, Research Institute for Humanity and Nature, Japan; 9. Edical Center East, Tokyo Women's Medical University, Japan)

Introduction : Falling in elderly people effect to decrease their quality of life (QOL). We investigate the relationship with Fall Risk Index (FRI) and Self-Rated Health (SRH) in community-dwelling elderly. **Method :** The study population consisted of 4107 people aged 65 and older (men=1575, women=2350, mean age 75.5±6.9) living in Urausu, Oodai, Tosa town at community-setting. They were screened by the self-reported questionnaire contained FRI-21, SRH, GDS, life styles, and medical conditions in 2006. The FRI-21 was validated by the Working Group for Fall Prevention in the Japanese Ministry of Health, Welfare and Labor to early detect of elderly at high risk of falling in 2005. It consists of 21 questionnaire-based items on a yes/no basis (0-21). SRH was rated on 100-mm visual analogue scale. Depression was assessed by the 15-item Geriatric Depression Scale (GDS-15: 0-15). **Results :** Response rates of the eligible population in each town were 79%, 90%, and 83%. Logistic regression model showed the factors associated with low SRH were scores of FRI-21, prior falls within a year, scores of GDS-15, usage of sleeping pill, osteoarthritis, stroke and cancer. Multiple logistic regression model showed the low SRH was significantly associated with FRI-21 in each town (Urausu: OR=3.00, 95%CI=1.96-4.58, Oodai: OR=3.24, 95%CI=2.50-4.21, Tosa: OR=2.56, 95%CI=1.86-3.52). **Conclusion :** The FRI-21 has significant correlation between SRH. We could use this index not only for the screening of fall risk, but also for perceiving SRH among community-dwelling elderly. **Keywords :** fall, self-rated health, community-dwelling elderly

PP25 S-037

OBJECTIVELY MEASURED PHYSICAL ACTIVITY IS ASSOCIATED WITH MULTIPLE FALLS IN OLDER ADULTS WITHOUT MUSCULOSKELETAL AMBULATION DISORDER SYMPTOM COMPLEX

Yosuke OSUKA¹, Yoshiro OKUBO¹, Noriko YABUSHITA¹, Mi-Ji KIM², Satoshi SEINO¹, Miyuki NEMOTO¹, Songee JUNG¹, Naoya OKI¹, Rafael FIGUEROA¹, Kiyoji TANAKA¹ (1. Graduate School of Comprehensive Human Sciences, University of Tsukuba, Japan; 2. The Research Team for Promotion Independence of the Elderly, Tokyo Metropolitan Geriatric Hospital and Institute of Gerontology, Japan)

Introduction : While daily moderate- to vigorous-intensity physical activity (MVPA) such as brisk walking prevents falls, over-commitment to MVPA may increase prevalence of falls in older adults. This discrepancy may stem from musculoskeletal ambulation disorder symptom complex (MADS). The purpose of this study was to identify the association between objectively measured physical activity and multiple falls in older adults with or without MADS. **Method :** A cross-sectional analysis was conducted on data from 703 older Japanese adult (72.6 ± 6.0 years: 170 male, 533 female). MVPA was assessed by using a uniaxial accelerometer and divided into high-MVPA (≥ 150 min/week) and low-MVPA (< 150 min/week). MADS was defined as participants who could not perform one leg stance more than 15.0 sec. Chi-square test and logistic regression analysis was

performed to identify the association between MVPA and multiple falls with or without MADS. **Results :** Prevalence of multiple falls was significantly lower in high-MVPA (2.6%) than low-MVPA (8.5%) for the group of non-MADS (P < 0.05), but it was not significantly lower in high-MVPA (6.7%) than low-MVPA (16.6%) for the group of MADS (P = 0.27). Logistic regression analysis showed that MVPA was significantly associated with fewer falls (odds ratio (OR): 0.32, 95% confidence interval (CI): 0.12-0.85) for the group of non-MADS, but not significantly associated with fewer falls (OR: 0.42, 95%CI: 0.09-1.88) for the group of MADS after adjusted for age and sex. **Conclusion :** Moderate- to vigorous-intensity physical activity seems to have beneficial effect for prevention of multiple falls only in older adults who have stable-balance ability. **Keywords :** multiple falls, objectively measured physical activity, musculoskeletal ambulation disorder symptom

PP25 S-038

FALLS AND SOME PSYCHO-SOCIAL EFFECTS

Zaida Aguiar Sa AZEREDO, Beatriz Azeredo TOMAZ (UNIFAI, Portugal)

Introduction : About 30% of elderly people fall at least once a year and about 15% twice or more times per years . The consequences are common and some are very several, but while the physical consequences are easily identify, the psycho-social impact is less known and less reported by the elderly. **Method :** We studied 45 persons who attend a family doctor by several reasons , but they refer a fall in the last 3 months. We inquired them about their feelings in moment they fall and about the future impact For the interview we wrote some guidelines We analyzed the answers and we divided into categories. **Results :** The majority was elderly people (93,3%) and female (82,2%). The eldest had 90 years old Most of them fall on the street. The impact was divided into 4 categories: Physical, psychological, social and spiritual (decrease of self-empowerment. Fear was one of the main feelings (more frequent than physical pain). Others: shame, loneliness, insecurity. **Conclusion :** Sometimes the physical pain is not the most important event on falling. The shame to fall and how or when they can't stand up together with the feeling of loneliness can develop feelings of fear to the future. **Keywords :** falls, elderly, psycho-social effects

PP25 S-039

“AGING IN PLACE” HAS A POSITIVE EFFECT ON HOUSEBOUND STATUS IN WELL-FUNCTIONING ELDERLY

Akie KAWAMURA¹, Naoto KAMIDE¹, Yoshitaka SHIBA¹, Noriko YAMASHINA², Chihiro YAMAGATA¹ (1. School of Allied Health Sciences, Kitasato University, Japan; 2. Graduate School of Gerontology, J.F. Oberlin University, Japan)

Introduction : The housebound state is a risk factor for disability. The purpose of this study was to examine factors of housebound status in well-functioning elderly Japanese. **Method :** The subjects of this study were 226 elderly people aged 60 years and older who were living independently in public apartments in Kanagawa, Japan. The investigation was conducted using a self-reported questionnaire. The survey items included basic attributes (age, sex, habitation years, cohabitation status), frequency of going out, habitual exercise, depression, and social factors. Social factors were assessed using the Lubben Social Network Scale (LSNS-6) and a short version of the Multidimensional Scale of Perceived Social Support (MSPSS) (A higher score indicates a larger social network in LSNS-6, and richer social support in MSPSS.) Housebound was defined as leaving the

house once a week or less. Multiple logistic regression analysis was conducted by making into an independent variable items that had a dependent variable and showed a significant difference among the housebound. Results : We found that 29 of the elderly subjects were housebound, while 197 were non-housebound. There was a significant negative relationship between being housebound and years of habitation in the area, and negative tendency between social network and being housebound. Conclusion : Our findings show that, among well-functioning elderly, a short habitation history in the area and a small social networks of friends and family are risk factors for becoming housebound. For preventive care, it is important to both continue living in the area which one is accustomed to, and maintain a social network. Keywords : Housebound, Well-functioning elderly, Preventing care

PP25 S-040
IS WORK COMPLEXITY ASSOCIATED WITH PSYCHOLOGICAL DISTRESS AFTER RETIREMENT AGE?

Alexander DARIN MATSSON, Ingemar Pingo KAREHOLT (ARC, Karolinska Institutet, Sweden)

Introduction : Psychological distress is common among older persons. It is well established that working conditions have effects on people's health that persist after retirement. In this study we examine the effects of work complexity on typical symptoms of psychological distress in older persons after retirement. Method : Swedish nationally representative samples, interviewed in 1968, 1981, and 1991. Survivors aged 77+ where reinterviewed, those from the 1968 baseline in 1992, those from 1981 in 2002 and in 2004, and those from 1991 in 2011, resulting in a 20-24 years follow up time. These four follow-up surveys have been pooled (n= 2043). Ordered logistic regressions were used to analyze the association between work complexity and psychological distress. Work complexity was measured with three dimensions based on the typical tasks associated with the respondent's occupations, the level of complexity handling: (I) information, (II) people (intrapersonal relations) and (III) things (handling objects). Psychological distress was measured by three self-reported items: general fatigue, anxiety, and depression as well as by a summarized index of all three items. Results : Individuals with occupations characterized by higher work complexity tended to report less psychological distress during old age than individuals with occupations characterized by less work complexity. Information was the dimension of complexity that showed the strongest association with psychological distress, whereas the dimension Things wasn't at all associated with psychological distress during old age. Conclusion : There are pervasive long term psychological effects, remaining after retirement, of the complexity level of one's occupation. Keywords : work complexity, psychological distress

PP25 S-041
HEALTH PROMOTION THROUGH HOME VISIT FOR ELDERLY HYPERTENSION PATIENTS IN VILLAGE KEMULAN

Alidha Nur RAKHMANI¹, Muhammad MAULANA², Muhammad Irvan ARVANDI², Stanley Ariestia TANJAYA², Yustina Maria PUSPITASARI², Dedde Aditya RACHMAN², Sarah Binti MASRUKIN², Finna Yustita SARI² (1. Public Health, Brawijaya University, Indonesia; 2. Medical Faculty, Brawijaya University, Indonesia)

Introduction : One of the degenerative disease is hypertension at elderly. In a major factor in elderly. It is obvious that death from stroke and cardiovascular disease morbidity decreased with treatment of

hypertension. As hypertension is a risk factor for smoking, microalbuminuria, obesity, male age > 55 years, women > 65 years old, it does not work, a family history of hypertension, high cholesterol and diabetes.. Besides the provision of adequate health promotion is also very necessary for the elderly to be able to get adequate health care. Method : health promotion through home visits by dividing Kinanti books. At that elderly patients measured their blood pressure. Then do the follow-up of the three-day blood pressure outcomes and behaviors that are written in the book Kinanti. This was done for 1 week. Results: a decline from the previous one by 60% of respondents have hypertension category II after the intervention to 60% of respondents have hypertension category I and 26.4% in the pre-hypertension category. After follow-up obtained a significant increase of 6.66% to 20% of patients who have hypertension do not do risky behavior. However, 6.66% of respondents still do 3 or 4 hypertension risk behaviors. There has been a significant reduction in stress, from 66.6% or 10 respondents to 33.3% or 5 out of 15 respondents. Conclusion : health promotion can control blood pressure and hypertension risk behavior change for elderly patients. Keywords : hypertension, health promotion, home visit

PP25 S-042
HEALTHY EATING HABITS IN SOUTHERN BRAZILIAN ELDERLY PEOPLE

Maria Marina Serrao CABRAL¹, Claudine Lamanna SCHIRMER², Andressa LEWANDOWSKI², Angelo Jose G. BOS² (1. Nutrition, Federal University of Santa Maria, Brazil; 2. Institute of Geriatrics and Gerontology, Pontifical Catholic University of Rio Grande do Sul, Brazil)

Introduction : The high prevalence of nutritional deviation in elderly people has been demonstrated. These results are due to the peculiar conditions in which older people live aggravated by socioeconomic conditions, the physiological changes of age and the progressive inability to perform their daily activities. In this context, the effects of poor nutrition, either excessive or deficit of nutrients, have significant representation. Additionally, little is known about elders living in developing countries as Brazil. Objectives: To investigate the elderly meals which usually hold throughout the day. Method : The research 'Older Adults' Profile in RS' involved 7315 elderly men and women, aged ≥60 years living in 59 different Brazilian Gauchos cities. They answered a questionnaire based on the WHO report "Global Age-Friendly Cities: A Guide" comprising multiple-choice questions as: 'What meals usually makes during a day?'. Results : We found that 94.5% (n=6,915) of older people eat for breakfast and only 5.5% (n=400) do not usually make this meal. On the other hand 17.4% (n = 660) of women and 15.6% (n=551) of men consume any food at midmorning (collation). With respect to lunch, 97.2% (n=7,108) of the elderly perform this meal. By midafternoon only 62.6% (n=4,576) of respondents perform the snack. Dinner is a meal held by 87.8% (n=3,100) of men and 85.8% (n=3,249) of women have supper (evening snack) is held by only 12.4% (n=906) seniors. Conclusion : It appears that most elderly performs four meals a day, as recommended where the number of daily meals is about 4 to 6. Keywords : Health promotion, Developing country, Nutrition

PP25 S-043
ASSOCIATION BETWEEN HIP WALKING PERFORMANCE AND PHYSICAL FITNESS IN COMMUNITY-DWELLING OLDER ADULTS

Atsushi MIZUMOTO¹, Hikaru IHIRA¹, Keisuke YASUDA¹, Keitaro MAKINO¹, Takeshi SASAKI¹, Mika KIMURA², Hyuma MAKIZAKO³, Taketo FURUNA¹ (1. School of Health Sciences,

Sapporo Medical University, Japan; 2. International Life Sciences Institute JAPAN, ILSI, Japan; 3. Department for Research and Development to Support Independent Life of Elderly, Center for Gerontology and Social Science, National Center for Geriatrics and Gerontology, Japan)

Introduction : The aim of this study was to measure hip walking distance for ten seconds and examine the relationship among hip walking distance, trunk muscle, balance and walking speed for older people. **Method :** The participants were 106 Japanese older adults (63 females) living in Sapporo, north city of Japan (mean age, 75.4 years). The term that will be used to describe the hip walking is defined as the movement: subjects in a posture of long sitting position with folding arms rotate a trunk with lifting an ischium and move the lower limbs forward as far as possible. The distance between right lateral malleoli was measured as for hip walking distance of ten seconds. Additionally, grip strength, knee extensor strength, trunk extensor and flexor strength, one leg stand, Functional Reach Test (FRT) and Timed Up and Go test (TUG) were measured. In order to explore the relationships between hip walking distance and other physical functions, partial correlation analysis was calculated using adjusted variable such as age, sex and body mass index. Furthermore, the stepwise linear regression analysis was conducted, in which dependent variable was hip walking distance. **Results :** It was indicated a significant correlation between hip walking distance and other physical functions (partial correlation coefficient $r=0.21-0.44$). As for regression analysis, 5m maximum walking speed, knee extensor strength and one leg stand were detected as significant factors with regard to hip walking distance. **Conclusion :** It was clarified that the hip walking would be a compound movement which reflects walking, muscle strength and balance. **Keywords :** hip walking, performance test, trunk function

PP25 S-044 DANCING WITH AGE

Lia MARQUES¹, Beatriz TOMAZ² (1. *Psychiatry, A Menina dos Meus Olhos Cultural Association, Portugal*; 2. *Psychology, A Menina dos Meus Olhos Cultural Association, Portugal*)

Introduction : In 2011 we work with a dance association monitoring dance classes of a group elderly. **Method :** Was intended to characterize the population of students in regular dance classes with regard to sociodemographic characteristics, cognitive impairment (dementia), mood disorders (Depressive syndromes), Self perception regarding their limitations and risk of falls. **Results :** In the initial evaluation we characterized 8 students, all females, with an average age of 74 years, a maximum 88 years and a minimum 60 years. Only 1 of the students scored positive in the test for cognitive impairment (MiniCOG). 2 scored positive in the Geriatric Depression Scale >5. To evaluate the self perception of limitations was applied to scale VES 13, and 5 students had scores greater than 3. As regards the risk of falls 2 students had fall risk accordingly to the Get up and Go test. Throughout the school year there was an irregularity in the frequency of classes. At the time of the final assessment were characterized only 5 students, all females, average age 77 years, maximum of 88 and minimum of 61 years. The results for cognitive impairment were similar to those found in the initial phase. Regarding the assessment of depressive syndromes none of the students had tested positive in the final evaluation. Regarding the vulnerability risk, 2 exceeded 13 in the test VES 3. The students at risk of falling at baseline abandoned classes throughout the school year. **Conclusion :** These data tend to indicate that dance classes may offer an improvement in depressive symptoms. **Keywords :** Dance, Ageing, Depression, self perception

PP25 S-045 DEMOGRAPHIC AND HEALTH CHARACTERISTICS AMONG NATIVE HAWAIIAN AND PACIFIC ISLANDER ELDERS

Bum Jung KIM¹, Kathryn BRAUN², Colette BROWNE¹, Lana Sue KA'OPUA¹, Noreen MOKUAU¹ (1. *School of Social Work, University of Hawai'i at Manoa, USA*; 2. *Department of Public Health, University of Hawai'i at Manoa, USA*)

Introduction : Although often aggregated together, Asian Americans (AA) and Pacific Islander populations in the US are considerably different. Generally, Native Hawaiians and Other Pacific Islanders (NHOPIs) have generally poorer socio-economic and health outcomes than most of the AA groups. In Hawaii, for example, life expectancy for Japanese, Chinese, and Korea residents is 9-13 years longer than for Native Hawaiian and Samoan residents. This study examines the health and mental health status of NHOPI elders in the US. **Method :** Using 2010 US Census Bureau data, the study investigated and compared socio-demographic characteristics of NHOPI elders, including population, age, gender, household income, disability status, comparing with that of the overall US population. In addition, Hawaii Health Survey data was used to explain health and mental status and relevant programs for NHOPI elders. **Results :** The study found that many NHOPI elders generally live in a poorer condition than do the general elderly and that they are economically vulnerable. Also, NHOPI elders suffer from higher rates of diabetes, dementia, as well as higher rates of demoralization, depression and low self-esteem. Vulnerability to physical and mental illnesses among NHOPI elders is associated with the highest rate of suicide in the AAPI elder population. **Conclusion :** Our findings call attention to the urgent need to develop programs that respond to NHOPI cultural beliefs, practices, and strengths, with a goal of increasing the appeal, accessibility, and timely use of health and social services. Further research is indicted to develop assessment measures and services that culturally tailor evidence-based and best practice interventions. **Keywords :** Native Hawaiian and Pacific Islander Elders, Health, Demography

PP25 S-046 EFFECTS OF SCIENCE-INQUIRY BASED INSTRUCTIONAL MODULE PROGRAM ON HUMAN HEALTH COGNITION FOR THE ELDERLY

Chwen-Chi WANG¹, Jin-Jong CHEN², Chao-Ti HSIUNG¹ (1. *Department of Science Education, National Taipei University of Education, Taiwan*; 2. *Department of Physical Therapy and Assistive Technology, National Yang-Ming University, Taiwan*)

Introduction : This study aimed to compare the effects of science-inquiry based instructional module program (SI) with traditional health education (HE) on human health cognition for the elderly. **Method :** Thirty-two community-dwelled apparent healthy elderly were recruited as volunteered subjects. All subjects were allocated into SI group (N=21, 73.0±6.0 y/o) and traditional HE group (N=11, 74.2±7.6 y/o). Body weight, height, and waist of both groups were measured to evaluate their body compositions. SI composed of lecture, demonstration, practice, and discussion was designed based on mastery learning theory for this special population. Density concept was introduced to illustrate the meaning of BMI and waist circumference. A six-item body composition related human health cognition (HHC) test was conducted before and after the intervention, and evaluated by one-way ANOVA with repeated measures. **Results :** After 90 minutes intervention, the SI group demonstrated significant improvements on total score of HHC test (3.43±.98 vs. 5.43±.98, P<.001), majorly on knowing (P<.001) and applying (P<.001). But, the

HE group kept their baseline HHC test total score level (3.45 ± 1.04 vs. 4.09 ± 1.30). Regarding acceptance to the SI program, 100% of SI subjects considered it as helpful ($n=8$) or very helpful ($n=13$). Conclusion : The results revealed that science-inquiry based instructional module program was a feasible and effective on human health cognition for community-dwelled apparent healthy elderly. Keywords : science-inquiry, health cognition, elderly

PP25 S-047

PSYCHOSOCIAL CORRELATES OF COLORECTAL CANCER SCREENING IN CHINESE OLDER ADULTS

Doris Y.P. LEUNG, Eliza M.L. WONG, Terry K.S. WONG, Carmen W.H. CHAN (*Nethersole School of Nursing, The Chinese University of Hong Kong, Hong Kong*)

Introduction : Colorectal cancer (CRC) is prevalent among older people. Screening for CRC presents a cost-effective secondary prevention and control strategy which results in a significant reduction in mortality. Psychosocial constructs are widely used to predict CRC screening and are targets for interventional studies as they are amenable to change. This study aims to explore psychosocial correlates of CRC screening in Chinese older people. Method : A convenience sample of 223 community-dwelling adults aged ≥ 60 was recruited in May-July in 2012 in Hong Kong. Volunteers were asked to complete a questionnaire which collected information on demographic variables, CRC-related psychosocial variables and whether had a CRC screening in the past 10 years. Logistic regression analysis with backward elimination was performed to identify factors associated with CRC screening. Results : Their mean age was 75.1 years old ($SD=7.5$), 80.0% were female, 59.4% were married, 24.4% had no education and 24.7% had CRC screening. Seven variables were found to be significantly associated with CRC screening in bivariate analyses and were included in the logistic regression model. Results of logistic regression revealed that participants with lower perceived psychological barriers ($OR=0.18$; $p<0.001$) and severity-fear ($OR=0.56$, $p=0.02$) were more likely to have CRC screening. Conclusion : Perceived barriers and severity seemed to be important correlates of CRC screening in Chinese older adults. However, similar to many studies in the Chinese populations, we also found perceived severity was negatively correlated with CRC screening. Further studies are needed to explore the reasons for the negative association between perceived severity and uptake of CRC screening. Keywords : Colorectal Cancer Screening; Psychosocial Correlates; Older Adults

PP25 S-048

COLORECTAL CANCER SCREENING BEHAVIOR AMONG OLDER KOREANS: DIRECTIONS TOWARD REDUCING CANCER HEALTH DISPARITY

Hee LEE, Mihwa LEE (*School of Social Work, University of Minnesota, Twin Cities, USA*)

Introduction : Screening for colorectal cancer is underutilized in Korea. This underutilization of cancer screening has led Koreans to have higher incidence and mortality rates of colorectal cancer. Although cultural attitudes and health beliefs have been considered to be critical factors impacting colorectal cancer screening behaviors, there is a dearth of empirical study on this topic in Korea. This study, therefore, examines sociocultural factors influencing colorectal cancer screening behaviors among older Koreans. Method : To explore the role of culture and health beliefs (the latter by means of the Health Belief Model) in colorectal cancer screening behaviors, a structured questionnaire was administered with 385 Korean older adults aged 50 and over residing in Seoul and Kwangju in Korea. Results : Results

showed that only 40% of the sample had undergone a fecal occult blood test within the past year, and a mere 33% of the respondents had received a sigmoidoscopy and/or a colonoscopy within the past five years. Logistic regression analyses revealed significant predictors that included not only constructs of the health belief model, but also cultural beliefs and attitudes about colorectal cancer screening. Conclusion : The findings reinforce a need for developing an intervention program that targets culture-specific barriers in order to increase colorectal cancer screening. Furthermore, a community education program aimed to increase older Koreans' knowledge and benefit of colorectal cancer screening should be implemented as a part of the intervention program. Keywords : Colorectal cancer, screening, culture

PP25 S-049

THE EFFECT OF ETHNIC MUSIC ON PSYCHOPHYSIOLOGICAL RESPONSES IN ELDERLY WITH DEPRESSED MOOD

Hui-Ling LAI¹, Yin-Ming LI², Chiung-Yu HUANG³ (*1. Department of Nursing, Tzu Chi University/Buddhist Tzu Chi General Hospital, Taiwan; 2. Department of Family Medicine/Department of Nursing, Buddhist Tzu Chi General Hospital/Tzu Chi University, Taiwan; 3. Department of Nursing, I-Shou University, Taiwan*)

Introduction : Since 2009, Taiwan has had the second most rapidly aging population in the world. This has naturally been accompanied by an increase in the number of elderly people with depressed mood. Music is considered an adjuvant therapy to heal patients. However, the efficacy of Taiwan ethnic music on psychophysiological responses has not been studied yet, which has resulted in uncertain clinical significance and limited its applications in clinical settings. Hence, we examined the effects of listening to their own classified ethnic music on psychophysiological parameters (heart rate variability, blood volume pulse, depression scores) in community residing elderly people. Method : This was a one-group repeated measures design for 32 subjects aged 55-76 years who participated in focus groups to classify Taiwan ethnic music classification into four quadrants according to the Thayer Model. Subjects were individually listening to the first quadrants music for 20 minutes in the research room. The music was pleasure, happy, and excited with music tempo between 100 and 130 beat/min. Subjects' heart rate variability and blood volume pulse were continuously measured by medical device for 20 minutes. Generalized estimating equation analyses were used to examine the differences within group. Results : Subjects' heart rate variability, blood volume pulse and depressive scores were significantly decreased after the subjects listening to the fourth quadrants ethnic music (all $p < 0.01$). Conclusion : Our results provide evidence for the beneficial effects of first quadrant Taiwan ethnic music on heart rate variability, blood volume pulse, and depressive scores of the community-residing elderly people. Keywords : music, psychophysiological parameters, Taiwanese elderly

PP25 S-050

THE EFFECTS OF PERCEIVED NEED AND ACTUAL MENTAL HEALTH STATUS ON MENTAL HEALTH SERVICE USE AMONG OLDER ADULTS IN THE US

Hyo Jung LEE, Elizabeth DUGAN (*Gerontology Department, McCormack Graduate School of Policy and Global Studies, University of Massachusetts Boston, USA*)

Introduction : The use of mental health services is related to how one perceives his/her mental health. Yet, self-perception is not always accurate and may lead to over or under-utilization of care. This study

examined the impact of discrepancies between self-perceived need and actual mental health status on mental health service use, focusing on depression and memory decline. Method : Data from the 2010 Health and Retirement Study were analyzed (n=9547). Subjects age 65 and older reported on their self-perceived mood and memory status. CESD and TICS measured current actual mood and memory status. Descriptive analysis and multinomial logistic regression were conducted. Results : We found that 12% and 30% of older adults in the US had inaccurate perceptions on their depression and memory status. Older adults who perceived that they were depressed are more likely to take medications for depression regardless of current depressive symptoms that they had (OR=3.075 and OR=4.831). Those who did not perceive depression but had current depressive symptoms were more likely to take medications for depression (OR=2.845), compared to those who did not perceive depression and had no current symptoms. Among those who took medications for memory decline (n=119), 14.7% perceived no memory decline and had no actual memory decline, while 20.6% perceived no memory decline but had actual memory decline. Also, 36.3% of those who took medications for memory decline perceived memory decline but did not have actual memory decline. Conclusion : Thus, providing evidence that discrepancies between perception and actual status contributes to both over and under-utilization of mental health care. Keywords : Depression, memory decline, mental health service use

PP25 S-051

ARE WORK CONDITIONS MORE THAN 20 YEARS EARLIER ASSOCIATED TO COMPLEX AND SEVERE HEALTH PROBLEMS AFTER RETIREMENT AGE?

Ingemar KAREHOLT, Alexander DARIN MATTSSON, Bettina MEINOW (Aging Research Center, Karolinska Institutet and Stockholm University, Sweden)

Introduction : Complex and severe health problems are increasingly common as age increases. Most people spend a large proportion of their life at work. Work conditions may therefore be associated with health at older ages. AIM: To study the association between complex and severe health problems and physical and psychological work conditions. Method : DATA: Swedish nationally representative samples, interviewed in 1968, 1981, and 1991. Survivors aged 77+ where reinterviewed, those from the 1968 baseline in 1992, those from 1981 in 2002, and those from 1991 in 2011, resulting in a 20-24 years follow up time. These three surveys have been pooled (n= 1598). ANALYSES: Binary and ordered logistic regressions. VARIABLES: Complex health problems were based on having severe problems in three domains: diseases/symptoms, mobility, and cognition/communication. Having severe problems in at least two domains was considered as complex health problems. We analyzed the number of domains with severe problems and each domain separately. Indexes of work conditions: 1) heavy work conditions e.g. heavy lifting and physically exhausting; 2) exposure to dust/gas; 3) psychological (flexibility, autonomy, psychological exhausting, monotonous work tasks); 4) number of days with night work. Results : Heavy work was associated with complex health problems, number of domains with severe problems, problems with cognition/communication, and diseases/symptoms. Exposure to dust/gas was associated to severe mobility problems. We found no associations for psychological work conditions and night work. Conclusion : There are long term effects of work conditions, e.g. having a physically heavy work, on health after retirement age. Keywords : Complex health problems,, Work conditions, Longitudinal

PP25 S-052

EFFECTS OF CIRCUIT TRAINING ON PHYSICAL PERFORMANCE AND BODY COMPOSITION FOR THE FRAIL ELDERLY

Jin-Jong CHEN¹, Tzu-Chiao LIAO¹, Ku-Chou CHANG², Hsuei-Chen LEE¹ (1. Department of Physical Therapy and Assistive Technology, National Yang-Ming University, Taiwan; 2. Division of Cerebrovascular Diseases, Department of Neurology, Chang Gung Memorial Hospital, Taiwan)

Introduction : This study aimed to compare the effects of a 12-wk “combined aerobic and resistance circuit exercise program” and a “chair-based exercise program” with “usual care” on physical performance and body composition for the frail elderly. Method : A mass frailty screening using the Fried frailty criteria was conducted to recruit subjects. Sixty-nine subjects were allocated into circuit training (CT) group (N=23, 77.0±8.8 y/o), chair-based (CB) exercise group (N=23, 81.1±9.8 y/o) and control group (CG) (N=23, 81.9±7.6 y/o). Physical performance and body composition were measured before and after the intervention, and evaluated by mixed-design two-way ANOVA with repeated measures. Results : After 12-wk intervention, the CT group demonstrated significant improvements on functional reach test (P=.016), grip strength (P<.001), knee extensor strength (P<.001); upper limb (P<.001) and lower limb endurance (P<.001), 6-minute walking distance (P<.001), as well as 5-m walking time (P=.008). The CB group kept their baseline physical performance level. In contrast, the CG group revealed significant decline on grip strength (P= .016), upper limb endurance (P=.029) and 6-min walking distance (P=.022). Regarding body compositions, the CT group kept their muscle mass while both CB and CG group demonstrated significant loss (P<.05). Conclusion : Our study demonstrated that there was a dose?response effect of exercise training, and CT program was feasible and effective for frail elderly of advanced age. Keywords : Circuit training, body composition, frail elderly

PP25 S-053

MEDICATION TAKING STRATEGY USE AMONG THE ELDERLY: IMPLICATIONS FOR MEDICATION ADMINISTRATION DEVICE DESIGN

Joan Julia BRANIN¹, Gloria JUAREZ² (1. Center for Health & Aging, University of La Verne, USA; 2. Nursing Research and Education, City of Hope, USA)

Introduction : Data from the WHO indicate that approximately 50% of all medications are being taken by the elderly, with 34% of the elderly taking three or more prescription daily. Nonadherence and errors in self-administration of medications are common and often lead to serious medical problems. The purpose of this research was to investigate the type of medication taking strategies used by older adults and its effect on medication administration device design. Method : One hundred-ninety seniors living independently in the community participated in the survey. Results : Participants were predominantly high school educated (58%) Caucasian (86%) women (78%) who were married (51%) and between 75-84 years of age (43%) living independently in the community. Older adults reported using more external memory strategies than internal memory strategies in their medication adherence behaviors. External strategies involve physical changes to the environment whereas internal strategies involve mental activities either to improve the quality of information encoding or improve the search for already encoded information. Use of a dated pillbox and other devices were the external memory strategy used most frequently (31%). Relating the taking of medication to one's routine was the internal memory strategy used most frequently (25%). There was a significant difference in preference for event-based

medication instructions (take with meals) over time-based medication instructions (take three times a day). Conclusion : These findings suggest that the type of strategy used by older adults in adhering to their medication regimen can impact the design of medication administration devices and be a major predictor of medication adherence. Keywords : medication adherence, medication administration devices

PP25 S-054

THE DEVELOPMENT AND OUTCOME OF AN ACTIVITY PROGRAM AT A NURSING HOME WITH THE MODE OF THE UNIT CARE IN TAIWAN

Ju-Huey WEN (*Department of Social Work, Chia Nan University of Pharmacy and Science / Department of Education, National University of Tainan, Taiwan*)

Introduction : Due to the development of and advances in medical technology and living conditions, the elderly population in Taiwan has already reach to 11.02% of the total population by 2012. A major cause of decline in the elderly is “activity reduction” or “lack of exercise taking” which has been ignored in their daily lives. This study presents the development and outcomes of an activity program which was conducted in a nursing home with the mode of the unit care in southern Taiwan. The space of care unit was utilized to provide small size activities to enhance the physical mobility and social interaction of elderly in their daily lives. Method : The activity program includes four unit activities: traditional childhood game, cooking, art crafting, and cheese unit activities. The one-group pre-test-post-test design was used and the tools of the Simple Intelligent Examination (MMSE), the Geriatric Depression Scale (GDS) index and the Instrumental Activities of Daily Living Scale (IADL) were conducted for evaluating the outcome of this program. Results : The major findings of this study showed that 80% (13 elderly) of the total participants’ scores in MMSE, GDS, and IADL were maintained the same level or made some progress within four months. Some elderly were not willing to attend activities because of the bad weather. Conclusion : A small-scale designed activity program in the care unit could promote elderly participation in activities that suit their physical and mental condition and also increase the interaction between the elderly and the nursing home staff. Keywords : nursing homes, elderly, activity

PP25 S-055

FACTORS ASSOCIATED WITH ANTIRETROVIRAL THERAPY NONADHERENCE IN OLDER ADULTS WITH HIV IN THE US

Katryna MCCOY¹, Louis GROTHAUS², Robert HARRISON², Sheryl CATZ², Christine MAHONEY² (*1. Health Sciences, Division of Nursing, Winston Salem State University, USA; 2. Center for Health Studies, Group Health Research Institute, USA*)

Introduction : By the year 2015, approximately 50% of US individuals infected with HIV will be over age 50. The advent of antiretroviral therapy (ART) has contributed to a significant decrease in deaths from HIV/AIDS in the US, yet Americans aged 50 years or older have continued to have higher mortality when compared to their younger counterparts. As more older adults confront the challenges associated with living with HIV/AIDS, an understanding of the complex psychosocial factors that impact adherence to ART regimens in this population becomes more urgent. The purpose of this study was to explore gender and racialized differences in psychosocial factors associated with antiretroviral therapy nonadherence and treatment adherence self-efficacy among HIV+ adults ages 50 years and older. Method : This descriptive study involved a secondary analysis of

baseline data collected from 426 African American (n=87 women and 168 men) and White American (n=30 women and 141 men) participants in the “PRIME” study, a telephone-based antiretroviral therapy adherence and quality of life intervention trial in older Americans living with HIV. Predictor variables included demographics factors, HIV-disease related factors, and psychosocial factors. Outcome variables included self-reported ART nonadherence and treatment adherence self-efficacy. Cross-sectional analyses of baseline data involved descriptive statistics, comparisons and analysis of covariance. Results : Neither ethnic nor gender differences contributed to the differences in ART nonadherence nor treatment self-efficacy across the different ethnic/gender groups. Conclusion : As the number of people ageing with HIV increases, factors that influence their ART nonadherence warrant further evaluation to encourage effective self-management of HIV. Keywords : antiretroviral therapy, adherence, older adults

PP25 S-056

IS CONTINUOUS-WALK-DISTANCE ASSOCIATED WITH TRUNK PERTURBATION DURING WALKING AND MOTOR FUNCTION IN COMMUNITY-DWELLING OLDER PEOPLE?

Keisuke YASUDA¹, Hikaru IHIRA¹, Atsushi MIZUMOTO¹, Keitarou MAKINO¹, Mika KIMURA², Hyuma MAKIZAKO³, Takeshi SASAKI⁴, Taketo FURUNA⁴ (*1. Graduate School of Health Sciences, Sapporo Medical University, Japan; 2. International Life Sciences Institute Japan, ILSI, Japan; 3. Department for Research and Development to Support Independent Life of Elderly, Center for Gerontology and Social Science, National Center for Geriatrics and Gerontology, Japan; 4. Department of Physical Therapy, School of Health Sciences, Sapporo Medical University, Japan*)

Introduction : The decline of the motor function and the increase of the trunk perturbation during walking may shorten older people’s continuous-walk-distance. The purpose of this study was to determine whether continuous-walk-distance was associated with trunk perturbation during walking and motor function among community-dwelling older people. Method : This study included men and women aged 65 and older, independent in activities of daily living and walking. Continuous-walk-distance without rest was evaluated by a self-reported questionnaire. After that, reported continuous-walk-distance was treated as dummy variables (0: 1km or more, 1: less than 1km). Root Mean Square (RMS) of trunk resultant acceleration during walking was calculated to provide an indicator of trunk perturbation. In addition, trunk flexion and extension strengths, knee extension strength, one-leg standing time, functional reach test (FRT) and timed up & go test were assessed. Results : Thirty seven persons were able to walk 1km or more and 16 persons were not able to walk 1km. Average RMS was 2.0±0.3G. With reference to multiple logistic regressions analysis (method of increasing and decreasing the variables) controlling for age, sex and body mass index, continuous-walk-distance was predicted by FRT (OR=0.84 [95%CI: 0.73-0.97]) and RMS (OR=12.70 [95%CI: 1.04-154.60]). Conclusion : Our result showed that older people who were not able to walk 1km or more had a decline of balance function and performed increased trunk perturbation during walking. Keywords : acceleration, continuous-walk-distance, motor function

PP25 S-057

THE ASSOCIATION BETWEEN GOING OUTDOORS DAILY AND PHYSICAL FUNCTIONS IN COMMUNITY-DWELLING OLDER ADULTS

Keitaro MAKINO¹, Hikaru IHIRA¹, Atsushi MIZUMOTO¹, Keisuke YASUDA¹, Taketo FURUNA² (*1. Graduate School of Health*

Sciences, Sapporo Medical University, Japan; 2. School of Health Sciences, Sapporo Medical University, Japan)

Introduction : It is reported that going outdoors daily is associated with maintaining the activities of daily living in community-dwelling older adults. The aim of this study was to determine the association between going outdoors daily and physical functions in community-dwelling older adults. **Method :** One hundred and two healthy older adults (35 men, 67 women, mean 74.3± 5.4 years) participated in this study. The going outdoors daily as main outcome was investigated the frequency of going outdoors per week. Grip power, knee extension power, abdominal muscle function, one-leg standing time, functional reach test, hip walking and 5m walking speed were also measured as physical functions. Pearson's correlation coefficients were used to assess relationships between going outdoors daily and each physical performance parameter. A stepwise multiple-regression analysis was also used to determine the relative contribution of going outdoors daily. **Results :** The mean frequency of going outdoors were 5.14 day per week. The stepwise multiple-regression analysis revealed that the going outdoors daily could be explained by the functional reach test and hip walking distance, this variable explained 20%. **Conclusion :** The results suggest that going outdoors daily is associated with dynamic balance and mobility function on the floor among community-dwelling older adults. **Keywords :** Going outdoors daily, Physical functions, Hip walking

PP25 S-058

RELIGIOUSNESS OF THE ELDERLY OF THE CITY OF PORTO ALEGRE

Laura Brenner MARIANO DA ROCHA, Nair Monica Ribacik NASCIMENTO, Patricia Chagas DURGANTE, Irenio GOMES, Yukio MORIGUCHI (*Geriatrics and Gerontology Institute, PUCRS, Brazil*)

Introduction : Religiousness and spirituality have been the subject of a growing interest among clinicians and researchers in the area of health. Hundreds of studies have been published investigating the relationship between religious involvement and physical and mental health. These studies indicate a positive association between religiousness and better health and quality of life. **Method :** This research was conducted with the elderly population of the city of Porto Alegre, aged over 60 years and 1078 individuals were included. An objective questionnaire was used containing general demographic, social, cultural and economic characteristics as well as health and daily living. **Results :** The sample consisted of 1078 elderly: 304 men (28.2%) and 774 women (71.8%). The mean age of the sample was 72 years, mostly Caucasian 879 (82.7%), widowed 417 (39.2%) and married 388 (36.5%). Most elderly received a monthly income of up to 3 minimum wages. More than half of the sample was born in the urban area 658 (61.9%). Most of the sample (72.3%) reported being Catholic and 62.9% practiced their religion. Almost half of the elderly (47.8%) reported not having changed in relation to religion over the years while 37.9% said they had become more religious and 12.5% less religious. When asked about some psychogeriatric issues we found higher positive responses in the group who does not practice its religion on questions relating to happiness and well being. **Conclusion :** Since religion has multiple connections to health, is very important to understand the distribution of religiosity in populations and its relation to health and quality of life. **Keywords :** religiousness, elderly, health

PP25 S-059

EFFECTS OF 3 SESSIONS OF PHYSICAL EDUCATIONAL CLASS COMBINED WITH 12 WEEKS HOME-BASED

EXERCISE PROGRAM ON IMPROVING PHYSICAL FITNESS IN MILD STROKE OUTPATIENTS

Long Pio CHIO¹, Ku Chou CHANG², Hsuei Chen LEE¹, Pei Jhen LEE³, Yu Ching HUANG², Jin Jong CHEN¹ (*1. Department of Physical Therapy and Assistive Technology, National Yang-Ming University, Taiwan, Taipei, Taiwan; 2. Division of Cerebrovascular Diseases, Department of Neurology, Kaohsiung Chang Gung Memorial Hospital, Taiwan, Taiwan; 3. Department of Rehabilitation Medicine, Kaohsiung Chang Gung Memorial Hospital, Taiwan*)

Introduction : This study aimed to investigate the effectiveness of the physical educational class for the mild stroke outpatients on improving the physical fitness on 12th week and 24th week. **Method :** This was a quasi-experimental study. Exercise group received 3 sessions of supervised physical educational class during the visit of the regular OPD consultation (1 session/month) with 12-week home-based exercise program. Each class included strengthening, cardiopulmonary fitness and balance training for 40 minutes. Control group received one exercise consultation session during the first visit. Outcome measures contain body composition, muscle strength, 6-minute walk test (6MWT), 10 meter walk time (10MWT), flexibility and Berg balance scale (BBS). Measurements were conducted at baseline, 12th week for both groups and 24th week for the exercise group. **Results :** One hundred and five stroke patients were recruited: 51 in exercise group and 54 in control group. There were 84 males and 21 females; 62.5±9.2 years. After 12 weeks, the exercise group demonstrated greater improvements than the control group on most outcomes including waist circumference (-1.4 vs. 0.2 cm, P=.004), 6MWT (-71.5 vs. -29.4 meter, P=.001), 10MWT (-1.73 vs. -0.28 sec, P=.001), upper limb strength index (lb/kg, -0.25 vs. -0.10, P=.001), lower limb strength index (lb/kg, -0.48 vs. -0.20, P=.002), and BBS (-1.59 vs. -0.04, P=.001). Exercise group maintained the fitness gain in 6MWT, 10MWT, lower limbs strength, and BBS at 3 months after the intervention. **Conclusion :** Physical educational class combined with home exercise program improved physical fitness for those mild stroke outpatients. These kinds of intervention also have the lasting effect on several outcomes. **Keywords :** stroke; physical fitness; outpatient

PP25 S-060

AN INTERPROFESSIONAL COLLABORATIVE NETWORK TO ADDRESS OLDER ADULT ORAL HEALTH

Sharon COMPTON¹, Minn YOON¹, Joanne CLOVIS², Sandra COBBAN¹ (*1. Dental Hygiene, University of Alberta, Canada; 2. Dental Hygiene, Dalhousie University, Canada*)

Introduction : Poor oral health significantly increases the risk for developing systemic diseases. Poor oral health is of growing concern considering the increasing number of older adults who are retaining their teeth longer, and who may be dependent for oral care such as those who reside in long-term care facilities. **Method :** A Canadian symposium hosting a collaborative network of various stakeholder groups involved in addressing older adult oral health (dental health researchers and practitioners; nurse researchers and practitioners; Speech Pathology; Occupational Therapy; geriatricians; frontline caregivers; policy makers; long-term care facilities; seniors advocates), facilitated the sharing of knowledge between researchers and knowledge users in the area of older adult oral health. **Results :** Using the Knowledge-to-Action framework, the presentation will specifically focus on the knowledge creation cycle and the tailoring of knowledge into areas of action produced by the various stakeholders. **Conclusion :** An interprofessional network collaborating on the development of strategies related to older adult oral health policy, practice and

research can provide a foundation to address disparities in this population. Keywords : oral health, interprofessional, knowledge translation

PP25 S-061
EFFECT OF ENVIRONMENTAL AND LIFESTYLE FACTORS ON HYPERTENSION IN AN AGING REGION IN JAPAN: SHIMANE COHRE STUDY

Tsuyoshi HAMANO¹, Yoshinari KIMURA², Miwako TAKEDA³, Masayuki YAMASAKI³, Minoru ISOMURA⁴, Toru NABIKA⁴, Kuninori SHIWAKU³ (1. Center for Community-based Health Research and Education (COHRE), Organization for the Promotion of Project Research, Shimane University, Japan; 2. Department of Geography, Graduate School of Literature and Human Sciences, Osaka City University, Japan; 3. Department of Environmental and Preventive Medicine, Shimane University School of Medicine, Japan; 4. Department of Functional Pathology, Shimane University School of Medicine, Japan)

Introduction : In recent years, there has been growing evidence of an association between residential remoteness and hypertension. However, no study has examined the effect of residential remoteness-lifestyle associations on hypertension. The aim of this study was to examine the effect of residential remoteness, measured by road network distance and elevation, and lifestyle (i.e. access to private car) on hypertension in an aging region in Japan. Method : This is a cross-sectional population-based study. We analyzed data from the Shimane COHRE study conducted from 2006 to 2009 in the rural mountainous regions of Japan. After excluding missing data, we conducted a logistic regression analysis of the data for 1,348 individuals. Results : In subjects without access to car use, the odds ratios for self-reported hypertension were significantly increased in those living in moderate (odds ratio (OR): 2.21, 95% confidence interval (CI): 1.19-4.08) and far (OR: 2.55, 95% CI: 1.00-6.51) road distances, whereas there were no significant associations in subjects with access to car use. There were no significant associations between elevation and hypertension for participants either with or without access to car transportation. Conclusion : Our findings show that the specific residential remoteness-hypertension associations differ by dairy transport, measured by access to private car, in an aging region in Japan. These results implicate that the more understanding are needed to consider the effect of residential environment in establishing health policy for coming aging society. Keywords : Residential environment, Geographic information systems, Hypertension

PP25 S-062
AN FACTOR ANALYSIS EFFECTED THE LIFE SATISFACTION AND SELF-ESTEEM FOR THE DISABLED ELDERLY POPULATION IN KOREA

Nan Hee YEE (Health Policy Division, Korea Institute for Health and Social Affairs, Korea)

Introduction : With growing the number of elderly population over the world, grows the concern about the elderly. So researchers have done analysis of the health behavior for the elderly population. Especially, the quality of life for the disabled aged is likely to effects the health behaviors. This research will identify the Satisfaction of Lives and Self-esteem for the Disabled Elderly Population in Korea. Method : Frequency, Chi-square, Multiple Logistic Regression Data: Korea Welfare Panel Study. Results : This research will analysis Factors effected the Life Satisfaction and Self-esteem for the Disabled Elderly Population in Korea. Conclusion : The conclusions of this study identify factors effected the life satisfaction and self-esteem for the

aged and propose programs development health behaviors for the elderly population. Keywords : The aged. Self-esteem, life satisfaction

PP25 S-063
DEPRESSION IN JAPANESE ELDERLY PEOPLE WITH LOW-INCOME WAS INFLUENCED FROM SOCIAL SUPPORT AND HABITUAL EXERCISE

Naoto KAMIDE¹, Noriko YAMASHINA², Akie KAWAMURA¹, Yoshitaka SHIBA¹ (1. School of Allied Health Sciences, Kitasato University, Japan; 2. Graduate School of Gerontology, J.F. Oberlin University, Japan)

Introduction : Elderly people with low income have a tendency to show depression. The aim of this study was to investigate physical, social and lifestyle factors which influence depression in Japanese elderly people with low income. Method : The participants in this study were people aged 60 years and older living independently in public apartments for low-income people in Kanagawa, Japan. Depression was assessed using the five-item version of the Geriatric Depression Scale (GDS-5), where a higher score indicates severe depression. Instrumental self-maintenance ability was investigated as physical factor using the subscale of the TMIG index of competence. Social network and social support were assessed as social factors by abbreviated Lubben Social Network Scale (LSNS-6) and a short version of Multidimensional Scale of Perceived Social Support (MSPSS), respectively (a higher score indicates a larger social network in LSNS-6, and a strong social support in MSPSS). Housebound status and habitual exercise were investigated as life-style factors. Age, sex and cohabitation status were also investigated. All investigations were performed by questionnaire. Results : 276 subjects (70.8±5.8 years old, men 40.2%) were included in this analysis. Significant negative relationships were found between GDS-5 and MSPSS, and habitual exercise from the results of multiple logistic regression analysis. Other factors were not significantly related to GDS-5. Conclusion : Our findings suggested that in elderly people with low-income, strong social support and regular exercise decrease the likelihood of depression. Our findings may provide useful information for prevention of depression in elderly people with low income. Keywords: Depression, Social support, habitual exercise

PP25 S-064
OCCUPATIONAL COMPETENCE AND QOL IN ELDERLY JAPANESE PEOPLE WHO LIVE AN INDEPENDENT LIFE

Norikazu KOBAYASHI¹, Takashi YAMADA², Hironori KAWAMATA³, Yu ISHIBASHI³, Atsuko TANIMURA¹, D. Yoshikazu ISHII¹ (1. Graduate School of Human Health Sciences, Tokyo Metropolitan University, Japan; 2. Graduate School of Rehabilitation Sciences, Mejiro University, Japan; 3. Faculty of Health Sciences, Tokyo Metropolitan University, Japan)

Introduction : The purpose of this study was to clarify the features of the occupational competence in elderly Japanese people living independent. Competence appears to begin with organizing one's life to meet basic responsibilities and personal standards and extends to meeting role obligations and then achieving a satisfying and interesting life (Kielhofner & Forsyth, 2001). Method : 205 healthy Japanese persons (aged 65 to 85 years) completed the Occupational Self Assessment Revised (OSA), the WHO-QOL26 and the SF-36. OSA is a two-part self-rating form, was assumed to be an index of the occupational competence. Section one includes a series of statements about occupational functioning (21 items), to which clients respond by labeling each in terms of how well they do it using a four-point scale. Rasch analysis was used to calculate the item difficulty of the each

item and the capability value(C-value) of the objected person. Results : The item difficulty was shown. Item with high difficulty included “Effectively using my abilities”, “Expressing myself to others” and “Accomplishing what I set out to do”. Conversely, item with low difficulty included “Managing my basic needs” and “Managing my finances”. The average score of the C-value in the participants was 62.4 with a standard deviation of 6.9. There was statistically significant correlation between any of the QOL & Health score and the C-value. Conclusion : This result suggests the occupational competence have relation to life satisfaction and health. Thus, we obtained an important perspective on preparing occupational therapy intervention programs aiming to promote the health of elderly people. Keywords : health promotion, aged person, Occupation Therapy

PP25 S-065

THE ROLE OF ELDERLY HEALTH PROGRAMME (POSYANDU LANSIA) TO ELDERLY HEALTH STATUS. OBSERVATIONAL STUDY IN SUB DISTRICT DIWEK JOMBANG JAWA TIMUR INDONESIA

Novira WIDAJANTI¹, Lilik DJUARI², Yudha HARYONO³, Erikavetri ERIKAVITRI³ (1. Subcommitee Geriatric of dr Soetomo Hospital, PERGEMI, PAPDI, Indonesia; 2. Community Medicine - Dept. of Public Health, Faculty of Medicine Airlangga University, IDI, Indonesia; 3. Subcommitee Geriatric of dr Soetomo Hospital, IDI, Indonesia)

Introduction : In Indonesia, elderly health programme (Posyandu Lansia) is the development of government policies through the health service for the elderly which operate through the program of the health center by involving the elders, families, community leaders and social organizations in its implementation. Level of development of Posyandu Lansia, divided into four groups from the lowest to highest level (pratama, madya, purnama, and mandiri). Health services in it including physical and mental health, with card records and monitoring to determine early disease or health problem facing threats. Method : To describe the elderly health status between Posyandu Lansia Mandiri (PLM) and Purnama (PLP) groups. This was an observational study, which conducted on 30 individuals aged 60 years above in each group. The data included age, gender, education, marital status, comorbidities, functional status by Barthel ADL, Cognitive status by MMSE, Mental status by GDS, Nutritional status by MNA. Results: In PLM 56.7% female, 70% in range of age 60-74 y.o, In PLP; 56.7% male, 63.3% in range of age 60-74 y.o. In PLM; the comorbidity 18/30 diabetes, B-ADL 20/30 were independent, Mild Cognitive Impairment were 24/30, risk of malnutrition was 6/30, and no depression. In PLP; the comorbidity were 20/30 hypertension, B-ADL 11/30 were independent, Mild Cognitive impairment were 28/30, the risk of malnutrition was 12/30, GDS showed 2/30 depression. Conclusion : The elderly health status in highest level of development of Posyandu lansia more better than in lower level. Posyandu Lansia could improve elderly health status. Keywords : Posyandu lansia, health status, elderly

PP25 S-066

OLDER GENERATION AS AN ECONOMIC AND SOCIAL RESOURCE OF NATIONAL CAPACITY

Olga MIKHAILOVA, Vladimir KHAVINSON, Lenar KOZLOV, Vera BASHARINA (Biogerontology, Saint Petersburg Institute of Bioregulation and Gerontology, Russia)

Introduction : According to UN experts demographic tendencies may produce considerable impact on economy, social sphere and safety of Russia. Every fifth Russian citizen is a pensioner. During recent 10

years the number of pensioners increased by 2 mln. and reached 31.8 mln. (22%). Life expectancy increased by 5 years during 2006-2011 and made 64,3 years for men and 76,1 years for women. Method : This disequilibrium should be considered during policy formulation. Extension of the pension age being the lowest in Europe is critical for Russia. It could be gradient retirement with decreased working time down to 6, 4 and 2 hours per day correspondingly. Education of all professionals and policy-makers in ageing is crucial. Results : Very instrumental in this respect seems to be the initiative of the Government of Saint Petersburg in collaboration with our Institute to have organized under the auspices of the Russian Health Ministry International Forum “Senior Generation” which provides a platform for experts from governments, research institutions, NGOs, business and civil society to exchange knowledge, experience and good practices at the regional, local and international levels. The Forum provides unique opportunities to highlight the achievements for the elder people in the fields of education, social support and health. It is a useful tool for promoting evidence-based research in various areas of ageing for its furtherance in the shape of policies. Conclusion : A lot has been done in Russia to meet the challenges of the ageing society, however, there is even more room for new efficient undertakings. Keywords : aging society, quality of life, social support and health

PP25 S-067

PREVENTIVE BEHAVIOR OF THE ELDERLY IN GERMANY

Peter ENSTE, Sebastian MERKEL, Josef HILBERT (Institute for Work and Technology, Westfaelische Hochschule, Germany)

Introduction : Successful prevention consists of different aspects, which is especially true for the elderly. Two crucial fields are regular physical activities and social interactions. However, up to now only a few studies address the preventive behavior of elderly people. As part of the European project 'Mobility Motivator' it is the goal of our study to close this knowledge gap. Method : We developed a questionnaire to measure the preventive behavior of the elderly. The questionnaire consists of three elements: a socio-economic part, a part measuring the subjective state of health using the SF-36 and a part to address the preventive behavior of the elderly. We used existing and established as well as newly developed scales. We will conduct a pretest to validate the questionnaire. The survey will include to a basic population of 2.000 participants, with an expected rate of return of approximately 15 percent. Results : The survey will provide a broad knowledge of the preventive behavior of the elderly. Using a cluster analysis we expect to identify different types, according to the different attitudes as well as the different needs. A major point of our interest lies in possible correlations between social inequalities and the preventive behavior. The final results will be available in April 2013. Conclusion : We will provide a tool helping to measure preventive behavior of elderly people and which can be used for further studies. Moreover we hope to close the scientific gap of research regarding the preventive behavior of the elderly. Keywords : Prevention, Mobility, subjective state of health

PP25 S-068

HOUSEWORK REDUCES ALL-CAUSE AND CANCER MORTALITY IN CHINESE MEN

Ruby YU, Jean WOO (Department of Medicine and Therapeutics, The Chinese University of Hong Kong, Hong Kong)

Introduction : The effects of non-leisure time physical activity on all-cause and cancer mortality are limited, particularly among the elderly. Method : We studied physical activity in relation to all-cause and cancer mortality in a cohort of 4,000 community-dwelling elderly aged

65 and older. Leisure time physical activity (sport/recreational activity and lawn work/yard care/gardening) and non-leisure time physical activity (housework, home repairs and caring for another person) were self-reported on the Physical Activity Scale for the Elderly. Subjects with heart diseases, stroke, cancer, or diabetes at baseline were excluded. Results : Among the 2,867 subjects with a mean age of 72 years at baseline, 452 died from all-cause and 185 died from cancer during the follow-up period (2001-2012). With the adjustment for age, education level and lifestyle factors, we found an inverse association between risk of all-cause mortality and heavy housework among men, with the adjusted hazard ratio (HR) of 0.72 (95%CI=0.57-0.92). Further adjustment for BMI, frailty index and leisure time activity did not change the result (HR=0.71, 95%CI=0.56-0.91). Among women, however, heavy housework was not associated with all-cause mortality. The risk of cancer mortality was significantly lower among men who participated in heavy housework (HR=0.52, 95%CI=0.35-0.78), whereas among women the risk was not significant. Men participated in light housework also were at lower risk of cancer mortality than were their counterparts, however, the association was not significant. Leisure time activity was not related to all-cause or cancer mortality in the elderly. Conclusion : Heavy housework was associated with reduced all-cause and cancer mortality in older men over a 9-year period. The underlying mechanism needs further study. Keywords : Non-leisure time physical activity, housework participation, elderly

PP25 S-069

LEISURE ACTIVITIES AS A MECHANISM LINKING SOCIOECONOMIC STATUS AND HEALTH: FINDINGS FROM THE JAPANESE STUDY OF AGING AND RETIREMENT

Ryo HIRAYAMA, Tatsuro ISHIZAKI (*Human Care Research Team, Tokyo Metropolitan Institute of Gerontology, Japan*)

Introduction : Better understanding of mechanisms linking socioeconomic status and health is necessary to resolve structural inequalities in later life. Guided by Hendricks and Hatch's (2006) framework on lifestyle, we examined longitudinally whether the link between these two might be mediated by older adults' level of involvement in health-promoting leisure activities. Method : We used two-wave panel data from 1,928 older adults age 65 and over in the Japanese Study of Aging and Retirement. Focusing on two types of leisure activities (physical and learning activities) and three indices of health status (self-rated health, depressive symptoms, and scores of physical functioning), we conducted path analysis and estimated models separately for each type of activities and for each health index. Results : The anticipated relations among socioeconomic status, leisure activities, and health were observed especially in the models on physical activities. Specifically, income level had a significant positive effect on time spent on physical activities, which then influenced health indices positively both within and across waves. Furthermore, there were significantly positive cross-lagged effects between time on physical activities and all health indices. For learning activities, similar results were obtained except in the model to predict depression. Conclusion : The results suggest that leisure activities function as a mechanism that links socioeconomic status and health in later life. On the one hand, more economic resources available increase older adults' involvement in leisure activities that can promote their health. On the other hand, better health status enables their further participation in such activities. Keywords : Leisure Activities, Socioeconomic Status, Two-Wave Panel Data

PP25 S-070

THE MOTIVES FOR FOOD CHOICE BY ELDERLY JAPANESE LIVING IN THE COMMUNITY: THE DIFFERENCE ACCORDING TO GENDER, AGE, AND LIVING ARRANGEMENTS

Sachiko KATO¹, Hisao OSADA² (*1. Department of Home Sciences and Welfare, Faculty of Home Sciences and Welfare, Kyoto Notre Dame University, Japan; 2. Graduate School of Gerontology, J. F. Oberlin University, Japan*)

Introduction : We should understand the perceived individual motives for food choices by the elderly when developing a health promotion programs. The purpose of the investigation was to measure the motives for food choices by elderly Japanese living in community. And we investigated the difference of the motives for food choice according to gender, age, and the living arrangements. Method : The participants were 244 Japanese elderly people with the higher-level functional capacity. They were 51 male and 193 female, 154 young-old (male; n=30, female; n=124) and 90 old-old (male; n=21, female; n=69), and 60 people living alone (male; n=3, female; n=57), and 184 people living with family (male; n=48, female; n=136). Data collection was conducted using a questionnaire survey method. FCQ-E (Food Choice Questionnaire for elderly; 9 motives, 27 items) was used to measure the motives. Two-way ANOVA without replication test of independence were used to examine. Results : 'Obviousness of quality', 'Weight control', 'Physical well-being', 'Nutrition balance', 'Familiarity', 'Managing relationships', and 'Economical efficiency' were more important in female than males. 'Familiarity' was more important in the people living with family than the people living alone. And 'Physical well-being' was interaction of gender and the living arrangements. 'Sensory/Mood', 'Physical well-being', 'Familiarity' and 'Managing relationships' were more important in the old-old than the young-old. Conclusion : The results of this study suggested that gender difference was large. It is necessary to also see relation with other factors. Keywords : FCQ-E, motives for food choice

PP25 S-071

READY TO ADAPT - SWEDISH OLDER PERSONS' PERCEPTIONS OF PSYCHOSOCIAL IMPACT OF EXISTING AND FUTURE MOBILE HEALTH RELATED ICT APPLICATIONS

Sarianne WIKLUND AXELSSON, Lars NYBERG, Annika NASLUND, Anita MELANDER-WIKMAN (*Health Sciences, Lulea University of Technology, Sweden*)

Introduction : The aim of this study was to describe how older people perceived the psychosocial impact of existing and future mobile health related ICT applications compared with the general ICT usage and the use of health information on the internet. Method : 650 persons, aged 55-105, were randomly selected from the Swedish population register for a survey. Two vignettes that illustrated the use of mobile health related ICT at present and in the future were presented and the psychosocial impact related to the two different vignettes was measured by the instrument PIADS. A total of 154 persons participated, (mean age: 71.9). Results : Mobile health related ICT applications was expected to have an overall positive psychosocial impact and there were significantly higher scores for the vignette that showed futuristic mobile applications. Adaptability was the highest ranked sub-score and advanced age was associated with low self-rated psychosocial impact in relation to both vignettes. Those with experience of general ICT usage and internet for health information scored a higher psychosocial impact. Conclusion : Older adults are from a psychosocial point of view ready to adapt mobile health related ICT and have to some extent already done so in Sweden. This

knowledge is encouraging for future deployment of the services, but a differentiated strategy seems to be of value in order to avoid that the services will be abandoned or rejected by important target groups.
Keywords : health related ICT, older persons, psychosocial impact

PP25 S-072

EXAMINATION OF AN EFFECTIVE AND EFFICIENT HEALTH PROGRAM TO IMPROVE THE NUTRITIONAL STATUS OF COMMUNITY-DWELLING ELDERLY

Shigeko KATAKURA¹, Miki SUGAWARA², Go INUZUKA³, Shouzoh UEKI³, Masako TSUJI⁴, Michiko SUZUKI¹ (1. Faculty of Comprehensive Human Sciences, Shoukei Gakuin University, Japan; 2. Tome Civic Life Part Healthy Promotion Section, Tome City Office, Japan; 3. Faculty of Medical Science & Welfare, Tohoku Bunka Gakuen University, Japan; 4. Faculty of Human Sciences, University of Human Arts and Sciences, Japan)

Introduction : To examine an effective and efficient health program to improve the nutritional status in the community-dwelling elderly. Method : Three kinds of health program [i.e., two intervention groups (high / low frequency) and control group] were conducted for elderly people over 65 living in three areas of Tome, Miyagi (areas A, B, and C). The effects of health programs were assessed based on the levels of serum albumin at the baseline and after intervention. Results : The levels of serum albumin were increased significantly in the high (area A, n=9, paired t-test, p=0.004) and low frequency (area B, n=24, p=0.021) intervention groups. The level of serum albumin in the control group was significantly decreased after intervention (area C, n=9, p=0.005). Interactions between the high or low frequency intervention group and control group were shown by ANOVA after adjustment for the age and sex, but no significant interaction was found between high and low frequency intervention groups. Conclusion : The effects of the health programs to improve the nutritional status were suggested in the high and low frequency intervention groups, and there were no significant difference in the levels of serum albumin between the two groups. From these results, the low frequency intervention of this study is proposed as an effective and efficient program. Furthermore, there is a need to examine the contents and frequency of interventions. Keywords : community-dwelling elderly, preventing undernutrition, serum albumin

PP25 S-073

RELATIONSHIP BETWEEN ANTHROPOMETRIC PARAMETERS, PERCENT BODY FAT AND PHYSICAL FITNESS PERFORMANCE IN OLD MALE LIVED IN RURAL COMMUNITY

Shoa-Yun YANG¹, Meng-Tzu HOU¹, Jin-Jong CHEN², Ian JEN³ (1. Department of Physical Therapy and Assisitive Technology, National Yang-Ming University, Taipei, Taiwan; 2. Department of Physical Therapy and Assisitive Technology, Exercise and Health Science Research Center, Taiwan. National Yang-Ming University, Taipei, Taiwan; 3. Institute of Public Health, Exercise and Health Science Research Center, Taiwan. National Yang-Ming University, Taipei, Taiwan)

Introduction : The purpose of this study was to disclose the relationship between anthropometric parameters and physical fitness performance in old male lived in rural community in Taiwan. Method : In 2010, 1033 men aged 65 and over lived in Tianliao Township, Southern Taiwan was selected in an epidemiological survey. A total of 414 subjects were enrolled, the respond rate was 60.8%. Structured questionnaires were inquired by face-to-face instructor for each subject. The anthropometric measurements, percent body fat (PBF,

Tanita TBF 410, Tokyo) and 5 physical fitness tests were also obtained accordingly. Results : There were 402 subjects completed the study, the average age was 74.5±6.0 (range=65-98) y/o. Using multiple linear regression models, the independent factors (β coefficient) for 5 different physical fitness tests were listed as followings: chair stand test= age(-0.299), height(-0.247) and socioeconomic status (SES) (1.085); chair sit-and-reach test = age (-0.4), height(-0.822), arm span (0.548) and waist (-0.247); open eyes stand=age(-0.738); 8-foot walking test=age (0.181), waist (0.077) and SES(-0.599); hand grip test (Grip-D, TKK 5401, Japan)=age(-418), height(-296), weight(0.477), arm span(0.287), waist(-0.272) and SES(1.068). Conclusion : The anthropometry, but not PBF, were dominantly associated with the physical fitness performance in old males live in rural community in Taiwan. Keywords : Old Male, Physical Fitness Performance, Anthropometric Parameters

PP25 S-074

EFFECTS OF THE DEVELOPMENT OF VOLUNTARY ACTIVITIES AIMED AT THE POPULARIZATION OF A LOW-INTENSITY EXERCISE PROGRAM BY ELDERLY VOLUNTEERS ON AN AREA

Shouzoh UEKI¹, Jinro TAKATO¹, Go INUZUKA¹, Naoko ARAYAMA¹, Hiroto YOSHIDA¹, Hiroshi HAGA² (1. Faculty of Medical Science & Welfare, Tohoku Bunka Gakuen University, Japan; 2. Graduate School of Gerontology, J. F. Oberlin University, Japan)

Introduction : The purpose of this study was to clarify the area-based effects of voluntary activities led by older volunteers, aimed at the popularization of a low-intensity exercise program, such as gymnastics, composed of muscle strengthening using one's own body weight and stretching exercise. Method : The subjects were 3,055 people over 65 years old living in three districts, in which the implementation rates of voluntary activities by volunteer leaders of the elderly were different. In order to understand the impact on the lifestyle and health of the subjects, in the baseline survey, we investigated the actual condition of eating habits, social participation, and rate of falls in the previous year using interview surveys. In addition, the grip strength, time needed to stand up from a long sitting position on the floor (SULF), and Up & Go time were measured. One and two years later, follow-up surveys were conducted. Results : In the intervention area, rates of being housebound and falls decreased significantly in the first year. There was a tendency toward an increased food diversity score in the area where voluntary activities were marked. In the intervention area, the grip strength was maintained, and Up & Go and SULF times were shortened. Conclusion : These results suggest that this approach required a willingness to promote voluntary activities. Keywords : voluntary activities, elderly volunteers, exercise for older adults

PP25 S-075

A STRUCTURAL ANALYSIS OF HEALTHY LIFE AMONG JAPANESE ELDERLY URBAN DWELLERS: THE EFFECTS OF SOCIO-ECONOMIC STATUS, LIFESTYLE AND SOCIAL HEALTH ON HEALTHY LIFE

Shuo WANG¹, Suwen YANG¹, Fanlei KONG¹, Naoko NAKAYAMA², Bin AI³, Tanji HOSHI¹ (1. Graduate School of Urban Environmental Science, Tokyo Metropolitan University, Japan; 2. Research center for development of nursing practice, St. Luke College of Nursing, Japan; 3. Department of Ethnology and Sociology, MinZu University of China, China)

Introduction : Population aging has been considered one of the most crucial social problems facing contemporary Japan. How to help

elderly people live a healthy life becomes an urgent issue. The purpose of this chronologic study was to clarify causal relationships between healthy life and its related factors among elderly urban dwellers of Japan. Method : The study was based on a self-reported questionnaire survey responded to by 8,162 elderly individuals in 2001, with response rate 80.2%. Moreover, two follow-up surveys were done in 2004 and 2007 respectively. Descriptive analysis by SPSS and structural equation modeling by Amos 17.0 were used to perform the analysis of data. Results : The structural equation modeling fitted the data well with IFI=0.931, RMSEA=0.020. The results showed 'healthy lifestyle' affected 'healthy life' directly. 'Social health' could not only have direct effects, but also could affect 'healthy life' through 'healthy lifestyle' indirectly as well. However, 'SES' had no direct effects on 'healthy life', just could affect it in an indirect way through 'lifestyle' and 'social health'. In the case of standardized total effects, 'lifestyle' and 'social health' exerted much greater effects on 'healthy life' than 'SES' did. Conclusion : A positive lifestyle and social health can turn into a better healthy life, exactly as it happens with high education level and income. Age plays a secondary role, because of its associations with lower levels of SES and social health. Social health is more important among older elderly than younger elderly. Comparing with female elderly, healthy lifestyle is more crucial for male elderly. Keywords : Lifestyle, Social health, Healthy life

PP25 S-076
IN THE EYE OF THE BEHOLDER: PSYCHO-EMOTIONAL ISSUES IN PERSON-CENTERED THERAPY WITH OLDER ADULTS

Sofia VON HUMBOLDT, Isabel LEAL (*Research Unit in Psychology and Health, R&D, ISPA-Instituto Universitario, Portugal*)

Introduction : Aims: This research aims to evaluate psycho-emotional challenges for older adults and the relevance of person-centered therapy (PCT) for older adults. Method : Methods: Forty senior adults, aged above 65 years (M = 71.7; SD = 4.6) were assessed with the the Self-Esteem Scale ('SES') and the Mini-Mental State Examination (MMSE). Socio-demographic data, including gender (57.5% women), marital status (37.5% married) and education (39.2% mandatory school) were also assessed. Bivariate associations were performed. Results : Results: Results yielded a set of five descriptive categories that captured the distinct ways older adults perceived psycho-emotional challenges and that reflected the individual's perceived importance of PCT: 'time perspective', 'the aging body', 'autonomy and control', 'cognitive endurance' and 'loss and reminiscing'. Regarding bivariate associations, results indicated that 'autonomy and control' was associated with the 'aging body' ($r=.552, p<.001$) and 'cognitive endurance' with 'time perspective' ($r=.425, p<.001$). This latter was also associated with 'loss and reminiscing' ($r=.616, p<.001$). Conclusion : Conclusions: This study highlights the importance of PCT for older adults facing psycho-emotional challenges in old age. Interventions with older adults may benefit from clearly understanding older adults' specific issues as an important component for promoting successful aging and reducing health disparities. Keywords : Congruence, person-centered therapy, psycho-emotional challenges

PP25 S-077
PREDICTORS FOR SENSE OF COHERENCE WITHIN A CROSS-NATIONAL SAMPLE OF OLDER ADULTS

Sofia VON HUMBOLDT, Isabel LEAL (*Research Unit in Psychology and Health, R&D, ISPA-Instituto Universitario, Portugal*)

Introduction : Aims: This research aims to explore a causal model of sense of coherence' predictors in a cross-cultural older population.

Method : Methods: Measures were completed using a variety of culturally appropriate methods, including mail-outs, self-administration and interviews. For the purposes of this study, the Sense of Coherence Scale, the Adjustment to Aging Scale, one measure of cognitive functioning - the Mini-Mental State Examination (MMSE) and demographics, were included. All variables prompted fewer than 1% missing values and complete data were available for 709 older adults (M = 82.4, SD = 6.45, (range 74-102)) from eight different nationalities. Structural equation modeling was used. Controlling for age, gender and country of origin, we assessed the level of sense of coherence of elderly people, and its predictors. Results : Results: Sense of coherence is predicted, not only by self-reported spirituality, but also by adjustment to aging, among other variables. Sense of coherence was significantly associated with age progression ($\beta = .426; p = .001$) and perception of health ($\beta = .381; p = .001$). All estimates were statistically significant ($p<.01$). Conclusion: Conclusions: Specifically in late adulthood, changes may affect older adults' worldview and thus their SOC. The older individual with a strong SOC has a greater ability to mobilize and exploit potential resources. In brief, this study stresses the predictors of sense of coherence in older age. Keywords : Predictors, structural equation modeling, sense of coherence, adjustment to aging.

PP25 S-078
THE POTENTIAL OF SPIRITUALITY TO OLDER ADULT'S ADJUSTMENT TO AGING: A QUALITATIVE STUDY WITH MULTIPLE CORRESPONDENCE ANALYSIS

Sofia VON HUMBOLDT, Isabel LEAL (*Research Unit in Psychology and Health, R&D, ISPA-Instituto Universitario, Portugal*)

Introduction : To analyze the indicators of adjustment to aging (AtA) and to investigate the latent constructs that can work as major determinants in spirituality for a cross-national older community-dwelling population. Method : Questionnaires were completed, assessing participants' background information. Interviews were performed, addressing one core area: indicators of AtA. Complete data were available for 154 older adults, aged between 75-103 years (M = 86.6, SD = 6.98) from two different nationalities. Data was subjected to content analysis. Representation of the associations and latent constructs were analyzed by a Multiple Correspondence Analysis (MCA). Results : The most prevalent response of the interviewed participants for indicators of AtA was 'spirituality' (43.2%) whereas 'financial stability' was the least referred indicator of AtA (10.3%). 'Spiritual activities' was the most reported response regarding 'spirituality' (20.0%). Spirituality for older adults was explained by a three-factor overall model: 'spiritual and existential meaning', 'limit-related awareness' and 'community embeddedness'. Conclusion : The findings presented in this paper emphasized the need to explore the potential of spirituality to AtA and the need for improving the spiritual dimension of health care for the older population. Keywords : Spirituality, Adjustment to Aging, Multiple Correspondence Analysis, Community-Dwelling Older Adults

PP25 S-079
OLDER ADULTS' SENSE OF COHERENCE: A LONGITUDINAL STUDY ON THE IMPACT OF PERSON-CENTERED THERAPY

Sofia VON HUMBOLDT, Isabel LEAL (*Research Unit in Psychology and Health, R&D, ISPA-Instituto Universitario, Portugal*)

Introduction : Older adults' sense of coherence (SOC) is often challenged by changes in later adulthood. Therefore, this study aims to explore if a brief eight-session individual person-centered therapy

(PCT) intervention on older adults can promote their SOC, as compared with a control group (waiting list). We posited that participants and randomized to PCT would report improvements in SOC from pre- to post-intervention compared to those in waiting list. Method : The Sense of Coherence Scale (SOCS) and demographics were assessed at the baseline (t1), post-treatment (t2) and at the 12-month follow-up (t3), in a group of 87 participants between 65-86 years (M=71.9 SD=4.77). Results : Results indicated that participants in PCT evidenced greater improvements as to their SOC (31.4%) than those in waiting list (2.3%). Both at the post-intervention, and at follow-up, participants who underwent PCT had a significantly higher SOC (M=4.76, SD=.524). In addition, results revealed no significant between group differences in any socio-demographic variable ($P>.05$) in t1, t2 and t3. Conclusion : Changes in SOC were positive and maintained, thus, findings suggest that PCT is favorable to enhancing SOC. In this context, PCT is also a personal resource to promote SOC. Moreover, since SOC is shown to be associated with health-related well-being among older populations, SOC development in old age should be focused. Keywords : Changes in SOC were positive and maintained, thus, findings suggest that PCT is favorable to enhance

PP25 S-080

USING DIFFERENT SCREENING TOOLS TO ASSESS NUTRITIONAL STATUS IN HOSPITALIZED ELDERLY PATIENTS

Su-E. KUO¹, Yuh-Jane KO² (1. Department of Nutritional Services, National Cheng Kung University Hospital, Dept. of Education, National University of Tainan, Taiwan; 2. Department of Nutritional Services, National Cheng Kung University Hospital, Taiwan)

Introduction : Malnutrition is one of the critical factors affect mortality, morbidity, infection, length of stay, and re-hospitalization, especially in elderly population. An effective screening tool is needed to early detect the risk of malnutrition, so that nutrition care plan could be implemented as soon as possible. Method : We used Nutritional risk screening (NRS-2002), Malnutrition universal screening tool (MUST), and Mini nutritional assessment-short form (MNA-SF) to assess the risk of malnutrition, blood samples were collected to check serum albumin level simultaneously. Results : After informed consent, 60 geriatric patients were enrolled, average aged 79.6 ± 7.7 years, BMI 22.5 ± 5.5 kg/m², both male and female gender were equal (n=30). The percentage of patients at moderate to high nutritional risk were 74%, 45%, and 84% based on NRS-2002, MUST, and MNA-SF separately; at low risk to normal status were 14%, 55% and 16%. Of patients, 38% showed normal serum albumin level (3.5-5.0 mg/dL), among these patients 28.6%, 23.9%, and 66.7% were screened as low risk or good nutritional status assesses by NRS-2002, MUST, and MNA-SF separately. For patients with low albumin level (≤ 3.0 mg/dL), of them 91%, 72.7%, and 63.6% were screened as moderate to high risk when assesses by NRS-2002, MUST, and MNA-SF separately. Conclusion : Malnutrition might be underestimated if MNA-SF was used as screening tool. We need to further analyze the relationship among these three nutritional screening tools, and include more subjects to find a most effective, time-sparing, and accurate tool for clinical applications. Keywords : malnutrition, NRS, MUST, MNA-SF, nutritional screen

PP25 S-081

THE RELATIONSHIP BETWEEN LIGHT-INTENSITY PHYSICAL ACTIVITY AND COGNITIVE FUNCTION IN A COMMUNITY-DWELLING ELDERLY POPULATION : AN 8-YEAR LONGITUDINAL STUDY

Sungchul LEE¹, Atsumu YUKI¹, Yukiko NISHITA¹, Chikako TANGE¹, Heungyoul KIM², Rumi KOZAKAI³, Fujiko ANDO⁴, Hiroshi SHIMOKATA¹ (1. Department for Development of Preventive Medicine, National Center for Geriatrics and Gerontology, Japan; 2. Department of Human Wellness, Tokaigaku University, Japan; 3. Department of Sport Education, Hokusho University, Japan; 4. Faculty of Health and Medical Sciences, Aichi Shukutoku University, Japan)

Introduction : The purpose of this study was to examine the relationship of light-intensity physical activity and sedentary time with cognitive decline independent of MVPA in a community-dwelling elderly population. Method : The subjects were 550 (289 men and 261 women) adults aged 60 years or older who completed the baseline (2000-2002) and eight years later (2008-2010) examinations of the National Institute for Longevity Sciences - Longitudinal Study of Aging in Japan. Data on sedentary, light-intensity physical activity, and MVPA time were collected using an interviewer-administered questionnaire at baseline. Cognitive function was measured using the MMSE at baseline and 8 years later. We examined the effect of light-intensity physical activity and sedentary time on cognitive decline (at least a 3-point decline on the MMSE) by multiple logistic regression controlled for age, sex, BMI, MMSE score at baseline, smoking status, self-rated health, CES-D, education, sleep duration, occupation, medical history (hypertension, myocardial infarction, hyperlipidemia, diabetes mellitus, stroke, rheumatoid arthritis) and MVPA. Results : Participants in the highest light-intensity physical activity quartile were less likely to show cognitive decline than those in the lowest quartile (OR = 0.39; 95% CI = 0.18 - 0.83). In contrast, those in the highest quartile of overall sedentary time were more likely to show cognitive decline than those in the lowest quartile. This tendency was also found among subjects without an occupation and lower education, regardless of multivariate control. Conclusion : A decrease in light-intensity physical activity and an increase in sedentary time are risk factors for cognitive decline in the elderly. Keywords : light-intensity physical activity, cognitive decline, longitudinal study

PP25 S-082

SELF-REGULATION IN THAI OLDER WOMEN WITH SELF-REPORTED KNEE OSTEOARTHRITIS: A PATH MODEL

Suparb AREE-UE¹, Inthira ROOPSAWANG² (1. School of Nursing, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Thailand; 2. Ramathibodi School of Nursing, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Thailand)

Introduction : The purpose of this study is to test a model of factors influencing coping behavior and health status among Thai older women with knee osteoarthritis, and to estimate the direct and indirect effects of illness representation, social support, and self-efficacy on coping behaviors and health status. Method : The 'Common Sense' Model (CSM) of illness representations has been developed as a proposed model for understanding the self-regulation processes in Thai older women with knee osteoarthritis. A total of 274 older adults with knee OA (mean \pm SD age = 63.56 ± 9.82 years, range 50-90 years) living in six communities in Bangkok and its vicinity was recruited. The data were collected through home and health care center visits using questionnaires including the Brief Illness Perception Questionnaire, the London Coping with Rheumatoid Arthritis Questionnaire, the Self-Efficacy Expectation Questionnaire, the MOS Social Support Survey, and Arthritis Impact Measurement Scale 2-Short Form. Data were analyzed using descriptive statistics, correlation techniques, and path analysis. Results : Illness representation was a better predictor of perceived health status than

were the other variables, while self-efficacy was a better predictor of coping behaviors. Illness representation and social support had a statically significant direct and indirect effect on perceived health status. Conclusion : The complex relationships among study variables should help to tailor future interventions more appropriately to break down the progression of the disease and to promote optimal health in Thai older women suffered from knee osteoarthritis. Keywords : knee osteoarthritis; Thai older women; the Common Sense' Model

PP25 S-083

ASSOCIATION BETWEEN HEALTH LITERACY AND HEALTH BEHAVIOR OR HEALTHY WEIGHT OF INDIVIDUALS AGED OVER 65 YEARS IN JAPAN

Tomoe NISHIZAWA, Junko SUGAMA, Seto IINO, Saki OKUBO, Yuki SAWADA, Chisato SUGIMOTO, Masumi DOUNO, Shoko YOKOYAMA, Aya AKAGAWA, Shiho OKAYAMA (*Department of Clinical Nursing, Institute of Medical, Pharmaceutical and Health Sciences, Kanazawa University, Japan*)

Introduction : Senior citizens currently obtain health information in various ways and incorporate this information into their lives. However, some do not have appropriate health behaviors because they misunderstand the information. Therefore, the purpose of this study was to investigate the association between health literacy (HL) and health behavior or healthy weight of individuals aged over 65 years in Japan. Method : This was a cross-sectional study in K city, Japan from August to September 2012. The subjects completed a questionnaire including demographic questions, an HL scale (5 items), and lifestyle questions regarding physical activity, sleeping, and diet (17 items). HL scale responses were solicited on a 5-point scale. The answers to the questions regarding lifestyle were "Yes" or "No." We measured the subjects' height and weight and calculated their body mass index (BMI). Subjects who answered 4 to 5 points for each item of the HL scale were the "High score group," and the remaining subjects were the "Low score group." The subjects with a BMI of 18.5 to 24.9 were the "Normal group," and the remaining subjects were the "Abnormal group." To investigate the association between HL and health behavior or BMI, χ^2 analysis was used for statistical analyses. Results : One hundred twenty-four of the 531 respondents were over 65 years of age. In terms of health behavior, dietary patterns were significantly associated with HL. In contrast, BMI was not associated with HL. Conclusion : These results suggest that acquiring HL effectively improves lifestyle in terms of diet. Keywords : health literacy, health behavior, healthy weight

PP25 S-084

ASSOCIATIONS OF SMOKING BEHAVIOUR WITH SOCIAL SUPPORT AND ACTIVITY IN RURAL ELDERLY JAPANESE MEN: A CROSS-SECTIONAL STUDY

Feng SUN¹, Toshimi YONEYAMA¹, Masamitsu KAMADA¹, Tsuyoshi HAMANO², Masayuki YAMASAKI¹, Kuninori SHIWAKU¹ (*1. Department of Environmental & Preventive Medicine, Shimane University School of Medicine, Japan; 2. Center for Community-based Health Research and Education (COHRE), Organization for the Promotion of Project Research, Shimane University, Japan*)

Introduction : Tobacco smoking is one of the risk factors for health-related diseases. In recent years, there is growing interest in the effect of social factors on smoking behaviour. The aim of this study was to clarify the association between smoking behaviour and social factors, defined by social support and social activity, in rural elderly Japanese men. Method : A total of 978 Japanese men aged over 65 years were

selected from the Shimane COHRE Study for a cross-sectional study. Multiple logistic regression analysis was performed to evaluate the association between social factors and smoking behaviour. Results : 94.7% of subjects reported having some social supports and 44.6% engaged in some kind of social activities. Social support (adjusted odds ratio: 95% confidence interval, 0.75: 0.41-1.38) was not associated with smoking, but social activity (0.69: 0.52-0.91) had a significant association with smoking behaviour. Among the subjects, 89.2% of them reported being satisfied or fairly satisfied with the current life. Life satisfaction (0.49: 0.31-0.78) was associated with smoking. Conclusion : Rural older men engaged in social activities were less likely to smoke. Social activity should be considered as a countermeasure in smoking prevention in the rural elderly population. Keywords : Smoking, Social support, Social activity

PP25 S-085

EFFECTS OF A DAO YIN YANG SHENG EXERCISE (DYYSE) ON PHYSICAL AND MENTAL HEALTH OF JAPANESE ELDERLY POPULATION

Toshio KOBAYASHI, Yubo CAO, Yukio URABE (*Graduate School of Biomedical and Health Sciences, Hiroshima University, Japan*)

Introduction : The Dao Yin Yang Sheng Exercise (DYYSE) as a traditional therapy belongs to Chinese Qi Gong. Its positive effects on healing chronic diseases have been verified in China. However, it is not clear how DYYSE affects the physical and mental functions of elderly populations. This study focused on Japanese elderly population as its study, conducted four weeks of DYYSE, and analyzed the effects on physical and mental functioning indices. Method : The subjects were 30 elderly Japanese (mean age: 64.7 years \pm 10.7 years). The evaluation indices for the study include Body Mass Index (BMI), blood pressure, pulse rate, the maximum one-step length, the time for single leg balance with closed eyes, CES-D scores as mental health, and SF-36 as quality of life (QOL) indices. The data were collected prior to the commencement of the exercise, and then measured again after four weeks of DYYSE. Results : During the four weeks of the DYYSE, there were 27 (90%) subjects who had a participation rate of above 80%. For these subjects, a significant reduction has been observed in their BMI, blood pressure, and pulse rate. In addition, the maximum one-step length and the time for single leg balance have significantly increased. Among the sub-scales of SF-36 indices, "Physical functioning", "Bodily pain", and "General health" have been significantly improved. Scores of CES-D has also been significantly improved. Conclusion : The practice of DYYSE was proved to be effective not only on the physical functions but also on mental health and QOL indices of the elderly Japanese. Keywords : Qi Gong, Quality of life, Physical and mental health

PP25 S-086

DEVELOPMENT OF PHYSICAL FITNESS EQUIPMENTS FOR ELDERLY IN NEIGHBOURHOOD PARKS

Cheng-Yu KUO¹, Tzu-Yao TAI¹, Chiang LIU², Hsueh-Wen CHOUW³, I-Yao FANG⁴ (*1. Department of Mechanical Engineering, Southern Taiwan University of Science and Technology, Taiwan; 2. Graduate Institute of Sports Equipment Technology, Taipei Physical Education College, Taiwan; 3. College of Management Institute of Physical Education, Health&Leisure Studies, National Cheng Kung University, Taiwan; 4. Department of Physical Education, National Taiwan Normal University, Taiwan*)

Introduction : Population aging is progressing rapidly in many industrialized countries and Taiwan is an exemplary one. The increasing aging population is the inevitable trend in the future. The

muscle weakening for elderly may cause in the recession in function, and also lead to inconvenience in daily life. Some simple actions could become more difficult due to the aging process. Method : How to make the elderly strengthen the key muscles by themselves and live independently is the key issue of successful aging. In this study, investigations are performed to census the new outdoor fitness facilities in metropolitan park of Tainan city. These facilities' numbers, types, and their prevalence are further identified. The topology, mechanism and movement are also analyzed to realize the health promotion for the elderly. Results : The results reveal that air walker ranks as top activity in terms of numbers in metropolitan parks of Tainan city (21.1%). Furthermore, 54% of parks in Tainan installed new outdoor fitness facilities. This indicates that these fitness facilities play a more and more important role for the elderly. However, according to the analysis from its mechanism and movement, these facilities can't enhance the health promotion due to no extra loading design. This study develops a upper and lower limb fitness facility equipped with rotary reciprocating cam and assisted by hydraulic resistance. Conclusion : It contains green design and can be involved into the park's surroundings. The muscle strengthening can be improved through this facility and hence provides a social activity and health promotion for aging in place. Keywords : Aging in place, Fitness facility, Active aging

PP25 S-087

META-ANALYSES OF HEALTH OUTCOMES FROM SUPERVISED EXERCISE INTERVENTIONS AMONG HEALTHY OLDER ADULTS

Vicki CONN, Jo-Ana CHASE, Lorraine PHILLIPS, Todd RUPPAR
(Health Sciences Center, University of Missouri, USA)

Introduction : These meta-analyses determined the magnitude of lipid, anthropometric, insulin sensitivity, and cardiovascular fitness (V02max) outcomes of supervised exercise among healthy older adults. Method : Comprehensive diverse search strategies located potential studies. Eligible intervention trials compared treatment and control subjects after supervised exercise with verified exercise dose. Data accuracy was verified through duplicate extraction. Standardized mean differences (d-indices) were calculated using random-effects models. Effect sizes were weighted by inverse of variance to give more influence to larger studies. Q and I2 statistics assessed heterogeneity. Results : Primary study sample mean ages ranged from 60 to 83 years. Six studies were comprised entirely of men and 30 included only women, the remaining studies included both genders. The typical exercise dose was 45-minute sessions thrice weekly over 12 weeks. The fitness effect size was 0.779 ($p < .001$; $k = 48$; k denotes comparisons). The effect size for insulin sensitivity was 0.478 ($p < .001$; $k = 6$). For anthropometric outcomes, the effect size was 0.112 ($p = .055$; $k = 45$). An effect size of 0.189 ($p = .148$; $k = 15$) was calculated for lipid outcomes. Significant heterogeneity (Q) was documented for lipid, anthropometric, and fitness outcomes. Conclusion : These meta-analyses quantified significant improvements in fitness, insulin sensitivity, and anthropometric outcomes from verified exercise among healthy older adults. Statistical power was limited for the smaller lipids effect size. Diversity in sample, intervention, and research procedures probably accounted for significant heterogeneity documented in this project. As more primary studies accumulate, future meta-analyses can use moderator analyses to determine if sample and intervention characteristics account for variations in health outcomes. Keywords : exercise meta-analysis

PP25 S-088

THE EFFECTS OF HYPERTENSION AND DIABETES IN THE

DIMENSIONS OF QUALITY OF LIFE OF ELDERLY PEOPLE

Victor CLAUDIO¹, Dina CARDOSO², Sofia VON HUMBOLDT¹, Isabel LEAL¹ (1. Department of Clinical Psychology and Health, ISPA-I.U. / UIPES, Portugal; 2. Department of Clinical Psychology and Health, ISPA-I.U., Portugal)

Introduction : Aging with quality has become increasingly relevant in a context in which life expectancy has increased. In addition to the efforts made in order to provide an increased life expectancy, several attempts are being explored so that the extra lifespan can be experienced with quality. This research aims at: 1) analyzing the variation of QoL dimensions of older adults with diabetes. 2) examining the variation of QoL dimensions of older adults and with hypertension. Method : 120 patients, between 74 and 97 years old constituted the convenience sample of this study. The instruments utilized were the following: Assessment Questionnaire for Health Gains (SF-6D), Socio-demographic Questionnaire and Mini-Mental State Examination (MMSE). Results : In both pathologies lower mean scores were verified in 'mental health' dimension ($M = 2.85$) in elderly with diabetes and ($M = 3.06$) in elderly with hypertension. Results also indicated significant differences in some of the QoL dimensions of elderly with both pathologies when compared with elderly with other diseases or with no diseases. However the correlation between the variable 'chronic disease' and QoL was not verified ($r = .589$; $p = .61$). Conclusion : This study highlighted that hypertension and diabetes affect dimensions of older adults' QoL. It is thus relevant to take into account these results for clinical practice and behavioral strategies for older populations. Keywords : Hypertension; Diabetes; Quality of life

PP25 S-089

ANALYZING THE EFFECTS OF RELIGION IN THE QUALITY OF LIFE OF AN INTERNATIONAL OLDER POPULATION

Victor CLAUDIO¹, Sofia VON HUMBOLDT¹, Catarina COSTA² (1. Department of Clinical Psychology and Health, ISPA-I.U./UIPES, Portugal; 2. Department of Clinical Psychology and Health, ISPA-I.U., Portugal)

Introduction : One of the motivations of human existence is linked to the search for meaning and value in life. In advanced age, elderly are affected by the end of life and death. These matters can be addressed through religion. Moreover, religion and spirituality are related to the physical and psychological well-being of elderly people. This study aims at assessing the association of religion to quality of life (QoL) and at analyzing the effects of religion on the six dimensions of quality of life: (i) Physical Functioning; (ii) Role Limitations; (iii) Social Functioning; (iv) Pain; (v) Mental Health and (vi) Vitality. Method : The sample comprised 118 people over 74 years, from eight different nationalities, with no psychiatric disorders. For the purposes of this study, the Assessment of Gains in Health Scale (SF-6D), one measure of cognitive functioning - the Mini-Mental State Examination (MMSE) and demographics, were included. Results : Findings indicated that taoist participants showed the highest score for social function score ($x = 6.0$), whilst protestants showed the highest score for role limitations ($x = 5.8$). There were no association between religion and QoL. Conclusion : Religion has proved to be a cross-cultural catalyst for personal investment, internal development and maturity. This study contributed to enlightening the relevance of religion to older adults' QoL. Recommendations for future research and behavioral approaches on older adults' QoL and clinical practice are also presented. Keywords : Health Promotion; Quality of Life; Religion.

PP25 S-090

DOES RELIGION REALLY MATTER? QUALITY OF LIFE AND RELIGION IN A CROSS-NATIONAL SAMPLE OF ELDERLY

Victor CLAUDIO¹, Sofia VON HUMBOLDT¹, Catarina COSTA²
(1. Department of Clinical Psychology and Health, ISPA-I.U./UIPES, Portugal; 2. Department of Clinical Psychology and Health, ISPA-I.U., Portugal)

Introduction : The aging process requires the individual's adaptation to resulting losses and changes. In old age, individuals might search for existential meaning, through religion. Moreover, there is a need to collect empirical data to understand the contribution of religion in the adaptation of elderly to aging. This study aims at examining the relevance of religion for the elderly and at analyzing how different religions may be relevant to the quality of life (QoL) of elderly people. **Method :** The sample comprised 118 participants over 74 years old, from eight different nationalities, including Portuguese, German, English and Romanian; with no psychiatric disorders. For the purposes of this study, the Assessment of Gains in Health Scale (SF-6D), one measure of cognitive functioning - the Mini-Mental State Examination (MMSE) and demographics, were included. **Results :** Findings indicated that QoL score was higher for taoist participants ($x = 5.3$), followed by protestants ($x = 4.9$), when compared to participants without religious beliefs ($x = 4.1$). German participants indicated a higher QdV score ($x = 5.3$) whilst Romanian showed the lowest QdV score ($x = 3.9$). There was no association found between QoL and religion or nationality. **Conclusion :** This study makes a valuable contribution for the incorporation of religion as an intervenient in QoL in old age, enlightening its contribution to healthy aging and behavioral strategies. Recommendations for future research on older adults' QoL and clinical practice are also presented. **Keywords :** Health Promotion, Quality of Life, Religion

PP25 S-091

DIABETES AND HYPERTENSION: ASSESSING THE EFFECTS OF PHYSICAL ILLNESSES ON THE QUALITY OF LIFE OF ELDERLY PEOPLE

Victor CLAUDIO¹, Dina CARDOSO², Sofia VON HUMBOLDT¹, Isabel LEAL¹
(1. Department of Clinical Psychology and Health, ISPA-I.U./UIPES, Portugal; 2. Department of Clinical Psychology and Health, ISPA-I.U., Portugal)

Introduction : There is a set of organic transformations in the aging process that contribute to the appearance of diseases characteristics of this stage of life, such as hypertension and diabetes. The adjustment to these pathologies can be facilitated, by understanding their effect on quality of life (QoL) of elderly people. **Objectives:** i) To analyze significant differences of QoL in elderly with diabetes when compared with elderly with other diseases or with no diseases; and ii) To analyze significant differences in elderly with hypertension when compared with elderly with other diseases or with no diseases. **Method :** The research focused on a sample of 120 patients, between 74 and 97 years. The instruments utilized were: Assessment Questionnaire for Health Gains (SF-6D), Socio-demographic Questionnaire and Mini-Mental State Examination (MMSE). **Results :** The results indicated that elderly with diabetes showed a significantly higher QoL score than the ones with other diseases ($M=1,11$; $p = .001$). Elderly with hypertension showed a level of QoL significantly lower to the ones with no diseases ($M=-0,919$; $p=.001$). **Conclusion :** We concluded that there is an association between these pathologies and the QoL and that this is pertinent for the understanding of health and well-being in older populations. **Keywords :** Diabetes; Hypertension; Quality of Life.

PP25 S-092

RELATIONS AND ASSOCIATED FACTORS AMONG SUPPLEMENT-TAKING HEALTH BEHAVIOR AND SELF-PERCEPTION OF AGING IN MIDDLE-AGED PEOPLE

Yoko NAGAYA¹, Nobuko AIDA², Shin-Ichi SUGIURA³, Hiroshi GOHMA³, Naoko KOBAYASHI⁴, Akemi OGATA⁵
(1. Department of Nursing, The National Hospital for Geriatric Medicine, National Center for Geriatrics and Gerontology, Japan; 2. Graduate School of Medicine (Health Sciences), Nagoya University, Japan; 3. Graduate School of Medicine, Nagoya University, Japan; 4. School of Nursing, Japanese Red Cross Toyota College of Nursing, Japan; 5. Department of Nursing, Association Medical Corporation MEISHOKAI, Total Support Clinic, Japan)

Introduction : We aimed to investigate requirements regarding nursing support for health-related supplement use by clarifying the relationship between supplement use and self-perception of aging and associated factors in middle-aged people. **Method :** A total of 392 of 963 recipients who aged ≥ 40 to < 65 years selected through stratified random sampling of the Basic Resident Register (collection rate, 40.8%) agreed to participate in and around Nagoya City, approved by Nagoya University Ethics Committee. **Results :** With regard to supplement use, 41.8% were currently taking supplements (Current Use), 25.0% had previously taken supplements (Previous Use) and 33.2% had never taken supplements (Never Used). The Current Use group took 2.5 ± 1.7 types of supplement daily for health maintenance ($p < .001$) and as an anti-aging measure ($p < .001$) despite feeling the financial burden ($p < .001$). There was higher self-perception of aging factor 'poor physical condition' among the Current and Previous Use groups (29.4 ± 5.8 and 29.5 ± 5.2 , respectively) than the Never Used group (27.9 ± 5.8) ($p = 0.038$). Female sex, valuing lifestyle health, and positive factors of self-perception of aging (leeway and maturity) were extracted as factors relating to current healthy lifestyle, while no experience using supplements and ineffectiveness of supplements (due to lack of use) were extracted as factors relating to unhealthy lifestyle in order to further investigate nursing support requirements. **Conclusion :** Based on the present findings, the following suggestions comprise nursing support requirements; 1) support based on assessment of health-related supplement use and background factors, 2) health education based on understanding of self-perception of aging, and 3) construction of a healthcare system based on multi-discipline cooperation were. **Keywords :** middle-aged, dietary supplement, health behavior, aging, self-perception

PP25 S-093

EFFECTS OF THREE-YEAR TELECARE-BASED EXERCISE PROGRAM FOR THE HEALTHY ELDERLY IN RURAL JAPAN

Yoshiharu YOKOKAWA¹, Minoru HONGO¹, Hiroaki URAYAMA², Ichiro KAI³
(1. School of Medicine, Shinshu University, Japan; 2. Surgery, Nakamura Hospital, Japan; 3. Emeritus Professor of Social Gerontology, University of Tokyo, Japan)

Introduction : Information communication technology-based telecare can be useful device to promote health condition of the elderly in rural community. Telecommunication video system enables to conduct exercise class by exchanging visual data between remote areas. The purpose of this study is to examine the effects of three-year telecare-based exercise program (TBE). **Method :** Twenty one female inhabitants aged 55 and over were randomly assigned to a TBE group (TBE, $n=11$) and a face to face resistance training group (FRT, $n=10$). Both groups trained once a week. The TBE group conducted slow resistance training without occlusion. The FRT group performed

resistance training with moderate vascular occlusion. And whole body vibration (WBV) twice weekly at a health center. Training by WBV was self-administered using a power plate (Power Plate International, Ltd.) at another center. All of programs were conducted for 33 months, using 6 sets of dynamic exercises. Each TBE and FRT exercise session included 1 sets of 10 repetitions of the movements. Various indicators such as bone mineral density (BMD) and strength were measured at pre- and post-intervention: BMD of femur, elbow extensor muscle strength, one-leg standing time, and 10 m walking time. Results : The mean age±SD were 64.8±4.5 (TBE) and 62.6±5.8 (FRT) years. Both groups improved significantly in their muscle strength and 10m walking performance after the intervention. The differences were observed on balance and walking distance between the two groups. Conclusion : TBE was suggested to be feasible and almost equally effective as FRT among the healthy elderly in remote areas. Keywords : telecare, exercise, BMD

PP25 S-094

THE EFFECTIVENESS OF ORAL HEALTH EDUCATIONAL PROGRAM IN COMMUNITY-DWELLING ELDERLY WITH XEROSTOMIA

Yuki OHARA¹, Naomi YOSHIDA², Yoko KONO³, Hirohiko HIRANO⁴, Hiroko IMURA⁵, Shiro MATAKI¹, Kumiko SUGIMOTO⁶
(1. Section of Behavioral Dentistry, Department of Comprehensive Patient Care, Graduate School of Medical, Tokyo Medical and Dental University, Japan; 2. Department of Dental Hygiene, Faculty of Health Care Science, Chiba Prefectural University of Health Sciences, Japan; 3. Section of Cognitive Neurobiology, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Japan; 4. Research Team for Promoting Independence of the Elderly, Tokyo Metropolitan Institute of Gerontology, Japan; 5. Section of Orofacial Pain Management, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Japan; 6. Basic Oral Health Science, School of Oral Health Care Sciences, Faculty of Dentistry, Tokyo Medical and Dental University, Japan)

Introduction : Few studies have reported about the effectiveness of oral health educational programs for the independent elderly by dental professionals. Thus, the purpose of this study was to evaluate the changes in oral health function by providing oral health education for the independent elderly. Method : The community-dwelling people aged over 65 years who had complaint about xerostomia were recruited for this education program. Forty-seven elderly were assigned into two groups, the intervention group (n = 26) and the control group (n = 21). The intervention group attended a 90-minute oral health education program every 2 weeks for 3 months. The program consisted of oral hygiene instruction, facial and tongue muscle exercise and salivary gland massages. The control group was provided only general information about oral health. The assessment of oral functions such as oral diadochokinesis of articulation, swallowing and taste was performed before and after 3 months with or without intervention. Results : Consequently, 38 subjects (21 from intervention group and 17 from control group) completed the study protocol. In the intervention group, unstimulated salivation and oral diadochokinesis were significantly improved after the program. The summed time of 3 times of repetitive saliva swallowing test was significantly shortened. The recognition thresholds for saltiness and bitterness were significantly lowered. On the other hand, no improvement was observed in the control group. Conclusion : The present result suggests that professional intervention of oral health education is effective for improvement of oral function among independent elderly. Keywords : oral health education, professional intervention, independent elderly

PP25 S-095

SELF-CARE IN ELDERLY PEOPLE WITH CANCER: A QUALITATIVE APPROACH

Carlos LARANJEIRA (Ph.D, Higher School of Health Sciences, Piaget College, Portugal)

Introduction : It is about a qualitative research of the case study type with the general objective of identifying the alterations in the way of living of elderly people with cancer in their home. Its specific objectives are learning how the elderly with cancer refer their life experiences in the home about the changes in life/ health habits and finding out how they perform the self-care therein. Method : For such purpose, home visits to fifteen Portuguese elderly with cancer were made when the semi-structured interview was utilized in order to collect the information. Results : The content analysis provided gathering four categories divided into themes. In the category "Experiencing the disease", two themes were noticed: "search for health care" and "facing the treatment". In the category "perception of the elderly about the disease", two themes stood out: "the subject feels him/herself different" and "the family history related to cancer". The category "the impact of the diagnosis" was related to the themes: psychological support and support from the religious belief. The category "alterations in the way of living" was related to the themes "changes in the daily life", "self-care with food"; "self-care with self-image" and "appreciation of health". Conclusion : Studies like this contribute for the construction of knowledge in the field of health education and, specially, in the case of elderly with cancer. The information about the aspects of health education can help the elderly and their families to manage their care and therefore avoid further hospital admittances and improve their quality of life. Keywords : elderly, cancer, health

PP25 S-096

AWARENESS OF THE IMPORTANCE OF ORAL HEALTH AMONG THE GENERAL PUBLIC: FINDINGS FROM A SURVEY IN JAPAN

Hiroshi UEDA¹, Mitsugu KANDA², Minoru YOSHIDA², Teruhisa TOYOKAWA³
(1. Graduate School of Human Sciences, Osaka University, Japan; 2. Information Management Committee, Hyogo Dental Association, Japan; 3. President's Office, Hyogo Dental Association, Japan)

Introduction : Oral health has been one of the most important issues in aging societies. In Japan, the Ministry of Health, Labour and Welfare has undertaken the 8020 campaign to increase the proportion of those who have 20 own present teeth at the age of 80. Method : We conducted a mail survey among the residents of Hyogo prefecture, Japan about their knowledge of and behavior towards oral health in June 2012. Results : The number of adult responders between ages 20 and 99 was 11,228 (2,433 men and 8,795 women). Among these, women knew more about the relationship between oral health and general health than men. The elderly generally showed a lower awareness of individual dental risk factors such as brushing, dietary practice, smoking, and alcohol consumption than younger age groups. Women in all age groups maintain higher awareness of the importance of dietary health for dental health than men, where lower understanding was observed with age. Older adults show a higher rate of having a personal dentist to visit regularly, especially for women. The rate of oral problems is highest among middle-aged persons and lower among the elderly. Approximately 20% of those who have an oral problem have not seen a dentist. Conclusion : It is concluded that the importance of oral health should be emphasized through an individual's life course to achieve general health in ageing societies.

To do so, oral health promotion to increase public awareness should be continuously highlighted. Keywords : oral health, health promotion, Elderly

PP25 S-097
THE EFFECT ON ATTITUDE OF SCALP AND HAIR CARE OF CLIMACTERIC SYMPTOMS IN MIDDLE AGED WOMEN
Eunjin IM, Chanhwi CHO, Jungtae HAN (*Dept. of Beauty Care, Youngdong University, Korea*)

Introduction : In recent, the stress factor is on the increase by the rise of women's social activities and achievement needs, which climacteric hair loss occurs when climacteric symptoms worsen as well as aging is promoted and premature ovarian failure grows. Method : It made a survey on middle aged women in their forties-sixties living in some areas of Seoul and Gyeonggi in Korea to examine. Results : All physical and psychological factors of climacteric symptoms were significantly and positively correlated with hair management, hair products and interests in hair. While hair conditions were significantly and negatively correlated with physical and psychological factors, which for women with severe climacteric symptoms, the current scalp or hair conditions were bad, and attitudes on scalp and hair management were high. Conclusion : Consequently, for middle aged women with severe climacteric symptoms, scalp or hair conditions were bad, while attitudes on scalp and hair care were high, which they are perceiving the importance of management for the health of scalp and hair, but they are treating scalp and hair as negative attitudes despite the symptom of hair loss. The role of scalp and hair specialists, who help prior prevention of women's hair loss by perceiving the necessity of scalp and hair management and improving the problems of it, is important for their health of scalp and hair by proper management. Keywords : Scalp and Hair Care, Climacteric symptoms, Middle Aged Women

PP25 S-098
GENDER DIFFERENCES IN SMOKING BEHAVIOR AMONG OLDER ADULTS IN TAIWAN: SMOKING TRAJECTORY PATTERNS AND CORRELATES

Dih-Ling LUH¹, Hui-Chuan HSU², Wen-Chiung CHANG³, Ling-Yen PAN⁴ (*1. School of Public Health, Chung-Shang Medical University, Taiwan; 2. Department of Health Care Administration, Asia University, Taiwan; 3. Institute of Health Policy and Management, National Taiwan University, Taiwan; 4. Bureau of Health Promotion, Department of Health, Taiwan*)

Introduction : Smoking behavior changes over time in old age, and smoking patterns differ by gender and age. However, the smoking trajectories of older adults are not often examined. The purpose of this study was to examine the smoking trajectories of older adults and their associated factors by gender. Method : Data were drawn from a nationally representative longitudinal study of a sample of Taiwanese adults aged 50 to 66 (n=2,097). The samples were followed from 1996 to 2007. Group-based trajectory analysis was used. Results : Three smoking trajectories were identified in men: non/rare smokers (42.6%), quitting smokers (16.5%), and chronic smokers (40.9%). The male quitting smokers were more likely to be lower educated than the male non/rare smokers. The male chronic smokers were more likely to be older, lower educated, and living in rural areas than the male non/rare smokers. Two smoking trajectories were identified for females: non/rare smokers (95.9%) and smokers (4.1%). Females of mainlander ethnic groups were more likely to be smokers. Conclusion: There are gender differences in the smoking trajectories and related factors of older adults. Tobacco control programs should be sensitive

to the gender of the target population. Keywords : smoking, group-based trajectories, gender difference

PP25 S-099
BURNOUT SYNDROME: DIFFERENT APPROACHES IN A LONG TERM CARE FACILITY (LTCF)

Ana Cristina AGUIAR¹, Tania Novinsk HABERKORN¹, Sabrina Marcondes TEIXEIRA², Gabriela SATO³, Miriam Ikeda RIBEIRO⁴ (*1. Psychology, Residencial Israelita Albert Einstein, Brazil; 2. Care Givers Supervision, Residencial Israelita Albert Einstein, Brazil; 3. Assistential Coordination, Residencial Israelita Albert Einstein, Brazil; 4. Institutional Manager, Residencial Israelita Albert Einstein, Brazil*)

Introduction : Burnout syndrome is a form of stress produced in professionals who keep constant and direct relationship with other people, being more evident in assistential occupations. Its consequences can be both somatic and psychical and might interfere with the quality of the relations. A LTCF it's known by the heterogeneity of the patients who live in the institutional care, by a variability of levels of functionality or diagnostics. The objective of this study is analyzing this phenomenon of stress on different aspects on the formal caregiver. Method : Data from the Maslach Burnout Inventory (MBI) of 58 formal caregivers were compared with the Neuropsychiatric Inventory (NPI) applied in 158 formal caregivers. These data were analyzed taking into account the degree of functionality of the residents: independent, semi-dependent and dependent. Results : The sub-items of the MBI showed no statistical difference when compared to the degree of functionality (emotional exhaustion, p=0.601; personal realization, p=0.525; depersonalization, p=0.374). Although NPI showed significant difference when analyzing the level of burnout among different degrees of functionality (p=0.001). Conclusion : The phenomenon of burnout is a reality for professionals who keep a constant and direct relationship with people who depend on some kind of care. In addition to the subjective aspects intrinsic of care, factors such as neuropsychiatric disorders might cause significant impact on these cares. The sensibilization of these professionals, besides the emotional aspects, should include educational strategies seeking a better understanding of neuropsychiatric disorders. Keywords : Long Term Care Facility, Burnout

PP25 S-100
PSYCHOMETRIC EVALUATION OF THE GERMAN VERSION OF THE CAREGIVER REACTION ASSESSMENT SCALE (G-CRA)

Astrid STEPHAN, Gabriele KRAUSE, Herbert MAYER, Anna RENOM-GUITERAS, Gabriele MEYER (*Faculty of Health/School of Nursing Science, Witten/Herdecke University, Germany*)

Introduction : Approximately 70% of care recipients in Germany receive nursing care at home, mostly from informal caregivers. Measurements assessing family caregivers' reaction on care giving are lacking. The CRA is a generic tool comprising 24 items in 5 subscales taking positive and negative aspects of caring into consideration. Psychometric properties' testing of the newly translated German version was nested into the 7th Framework European project RightTimePlaceCare. Method : Calculations are based on 234 interviews with caregivers of older persons with dementia in North Rhine-Westphalia, Germany (home care: n=116; nursing homes: n=118; time: 01/2011-01/2012). Exploratory factor analysis (EFA) was performed to derive independent subscales. To assess criterion validity, subscales were inter-correlated. Internal consistency was

computed for subscales using Cronbach's Alpha. Applicability was assessed by evaluation of interviewers' experiences (n=9). Results : EFA revealed 6 factors with eigenvalues >1 but screen-plot clearly supported 5 factors explaining 56.2 % of variance. Dimensions of the original instrument were confirmed. Subscales' inter-correlation was mainly weak to moderate (Spearman's rank correlation coefficients between $r = -0.097$ and $r = 0.304$) indicating different concepts. Only subscales "schedule" and "health" inter-correlated higher ($r = 0.496$; $p = 0.01$) which might indicate that both dimensions cannot be separated accurately enough. Internal consistency of subscales can be judged as sufficient/good (Cronbach's α between 0.671 and 0.78). In general, interviewers judged the G-CRA as well applicable. Conclusion : Sufficient psychometric properties were found indicating - conservatively interpreted - that the G-CRA might be an appropriate measurement on family caregivers' reactions in the German context. Further research is needed focusing on different target groups. Keywords : caregiver reaction assessment, psychometric evaluation

PP25 S-101

PERSONS WITH DEMENTIA BEING AT RISK FOR INSTITUTIONALISATION: ANALYSIS OF JUDGEMENTS BY PROFESSIONAL CAREGIVERS ACROSS EIGHT COUNTRIES

Astrid STEPHAN¹, Basema AFRAM² (1. Faculty of Health/School of Nursing Science, Witten/Herdecke University, Germany; 2. Department of Health Services Research (Faculty of Health, Medicine and Life Sciences), Maastricht University, School for Public Health and Primary Care (CAPHRI), Netherlands)

Introduction : Transition from home care to nursing home is a decisive moment in the trajectory of dementia care. Decision-making in this context is not well understood. We investigated why professional caregivers consider nursing home admission as necessary and whether their judgements differ across countries. The analysis is part of the EC 7th framework project RightTimePlaceCare with England, Estonia, Finland, France, Germany, Spain, Sweden and The Netherlands. Method : Professional caregivers of persons with dementia living at home were asked to openly report anticipated reasons for nursing home admission. Answers were translated into English and inductively categorized, after 20% were checked for reliability and validity. Results : Unstructured risk assessments of 1162 professional caregivers were eligible for analysis. The content analysis of anticipated reasons for admission revealed 25 main categories containing several subcategories. In the participating countries, the following 5 main categories were most often identified: caregiver burden (39%, n=453), caregiver inability to care (20%, n=235), neuropsychiatric symptoms (18%, n=204), overall deterioration (16%, n=185) and ADL dependency (11%, n=128). Professionals in Finland more frequently mentioned patient-related characteristics; caregiver burden was identified in only 26% of all Finnish cases. Risk assessment of Spanish professionals focused primarily on caregiver-related factors: burden was identified in 72% and caregiver inability to care in 15% of all Spanish cases. Conclusion : Professional risk assessment for institutionalisation considered caregiver and patient-related aspects, whereas caregiver-related aspects were predominantly mentioned. In this regard, our analysis revealed interesting variations between countries. Analysis of subcategories and comparison between formal and informal caregivers is ongoing. Keywords : Dementia, institutionalisation, risk assessment

PP25 S-102

INFLUENCE OF VISUALIZING HOME CARE BY USING DEMENTIA CARE MAPPING ON CARE PLAN FOR

ELDERLY PERSON WITH DEMENTIA

Atsushi USHIDA¹, Hisayuki SHIMOYAMA² (1. Graduate School of Medical Welfare, Aichi Shukutoku University, Japan; 2. Social Welfare Department, DOHO University, Japan)

Introduction : This study's purpose was to clarify visualizing home care service by using of Dementia Care Mapping (DCM) to improve a care plan for an elderly person with dementia. Method : The research was done from December 2010 to March 2011, using DCM (7th edition) which was made a small adjustment from original methods. Subjects of the investigation were three elderly persons with dementia who were living in their house, and home care givers. Results : Each investigation took 4 hours, 3 hours were devoted to the observation and 1 hour was devoted to the feedback based on the observation to home care givers. Each home care giver wanted to get advice concerned with dementia care. And they wondered their care ways were effective or not. When they got some advice, they were release from their stress. After that these result reported to each Care Manager who planed care service for the elderly people with dementia. The Care Managers said they got new information and notified new needs for an elderly person with dementia from these reports. They suggested visualizing by DCM should be done one time per three months. That was a chance of monitoring the care plan for elderly persons with dementia. Conclusion : As a result, visualizing by DCM is effective to improve a care plan for person with dementia. Further it releases home care givers from their stress. And visualizing by DCM makes a network relevant people. After those result, a person with dementia can live in their house continuously. Keywords : Visualizing, Dementia Care Mapping, Care Plan

PP25 S-103

A 10-YEAR (2000 TO 2009) HOME CARE STUDY IN SINGAPORE

Benedict John Chain Ching HO¹, Gerald Choon Huat KOH², Lydia SEONG³, Weng Yew THAM⁴, Thai Lian TAN⁵, Ming Ee YOUNG⁶ (1. Regional Health Systems & Primary Care Development, Agency for Integrated Care, Singapore; 2. Saw Swee Hock School of Public Health, National University of Singapore, Singapore; 3. Knowledge Management Division, Agency for Integrated Care, Singapore; 4. Home Care, Code 4 Pte Ltd, Singapore; 5. Clinical Services, Ren Ci Community Hospital, Singapore; 6. Community Care Development Division, Agency for Integrated Care, Singapore)

Introduction : Aim of study: To describe the home care patients in Singapore from 2000 to 2009. Description of home care patients in terms of their socio-demographic profile, mental and physical attributes, functional abilities and existing medical problems. Method : We reviewed the medical records of patients admitted to a home care provider in Singapore, over a 10-year period from 2000 to 2009. Results : Of the 582 patients who utilised the home care services provided by the provider, 37% were male and 63% were female, with about 75% were Chinese and living in HDB 5-room (33%) and 4-room (22%) flat. The acute public hospitals were the main source of patient referral for homecare services, accounting up to 73%. Patients utilising homecare usually have at multiple co-morbid conditions, with stroke (63%) and hypertension (62%) being the two more common medical conditions. Their length of stay as a homecare client averaged a year (355 days) with the death as the main reason for discharge (75%). Other trends on the co-morbid conditions, functional assessment, psychological assessment and social assessment of the 582 patients over the 10-year period would be further analysed so as to better determine the needs of the homecare patients and identifying area in medical and nursing care or social sector that can be ameliorated.

Conclusion : Conclusion: With an increasing emphasis to encourage ageing in the community and more attention diverted to building up the home care industry's capacity and capability, it is important to understand the profile of the patients who had been utilising home care. **Keywords :** home care

PP25 S-104

OUTCOMES STUDY FOR THE ENHANCED HOME AND COMMUNITY CARE SERVICE - THE MAIN HOME CARE SERVICE FOR MODERATE TO SEVERE IMPAIRED ELDERLY IN HONG KONG

Choi Ying TONG, Chi Shan KONG (*Integrated Elderly Care Service, Christian Family Service Centre, Hong Kong*)

Introduction : The Enhanced Home & Community Care Service (EHCCS) in Hong Kong has been a pilot home care service for moderate & severe impaired elderly since 2000. The multi-disciplinary service team consists of social workers, nurses, physiotherapists, occupational therapist & home care workers. The Team provides various home care service including basic to advanced nursing care, rehabilitative exercise, home modification, independent daily living functioning training, carer support and training, & basic home care, e.g. meal delivery, escort service, personal care, household cleaning, etc. This is the main home care service, in the Long Term Care Service System, for this target group in Hong Kong. There are in total 5600 placement of this service in Hong Kong. **Method :** Christian Family Service Centre has, now, a quota of 723 service placement serving the target elderly living in the community. A pre-and-post service evaluation study has been conducted, measuring 127 service users for the degree of improvement of the functioning. Three times of data collection was conducted, ie. baseline, first half year and 2nd half year after service intervention. Barthel Index (dependence of activity of daily living), EMS (mobility & functioning), MMSE (cognitive functions) were used as assessment tools. Improvement was found in comparison. **Results :** Positive improvement was found in EMS and MMSE with statistically significant ($p < .005$). The improvement rate in the first half year is higher than the second half year. **Conclusion :** The improvement resulted shows the positive effectiveness of the EHCC service. **Keywords :** home-care, long-term care, functioning

PP25 S-105

CAREGIVER'S PELVIC MOVEMENT DURING TRANSFER ASSISTANCE FROM BED TO WHEELCHAIR USING 3D MOTION ANALYSIS SYSTEM AND A TRIAXIAL ACCELEROMETER DEVICE

Douglas MORI¹, Yurimi MATSUMOTO², Mitsuhsa SHIOKAWA¹, Kenji KAWAMURA³, Hiroshi SUMII¹ (*1. Health and Welfare Sciences, Prefectural University of Hiroshima, Japan; 2. Health and Welfare Sciences, Niimi College, Japan; 3. Physical Therapy, Kibi International University, Japan*)

Introduction : Regarding on the increased number of elderly people with needs of assistance transferring movement submitted by the caregiver and the high mechanical load on the lumbar spine that these care activities are characterized. This study analyzed caregiver's pelvic movement by simulating transferring assistance from bed to wheelchair. **Method :** By simulating the task of the caregiver while transferring assistance, 6 divided phases were analyzed: Starting-up, Pulling-close, Standing-up, Turning, Sitting-down and Seating. To measure values of the movement course and acceleration data, a 3D Vicon Motion Analysis System were used compounding 12 infrared cameras and a Triaxial Accelerometer device. All the data were plotted on a graph for further analysis of the waveform and statistical analysis

was adopted. **Results :** The positioning of the pelvic axis were determined in all six phases by the coordinates x,y,z, as follows: X-axis: Starting-up (221.35±32.87); Pulling-close (257.55±43.63); Standing (295.54±34); Turning (231.24±19.82); Sitting-down (261.60±39.86) and Seating (314.90±18.42). Y-axis: Starting-up (-5.90±29.20), Pulling-close (-33.25±4.80), Standing (-29.43±7.87), Turning (-34.31±13.61), Sitting-down (-1.54±23.99) and Seating (61.75±24.43). Z-axis: Starting (921.80±30.81), Pulling-close (807.87±42.72), Standing (890.19±64.32), Turning (940.17±9.34), Sitting-down (916.22±17.92) and Seating (824.33±19.10). **Conclusion:** The caregiver's pelvic movement during the transfer assistance, composed by the 6 phases was analyzed showing a high load in this care activity, during the Standing phase, according to the index of acceleration created upon xyz coordinates. **Keywords :** Transfer assistance, 3D, Caregiver

PP25 S-106

IS HONESTY ALWAYS THE BEST POLICY? MEDICAL STUDENTS' VIEWS ABOUT LYING TO PEOPLE WITH DEMENTIA

Ellen TULLO¹, Tony Johnstone YOUNG² (*1. Institute for Ageing and Health, Newcastle University, United Kingdom; 2. Education, Communication and Language Sciences, Newcastle University, United Kingdom*)

Introduction : Communicating with people with dementia (PWD) in clinical settings is complex. Healthcare professionals are often faced with communicative dilemmas, for example whether it is ever acceptable to lie to PWD. Healthcare professionals' views about lying to PWD remain under-explored. **Method :** Using mixed-methods, first and third-year students at a medical school with sites in the UK and Malaysia were invited to complete a Likert-scale questionnaire about communicating with PWD (the CDQ). Participants were subsequently invited to participate in exploratory focus groups to further discuss their responses. Analysis here focussed on data relating to lying to PWD. Audio-recorded focus group data was transcribed and initial codes identified. Further coding cycles allowed the identification of themes relating to perceived acceptability of lying to PWD. **Results :** 284 first and 43 third-year students completed the CDQ. The modal response ($n = 143$) was to 'neither agree nor disagree' that it was acceptable to lie to PWD if the truth might be upsetting. A total of 19 students took part in 6 focus groups. Key themes relating to lying included: plurality of terminology used to describe dishonest communication; uncertainty about the application of ethical principles in practice; and awareness that acceptability of lying was highly dependent on individual circumstances. **Conclusion :** This mixed-methods study revealed that medical students are uncertain about the acceptability of lying to PWD, although some examples of acceptable lies were proposed. This uncertainty highlights the need to continue explore the ethical issues concerning lying to PWD, including the individual circumstances when lying to may be acceptable. **Keywords :** dementia, lying, medical student

PP25 S-107

CHANGES IN LONG-TERM INSTITUTIONAL CARE AND ROUND-THE-CLOCK CARE OF THE ELDERLY DURING TWENTY-FIVE YEARS IN HELSINKI

Heikki TAKKUNEN¹, Elina TAKKUNEN² (*1. Assurance Medicine Consultations, Freelance Helsinki, Finland; 2. General Practice, Freelance Helsinki, Finland*)

Introduction : In Helsinki, the capital of Finland with 600000 inhabitants, long-term institutional care of the aged has been prevalent.

Method : The aim was to study the changes of long-term institutional care and round-the-clock care using the public statistics of Helsinki and National Institute for Health and Welfare, Finland. **Results :** In 1985 there were daily on average 3540 people at old-age and nursing homes. In long-term hospitals on average 2094 beds were daily in use. On average 440 patients needing long-term care were daily waiting in acute wards. In 1985 circa 15% of Helsinki aged 75 years or over (N = approximately 4300) were in the long-term institutional care. Round-the-clock service housing was practically nonexistent. In comparison, in 2010 the average number of clients daily at old-age homes was 2851 persons, of them 2415 persons aged 75 years or over (6.1% of this age cohort). The average number of long-term patients daily in health centre hospitals was 480, of them 323 aged 75 years or over (0.8 of the cohort). In units of enhanced service housing (24h care) the average number of clients was 2902, of them 75 years or over 2511 persons (6.3%). At the end of 2010 the proportion of long-term institutional care in people aged 75 years and over was 5.1%. The total proportion of long-term round-the-clock care of this age group, either institutional or enhanced service housing, was 10.9%. **Conclusion :** In Helsinki during 25 years the proportion of the elderly needing long-term round-the-clock care decreased approaching the goals of the City. **Keywords :** Aged, Long-Term Care, Housing for the Elderly

PP25 S-108
EXPLORING NECESSARY SUPPORT FOR OLDER ADULTS AFTER THE DEATH OF THEIR FAMILY MEMBERS THEY CARED FOR

Hiroko KODAMA (*Human Care Research Team, Tokyo Metropolitan Institute of Gerontology, Japan*)

Introduction : My aims in this study are (a) to identify the challenges older adults face in the lives after the death of their family members they cared for and (b) to explore necessary support for these older adults. It is important to understand their support needs because it is found that family caregiving influences caregivers' health negatively even after the death of care recipients and that such influences are especially powerful for older caregivers. **Method :** I qualitatively analyzed interview data from 15 older adults age 60 and over who cared for one of their family members until her or his death. **Results :** Participants' view of their lives varied by whether they had a coresiding family member and whether and how much they accepted the death of their care recipients. Those without coresiding family members felt helpless, reporting little interest in socializing. Some participants made efforts to close their caregiving lives and move forward by writing down their experiences with their care recipients. Keeping connected with care service staff members also helped participants to adjust to their post-caregiving lives. **Conclusion :** Given the negative view of life among some participants, it is necessary to provide socioemotional support for family caregivers after the death of care recipients, not only during caregiving. **Keywords :** older caregiver, after the death of care recipients, socioemotional support

PP25 S-109
IMPACT OF ORGANIZATIONAL FACTORS ON BURNOUT AMONG CARE WORKERS IN JAPAN

Hisanori ISHIKAWA (*Social Work, Kwansei Gakuin University, Japan*)

Introduction : Due to the increase of the elderly in Japan, it has been necessary to improve the quality and quantity of care workers. This study aims to investigate the cause of care workers quitting through calling attention to the problem of burnout syndrome, and investigating the factors contributing to burnout syndrome. **Method :**

486 care workers in 15 facilities for the aged in Hyogo Prefecture were sent questionnaires by mail in February 2010, and 188 replied. The revised Japanese version of the Maslach Burnout Inventory (MBI), which consisted of 17 items, was used as a dependent variable. Organizational factors such as manager support, working conditions, mutual respect, and maintenance of goals were independent variables. Professional network^o item was also an independent variable. **Results :** The results of one-way ANOVA of burnout of care staff by socio-demographic variables showed that there was a significant difference of their experience and working status. As a result of multiple regression analysis, working conditions and mutual respect were significantly related to burnout with controlling other independent variables. **Conclusion :** The results indicate that burnout can be reduced through improvement of working conditions and by increasing mutual respect. Working conditions such as wages, working hours and holidays are important factors in running and managing care facilities for the aged. Therefore, adequate planning of care workers' salaries and duties are necessary to improve the workers' motivation. In addition, it is the care facilities' managers who should take a leading role in increasing mutual respect among care workers. **Keywords :** Care worker, Burnout, Organizational factor

PP25 S-110
THE NECESSITY OF DEVELOPMENTAL AND CONTINUOUS EVALUATIONS FOR LONG TERM DEMENTIA CARE

Hisayuki SHIMOYAMA¹, Atsushi USHIDA² (*1. Faculty of Social Welfare, DOHO University, Japan; 2. Graduate School of Medical Welfare, Aichi Shukutoku University, Japan*)

Introduction : The purpose of this study was to clarify the function of Dementia Care Mapping (DCM) as developmental and continuous evaluations for long term dementia care. **Method :** We were investigating one group home (GH) for people with dementia using DCM from 2008 to 2012. That GH had 9 residents and 7 staff members. In 2008, we did DCM 5 times. From 2009 to 2012, we did DCM 2 times every year. In total, we did 11 times DCM in this GH. **Results :** Before the 1st DCM, the GH had several problems, some residents showed B.P.S.D, and some staff wondered whether their care methods were effective or not. The 1st DCM clarified the GH's condition, after that the staff improved their care methods. Gradually, the GH's condition improved. However, the next year, we found the condition was worse than previous year's condition. There were 5 months between the 5th DCM and the 6th DCM. The GH's care standard was falling. At 7th DCM, the GH's condition was recovered. From 2011 to 2012, some residents' health conditions were deteriorating as aging. They were in the stage of terminal care. The staff had to get new care methods for these conditions. The DCM helped the staff cope with new needs. **Conclusion :** The word "Developmental" imagines improvement. The care for an elderly people is not always improving, however, that is not due to the lack of a staff's effort. As they age, elderly people might exhibit their worse conditions, continuous evaluations help care staff knows how to do. **Keywords :** Dementia Care Mapping, Continuous Evaluations, Group Home Care

PP25 S-111
THE RELATIONSHIP BETWEEN QUALITY OF LIFE AND DAILY ACTIVITIES OF DISABLED ELDERLY USING HOME CARE SERVICES

Hsiao-Mei CHEN¹, Ching-Min CHEN² (*1. Department of Nursing, and Doctoral Student, National Cheng Kung University, CC0003, Taiwan; 2. Department of Nursing, National Cheng Kung University,*

CC0003, Taiwan)

Introduction : As proportion of elders increased, the need for long-term care also increased. To enable aging in place for the elderly, the government has implemented home care services to utilize this community-based long term care service in meeting their needs. Home care service provides 'in home' elder care services which can help the disabled individuals with daily tasks such as bathing, cleaning the home and preparing meals in order to maintain their independence and stay at homes for as long as possible. As utilization of the services increasing, it is important to know the relationship between quality of life and daily activities of disabled elders who using home care services. **Method :** A cross-sectional, correlated design was used. A total of 255 disabled elders currently using home care services from the seven home care service centers in Taichung, Taiwan were recruited. The SPSS 17.0 was used for statistical analysis. **Results :** The mean scores of QoL are 45.41. Result of multiple regression analysis reveals a total of 39.2% of the variance in QoL by following predictors respectively. Income (over 15001 NTD monthly), not receiving public aid, fewer diseases, and better in IADLs are positively predicting QoL. Results of this study demonstrate the importance of home care service in helping disabled elders with ADL and IADL to enhance their QoL. **Conclusion :** The research results demonstrate the empirical evidence of the relationship between daily activities and quality of life among disable elders using home care services. A better follow-up and interventional study will be recommended for future research. **Keywords :** quality of life, home care services, activities of daily living

PP25 S-112

A COMPARATIVE STUDY OF MUSCULOSKELETAL DISCOMFORT AND PSYCHOSOCIAL BURDEN AMONG FOREIGN AND DOMESTIC NURSING ATTENDANTS IN TAIWAN

Pei-Chun LIN¹, Ku-Chou CHANG², Yu-Ching HUANG², Man-Chun CHOU³, Hsuei-Chen LEE⁴ (1. Department of Rehabilitation, Tri-Service General Hospital, Taipei Clinic Center, Taiwan; 2. Department of Neurology, Kaohsiung Chang Gung Memorial Hospital, Taiwan; 3. Department of Nursing, Kaohsiung Chang Gung Memorial Hospital, Taiwan; 4. Department of Physical Therapy and Assistive Technology, National Yang-Ming University, Taiwan)

Introduction : Nursing attendants (NA) are at risk of work-related musculoskeletal disorders (MSD) and psychosocial burden. This study investigated the prevalence and risk factors related to MSD and psychosocial burden for foreign NA (FNA) and domestic NA (DNA) in Taiwan. **Method :** This cross-sectional comparative study recruited family FNA and hospital affiliated DNA after informed consents. Variables were collected and compared between FNA and DNA including: 1) Demographics, 2) Physical fitness, 3) Knowledge of transfer skills (0-10, 10=excellent), 4) Frequencies of tasks and activities, 5) Nordic Musculoskeletal Questionnaire (NMQ), 6) Caregiver Strain Index (CSI 0-13, normal < 7), 7) Cervical and lumbar spine image, and 8) urine 17-hydroxycorticosteroid (17-OHCS). **Results :** The study enrolled 85 FNA and 65 DNA with mean age 31.4 and 51.4 years. MSD was prevalent in 70.6% FNA and 83.1% DNA, frequently on neck (40-52%), low back (37-48%), and shoulder (35-55%). FNA performed better than DNA in BMI, grip strength, and flexibility. Both groups had worse abdominal/back muscular endurance compared to age-matched norms. FNA showed higher work loading but inadequate knowledge of body mechanics. Among 39 FNA and 50 DNA undertaking X-ray examinations, C-spine abnormality was 35.9% vs. 82.0% while L-spine abnormality was

51.3% vs. 84.0%. C/ L spine lesions were positively correlated to MSD. CSI was 6.0 vs. 4.4 and abnormal 17-OHCS was found in 59.6% vs. 43.4% of FNA and DNA respectively. **Conclusion :** The prevalence of MSD in NA was high. Intervention on fitness training and education of transfer skills might ameliorate MSD risk for NAs. **Keywords :** Domestic nursing attendant, Foreign nursing attendant, Musculoskeletal disorder, Psychosocial burden, Risk factor

PP25 S-113

COST-EFFECTIVENESS OF A CHRONIC CARE MODEL FOR COMMUNITY-DWELLING FRAIL OLDER ADULTS: DESIGN OF THE ECONOMIC EVALUATION OF ACT (FRAIL OLDER ADULTS: CARE IN TRANSITION)

Karen VAN LEEUWEN¹, A.P.D. JANSEN², J.E. BOSMANS³, H.P.J. VAN HOUT², M.W. VAN TULDER³, H.E. VAN DER HORST², G. NIJPELS² (1. General Practice and Elderly Care Medicine, VU University Medical Centre / EMGO Institute for Health and Care Research, Netherlands; 2. General Practice and Elderly Care Medicine, EMGO+ Institute for Health and Care Research, VU University Medical Center, Netherlands; 3. Department of Health Sciences, EMGO+ Institute for Health and Care Research, VU University Amsterdam, Netherlands)

Introduction : Health care utilization in Western countries is increasingly driven by the needs of vulnerable older persons. New care models are needed to warrant the financial tenability of health care systems. We evaluate the cost-effectiveness and -utility of the Chronic Care Model for community-dwelling frail older adults compared to usual care. **Method :** Design: Prospective (2-year) economic evaluation from a societal perspective alongside a stepped wedge cluster RCT Study population: Dutch community-dwelling frail older adults (N = 1147) and their primary informal caregivers Intervention: Half-yearly geriatric assessments of care needs will be performed by practice nurses using the Resident Assessment Instrument (RAI), resulting in a tailored care plan. Complex situations are reviewed in a multidisciplinary meeting (including the patient's general practitioner). All professionals involved are directed by a central CCM team, which encourages coordination between care organizations. Measurements: Effect measures at 6, 12, 18 en 24 months include functional status (Katz Index) and quality of life (EQ-5D). Costs include health care utilization by both the older adults and their informal caregivers, and the costs of development and implementation of the CCM. Resource use is measured using cost diaries and will subsequently be valued using Dutch cost prices. Analysis: Bootstrapping will be used to analyses cost-effectiveness. Cost-effectiveness planes and cost-effectiveness acceptability curves will be estimated. **Results :** Results are expected in the second half of 2013. **Conclusion :** This study will show whether implementing the CCM for community-dwelling older adults is cost-effective compared to usual care. **Keywords :** Care models, Cost-effectiveness, Design

PP25 S-114

A NEW ATTEMPT TO ACHIEVE SEAMLESS MULTIDISCIPLINARY COOPERATION USING INFORMATION AND COMMUNICATION TECHNOLOGY IN AGGRESSIVE PROMOTION OF HOME MEDICAL CARE IN JAPAN

Katsuya IJIMA¹, Satoru YOSHIE¹, Mari KIMATA¹, Mikio IHORI¹, Takuma YAMAMOTO¹, Jun GOTO¹, Shinsuke FUJITA², Katsuhiko TAKABAYASHI³, Minoru KAMATA¹, Tetsuo TSUJI¹ (1. Institute of Gerontology, The University of Tokyo, Japan; 2. Dept. of Welfare and Medical Intelligence, Chiba University Hospital, Japan; 3. Division for Medical Informatics and Management, Chiba

University Hospital, Japan)

Introduction : Now Japan is advancing toward super-aged society, there is general consensus that the current healthcare delivery system will not be able to supply an adequate workforce for the ever-increasing chronic-care needs of growing Japanese elderly. Therefore, medical policy in Japan should be redefined. In concrete, it is necessary to reconsider the importance of patient-centered home medical care (HMC) comprehensively, but not the traditional hospital-centered care only. In particular, aggressive promotion of HMC is strongly demanded further, however, many problems are still piled up. Our aim is to achieve 'AGING IN PLACE' that the patients should receive hospitable care closely connected with their life in their hometown (region) throughout their lifetime. **Method :** Here, we promote patient-centered home medical care, which implements chronic and/or end-of-life care models, as a new model of a promising framework for primary care transformation in Kashiwa city, 400 thousand population city in the north-east part of Mega-Tokyo. The intents of our challenge are to provide coordinated and comprehensive care rooted in a strong collaborative relationship and to launch an original model with 'chief physician/vice-chief supportive physician system'. **Results :** This system strongly consists of the multidisciplinary team-based care system. In addition, the use of Information and Communication Technology (ICT) with mobile device has made possible smooth and seamless cooperation from it without time lag. **Conclusion :** Healthcare reform will require implementation of new models of care with utilizing ICT. We report new perspective based on the progression of our challenge in Kashiwa city on the concepts of the patient-centered HMC. **Keywords :** Comprehensive Home Medical Care, Multidisciplinary Cooperation, ICT

PP25 S-115

USER ATTRIBUTES THAT INFLUENCE THE DEGRADATION OF QOL OF THE ELDERLY LONG-TERM CARE INSURANCE USERS

Kazutaka MASUDA¹, Masakazu SHIRASAWA², Ryosuke HATA³, Satoru YOSHIE⁴, Hiroko SHIRAKI⁵, Keiko YAMADA⁶, Hiroko TAKASUNA⁷, Asako YONEZAWA⁸, Koji KISHIDA⁹, Yoshimasa TAKASE¹⁰, Katsuko TANNO¹¹ (1. Faculty of Human Sciences, Waseda University, Japan; 2. Graduate School of Gerontology, J.F. Oberlin University, Japan; 3. School of Social Welfare, Hokusei Gakuen University, Japan; 4. Institute of Gerontology, The University of Tokyo, Japan; 5. General Division, Fuji Care Corporation, Japan; 6. Division of Chief Care Managers, Maebashi-shi Comprehensive Community Support Center, Japan; 7. Division of Visiting Nurse, Minamiku Visiting Nurse Center, Japan; 8. Social Innovation Consulting Sector, NTT Data Institute of Management Consulting, Japan; 9. Department of Home Economics, Wayo Women's University, Japan; 10. Division of Visiting Doctors, Takase Clinic, Japan; 11. Department of Physical Therapy, Yamagata Prefectural University of Health Sciences, Japan)

Introduction : With the aim of identifying the characteristics of the service users whose QOL tends to degrade, the study investigated the changes of QOL for one year, observed by case managers, as well as the correlation between the changes and the user attributes. As a result, age, dementia and the after-effect of cerebrovascular disease (CVD) were identified as the QOL degrading factors. **Method :** A panel survey was conducted from 2010 in order to observe the changes of the QOL of the service users. A logistic regression analysis was then conducted to determine the correlation between the changes of QOL and the user attributes. **Results :** As a result of logistic regression analysis, it was shown that the degrading risks of eating and bathing

are approximately 2.5 times higher among the users of over 75 years old group, compared to the under 75 group. It was also shown that the degrading risks of toileting, communication, and motivation in life are more than 2 times higher among the users with dementia, compared to those without. The degrading risk of eating is 1.27 times and the communication 2.13 times higher among the users with after-effect of CVD. **Conclusion :** For high-risk users, it is necessary to conduct detailed assessments and coordinate and manage the service provision in order to prevent further degradation as much as possible. It is also necessary to ensure that care support professionals have knowledge of risk management in order to prevent accidents and illnesses caused by the degradation of QOL. **Keywords :** case management, QOL

PP25 S-116

A STUDY BASED ON THE THOROUGH DATA ANALYSIS OF THE ELDERLY REGARDING THE NUTRITION GUIDANCE OFFERED AT THE DAY CARE CENTER

Keiko ENDO (Section of Oral Health Care Science for Community, Tokyo Medical and Dental University, Japan)

Introduction : The Nursing Care Insurance system in Japan has been focusing mainly on the preventative care since 2005. However, its substantial target has been the underweight elderly with precise nutrition program. The objective of this research is to verify the necessity of a new nutrition guidance program for the overweight elderly who are receiving the day-care services. **Method :** The elderly at the Day Care Center have been divided into five groups for the data analysis: the underweight with their BMI below 18 and the overweight with their BMI over 25. The questionnaire survey was conducted for both groups concerning their daily diet and their feeling of contentment induced by the food in order to specify the correlation. **Results :** The data consist of age, gender, height, weight, need for nursing care, use of the nursing care insurance services, illnesses, single household or with a family, physical activities, and nutrition assessment. For the purpose of examining their mental wellbeing, several questions were asked such as their judgment of present physical status, their awareness of weakening ability, their daily diet, and their request for the better services at the Day Care Center. **Conclusion :** The data shows that there is a strong correlation between the overweight and the necessity for a further nursing care, in remedy for nutrition balance. Therefore, this research leads to a conclusion that a new approach for nutrition guidance should be adopted at the Day Care Center to support the quality of life of the overweight elderly now and in the future. **Keywords :** Obese elderly, nutritional care, Day Care Center

PP25 S-117

ACTUAL CONDITION OF FALL PREVENTION INVOLVING COLLABORATION FROM THE PERSPECTIVE OF THE ROOT CAUSES OF FALLS: FOCUS ON GERIATRIC HEALTH SERVICE FACILITIES

Keiko YAMAMOTO, Etsuko KAKIYAMA (Nursing, Kyushu University of Nursing and Social Welfare, Japan)

Introduction : Fall prevention at elderly care facilities requires the collaboration of facility staff as the risk of falls cannot be avoided by the elderly individuals themselves. In the present study, we therefore aimed to elucidate the actual awareness and collaboration of staff regarding fall prevention. **Method :** An anonymous self-report questionnaire survey was conducted on a total of 530 geriatric health service facilities. The inadequacy of such survey items as sharing of information among professions, assessment of users, care planning, and evaluation of plans is considered a root cause of falls. The present

study was approved by the ethics committee of the researchers' university. Results : Responses were obtained from a total of 127 facilities (response rate, 24.0%). Sharing of information, care planning, and evaluation of plans were implemented by 97% of facilities while assessment was implemented by 80% of facilities. At many facilities, the four items were implemented by multiple professions. However, investigation of the details of implementation such as methods and timing showed that 20% of staff had a common awareness. In addition, none of the facilities had a common awareness for all four items. Facilities at which staff had a common awareness tended to have fewer falls. Conclusion : Although staff implemented fall prevention, there was a lack of common awareness within facilities regarding the methods and timing of implementation. These findings suggest that improvement of the lack of common awareness may strengthen collaboration among staff and contribute to fall prevention. Keywords : Fall prevention, collaboration, residential care

PP25 S-118

EFFECTS OF USING AROMATHERAPY TO RELIEVE KNEE PAIN FOR THE ELDERS IN COMMUNITY: A RANDOMIZED CONTROLLED TRIAL

Cheng-Yuan LIN, Shu Nu CHANG-LEE (*Long-term Care, Asia University, Taiwan*)

Introduction : Osteoarthritis is a common cause of disability in elderly. Most patients with the condition will be managed in the community. This study was aim to investigate the effects of aromatherapy to relieve the knee pain for the elders in community. Method : This study was carried out in three communities. A single-blind, placebo-controlled randomized study was conducted to evaluate the effects of aromatherapy to relieve the knee pain for the elders in community. A total of 81 elders with knee pain were randomly allocated to 2 groups, 41 in experimental group and 40 in the control-placebo group. Outcome measures included the Western Ontario and McMaster universities (WOMAC) osteoarthritis index of pain, disability and joint stiffness in knee. Results : The scores in WOMAC were reduced significantly at 1 and 2 months ($p < 0.001$) in both groups. Nevertheless, in first month of intervention, the scores of pain, stiffness and motor disturbance in experimental group were reduced much more remarkably as compared with placebo group ($P < 0.01$, $P < 0.05$). Conclusion : Positive effects with both groups were observed. Moreover, the beneficial long-term effects on knee pain with aromatherapy appeared to be sustained. In conclusion, aromatherapy can significantly relieve the knee pain for the elders in community. Keywords : Osteoarthritis, aromatherapy, randomized controlled trial (RCT)

PP25 S-119

GRANDCHILDREN'S BEHAVIOR PROBLEMS AND CUSTODIAL STATUS PREDICT DEPRESSION AND BURDEN IN GRANDPARENTS

Loriena YANCURA (*Family and Consumer Sciences, University of Hawaii, USA*)

Introduction : Research literature provides conflicting information on how raising grandchildren influences mental health. These conflicting findings might be because there are variations in type and intensity of care. Some grandparents provide custodial care to grandchildren, without assistance from the children's biological parents; other grandparents provide only babysitting or part time care. The present study compares mental health outcomes between groups of grandparents based on type (custodial vs. part time) and intensity (presence or absence of grandchildren's behavioral problems) of care.

Method : Participants in this pilot study were 29 grandparents aged 51-84 years who completed structured interviews that included measures of CESD Depression, Burden, Self-Care, and Life Satisfaction. One-Way ANOVAs were used to compare outcome variables between three groups based on intensity of grandchild care: low (part time care, no grandchild problems), medium (either custodial care or grandchild with problems), and high (custodial care and grandchild problems). Results : All groups had significantly different scores on CESD depression, $F(2,26) = 5.42$, $p < .01$, and emotional burden, $F(2,26) = 14.147$, $p < .001$. Post hoc tests showed that high intensity grandparents had highest scores and low intensity grandparents had the lowest scores. Conclusion : These findings suggest that the impact of raising grandchildren on grandparents' health depends on the type and intensity of care. Grandparents providing custodial care to grandchildren with behavior problems may be most at risk for poor mental health outcomes. Keywords : grandparents, depression, burden

PP25 S-120

THE RELATIONSHIPS BETWEEN CAREGIVER BURDEN AND LEARNED RESOURCEFULNESS FOR THE SENIOR CAREGIVERS OF THE DISABLED OLDER ADULTS

Meng-Chun CHEN, Kuei-Min CHEN (*EE0003, CC0002, Taiwan*)

Introduction : According to the standard of ageing population introduced by the United Nations, Taiwan has developed as an aging society since 1993. Caregivers are under heavy burden levels for caring for the disabled older adults. Rosenbaum (1990) emphasized a set of skills for regulating internal events and using problem solving methods obtained from internal and external events combined with experience is known as learned resourcefulness. The purpose of this study was to explore caregiver burden and learned resourcefulness for the senior caregivers of the disabled older adults. Method : A cross-sectional correlation research design was used in this study. Using convenience sampling, 108 senior caregivers of the disabled older adults were recruited from a medical center and a regional teaching hospital, southern Taiwan. The data was collected using a structured questionnaire interview. Measures used in this study include SPMSQ, Barthel Index, the Caregiver Burden Scale and the Rosenbaum's Self Control Scale (SCS). Results : Results indicated that the two variables " caregiver's burden and learned resourcefulness " were negatively correlated ($r = -.70$; $p < .001$). Multiple regression analysis further showed that the predictors of caregiver burden included learned resourcefulness, economic status, and duration of care. These three predictors accounted for 57.2% of total caregiver burden variance. Conclusion : Results of this study revealed that the health professionals should understand the effect of the senior caregiver's burden and self-control skills. Results suggested that the healthcare professionals who use cognitive behavior coping strategies (learned resourcefulness) may help senior caregivers to cope with stressful events and decrease the caregiver's burden. Keywords : senior caregivers, caregiver's burden, learned resourcefulness

PP25 S-121

PREVALENCE OF PAIN AND THE RELATIONSHIP BETWEEN PAIN AND PHYSICAL/PSYCHIATRIC FUNCTIONS AMONG THE ELDERLY WITH DEMENTIA IN JAPANESE GERIATRIC FACILITIES

Mizue SUZUKI¹, Yukari TAKAI², Yoshie FURUTA³, Yumi MATSUI⁴, Ayami SATO³, Hajime OOSHIRO⁵, Noriko Mitani YAMAMOTO⁶, Masao KANAMORI⁷ (*1. Faculty of Nursing, Hamamatsu University School of Medicine, Japan; 2. Graduate School of Health Sciences, Gunma University, Japan; 3. Graduate School of Nursing, Hamamatsu University School of Medicine, Japan;*

4. Nursing Department, Totomi Hospital, Japan; 5. Administration, Totomi Hospital, Japan; 6. Graduate School of Medicine, the University of Tokyo, Japan; 7. Department of Health Sport, Seikei Spot College, Japan)

Introduction : Elderly patients with dementia who have communication impairments are often having difficulty to report the degree and locations of their pain appropriately. Therefore, it is highly possible that physical/psychiatric functions could be impaired by the pain. The purpose of this study is to clarify the pain among the elderly patients with dementia by using the Japanese version of the Abbey Pain Scale (APS-J) and to find its relationship between pain and physical/ psychiatric functions. **Method :** One hundred twenty nine elderly patients with dementia staying at the geriatric psychiatry hospitals and long-term care health facilities between August and October of 2012 were enrolled in this study. Primary nurses evaluated their patients' pain by using the APS-J. Clinical psychologists and occupational therapists evaluated these patients' cognitive functions and dementia symptoms by using the Mini-mental State Examination (MMSE), the Japanese version of the Gottfries-Brane-Steen Scale (GBS-J) and Behavioral symptoms in Alzheimer's disease (Behave-AD). **Results :** In the results, the subjects of 41(32%) suffered from pain. The relationship among the total score of APS-J and subscales of GBS-J such as motor functions, instinctual, emotional functions, and different symptoms of dementia were significantly correlated. Due to these findings, pain could induce certain Psychological Symptoms of Dementia (BPSD), degenerate of cognitive impairment and ADL among the elderly patients with dementia. **Conclusion :** It was suggested that nurses have to assess elderly patients with dementia to reduce pain even though they have communication impairments. **Keywords :** Dementia, Pain, physical/psychiatric functions

PP25 S-122

DIFFICULTIES EXPERIENCED BY STAFF AT WELFARE FACILITIES FOR THE ELDERLY REQUIRING LONG-TERM CARE WHEN CUTTING THE TOENAILS OF RESIDENTS WITH DEMENTIA AND RELATED STRATEGIES

Nobuko AIDA¹, Makomi TAKAKI², Naoko KOBAYASHI³, Yoko NAGAYA⁴, Akemi OGATA⁵, Hiroshi GOHMA⁶, Shin-Ichi SUGIURA⁶ (1. Graduate School of Medicine (Health Sciences), Nagoya University, Japan; 2. Department of Nursing, Nagoya University Hospital, Japan; 3. School of Nursing, Japanese Red Cross Toyota College of Nursing, Japan; 4. Department of Nursing, The National Hospital for Geriatric Medicine, National Center for Geriatrics and Gerontology, Japan; 5. Department of nursing, Association medical corporation MEISHOKAI, Total Support Clinic, Japan; 6. Graduate School of Medicine, Nagoya University, Japan)

Introduction : The present study clarified the difficulties experienced by 5 care workers and 3 nurses at a welfare facility for the elderly requiring long-term care when cutting the toenails of residents with dementia, and the details of related strategies. **Method :** The study was approved by the Nagoya University School of Medicine Life Ethics Committee School of Health Sciences, and was done by interview method. **Results :** Difficulties comprised 1) dealing with behavioral and psychological symptoms of dementia (BPSD) provoked by the characteristics of care activities; 2) dealing with unpredictable and dangerous situations; and 3) the dilemma of being unable to cut the toenails even if willing to due to factors such as being too busy and the limited discretionary power of care workers and nurses. High levels of awareness were observed regarding dealing with BPSD and risk management, and various strategies were employed. However, the dilemma between job role and limited discretionary power were not

proactively handled. **Conclusion :** The present findings suggest that a nationwide survey is required to investigate 1) the care provision environment affecting toenail care; 2) the relationship between care techniques and educational background regarding risk management; and 3) the effects of job role and limited discretionary power on the implementation of toenail care and the requirements of basic and postgraduate education regarding foot care in the elderly. **Keywords :** dementia, trimming and filing of nails, welfare facilities for the elderly requiring long-term care

PP25 S-123

THE BEST EVIDENCE FOR MINIMIZING RESISTANCE-TO-CARE (RCT) BEHAVIORS DURING ASSISTED PERSONAL CARE FOR OLDER ADULTS WITH DEMENTIA IN NURSING HOMES: A SYSTEMATIC REVIEW

Rie KONNO¹, Kiyoko MAKIMOTO², Hee Sun KANG³, Miyae YAMAKAWA² (1. Department of Nursing, Kansai University of International Studies, Osaka University, Japan; 2. Division of Health Sciences, Osaka University Graduate School of Medicine, Osaka University, Japan; 3. Red Cross College of Nursing, Chung-Ang University, Korea)

Introduction : The purpose of this study was to systematically review the literature regarding the effectiveness of non-pharmacological interventions for resistance-to-care (RCT) behaviors during assisted personal care for older adults with dementia in nursing homes. **Method:** A review was conducted by searching the relevant electronic databases with specified search terms for studies published between 1990 and 2012. The references listed in the selected publications were also searched for additional studies. Twenty articles were included for final analysis. **Results :** The majority of studies, firstly, employed a quasi-experimental design with a small sample, and secondly, were conducted only in one institutional setting. The participants' age ranged from 55 to 101 years and the majority were female. Participants in most studies had a moderate to severe level of dementia. Interventions such as music or individualized person-focused care were examined during mealtime, bathing, oral care, and morning care to manage RCT behaviors. Music was the most common intervention. Most studies measured only behavior of participants except four studies that measured emotion or interactional behavior of caregivers. Playing music and use of the person-focused approach was found to be effective for reducing RCT behaviors. **Conclusion :** This review identified playing music during mealtime and using the person-focused approach can minimize RCT behaviors of older adults with dementia. However, more high-quality research is necessary to confirm these findings. Evaluating the impact of intervention on the caregivers would be desirable since caregivers play a crucial role in managing resistant behaviors during personal care. **Keywords :** Dementia, Nursing home, Resistant Behavior

PP25 S-124

INFLUENCE OF DEMENTIA ON CHANGES OF CONDITION OF THE ELDERLY WHO REQUIRE EVERYDAY LIFE ASSISTANCE

Ryosuke HATA¹, Masakazu SHIRASAWA², Kazutaka MASUDA³, Satoru YOSHIE⁴, Hiroko SHIRAKI⁵, Keiko YAMADA⁶, Hiroko TAKASUNA⁷, Asako YONEZAWA⁸, Koji KISHIDA⁹, Yoshimasa TAKASE¹⁰, Katsuko TANNO¹¹ (1. School of Social Welfare, Hokusei Gakuen University, Japan; 2. Graduate School of Gerontology, J.F. Oberlin University, Japan; 3. Faculty of Human Sciences, Waseda University, Japan; 4. Institute of Gerontology, The University of Tokyo, Japan; 5. General Division, Fuji Care Corporation, Japan; 6. Division of Chief Care Managers, Maebashi-shi Comprehensive

Community Support Center, Japan; 7. Division of Visiting Nurse, Minamiku Visiting Nurse Center, Japan; 8. Social Innovation Consulting Sector, NTT Data Institute of Management Consulting, Japan; 9. Department of Home Economics, Wayo Women's University, Japan; 10. Division of Visiting Doctors, Takase Clinic, Japan; 11. Department of Physical Therapy, Yamagata Prefectural University of Health Sciences, Japan)

Introduction : With the aim of identifying the influence of dementia on the changes of conditions of the elderly requiring everyday life assistance and using the elderly long-term care insurance services, the study followed the changes of QOL assessment of the service users for one and half years, to investigate the correlation between the changes and dementia. Method : A panel survey was conducted. In the study, the changes in the QOL evaluations of the service clients were analyzed at three time points, at the start of the case management, 6 months and 18 months after receiving the service, during the 18 months of the investigation. In order to identify the influence of dementia on the changes of clients' QOL evaluation, two-way repeated measure ANOVAs were conducted with each of the nine QOL indexes as the dependent variables, the time as the independent variable and with/without dementia as the between-subject factor. Results : As a result of the analysis, time was shown to have a significant correlation with all QOL items, demonstrating that the case management service influences the QOL of the clients. Dementia showed significant correlation with the four QOL items, identifying the negative pattern of changes among the clients with dementia. Conclusion : The study demonstrated that the QOL of the elderly temporarily improves after starting to receive the case management service, but that it tends to deteriorate again. It is significant that the study showed the possibility that even the elderly with dementia could maintain the once-improved QOL with appropriate case management. Keywords : Case management, Dementia, Panel survey

PP25 S-125

IMPLEMENTING PRACTICE CHANGE IN RURAL AUSTRALIA: CREATING ENABLING ENVIRONMENTS

Sandra DAVIS¹, Alison CAMPBELL², Bernie MCCARTHY³
(1. Palliative and Supportive Services, Flinders University, Australia; 2. Palliative and Supportive Services, School of Medicine Flinders University, Australia; 3. Managing Director, McCarthy Psychology Services, Australia)

Introduction : Many rural communities in Australia are faced with significant challenges in providing quality dementia care, with ageing buildings designed for acute care, a workforce that is itself ageing, a severe shortage of skilled health care professionals generally and many barriers to up-skilling and educating staff. The Australian Government Department of Health and Ageing, Encouraging Best Practice in Aged Care Program funded two year study aimed at implementing existing evidence specific creating enabling environments to facilitate better practice in addressing behaviors of concern. Method : A hub and spoke model was used to support implementation in aged care homes across seven locations. The framework of change used targeted the dimensions of philosophy, management support, leadership, skilled staff and environment. Three education components underpinned the implementation process, with environmental modifications, policy review and Dementia Care Mapping informing practice change over an 18 month period. Using a pretest-posttest non-experimental design for the evaluation, outcome indicators included levels of psychotropic drug use, frequency of behaviors of concern/incident reporting, measures of individualized care, well-being, quality of life and family involvement. Results : The results of the evaluation revealed increases

in staff Individualized Care Inventory scores, needs-based problem solving embedded as standard practice, better quality family involvement, reductions in behaviors of concern, decreased use of psychotropic medications and increased resident well-being. Conclusion : Affordable, accessible education of a critical mass of staff, key staff to champion change and support other staff, strong management support and external expertise to support change processes can effect successful, sustainable outcomes that benefit staff and residents. Keywords : behaviors of concern, enabling environments, long term care

PP25 S-126

A SURVEY OF THE FACTOR ABOUT ORAL HYGIENE MANAGEMENT IN THE DEPENDENT ELDERLY ~ FINDINGS ON INVENTORY SURVEY IN SPECIFIC REGION ~

Shiho MORISHITA¹, Yutaka WATANABE¹, Hirohiko HIRANO², Ayako EDAHIRO³, Yuki OHARA⁴, Emiko SATO⁵, Takeo SUGA⁶, Takao SUZUKI⁷ (1. Oral Diseases Research, National Center for Geriatrics and Gerontology, Japan; 2. Research Laboratory, Tokyo Metropolitan Geriatric Hospital and Institute of Gerontology, Japan; 3. Research Laboratory, National Center for Geriatrics and Gerontology, Japan; 4. Behavioral Dentistry, Tokyo Medical and Dental University, Japan; 5. Oral Medicine and Oral and Maxillofacial Surgery, Tokyo Dental College, Japan; 6. Geriatric Dentistry, Tsurumi University School of Dental Medicine, Japan; 7. Research Laboratory, National Center for Geriatrics and Gerontology, Japan)

Introduction : The purpose of the present study was to assess state of needs of oral care and to investigate the factor to need oral hygiene management by dental hygienist for the dependent elderly. So we conducted actual condition survey about them for all the dependent elderly of specific region. From those results, we examined correlated factor for needs of oral care and oral hygiene management for the dependent elderly. Method : We intended for 425 dependent elderly who resident in A prefecture Y City old O-cho. They underwent examination of oral status, examination of cognitive function (Clinical Dementia Rating), certification of needed Long-Term Care, mode of nutrition intake, needs of oral care and oral hygiene management by dental hygienist. Results : The result about necessity of oral hygiene management found a significant association on all survey items. For the logistic-regression analysis, dementia strongly influenced the oral hygiene situation than age, degree of autonomy, certification of needed Long-Term Care, mode of nutrition intake, number of the teeth. Conclusion : In this investigation, the oral hygiene situation and severity of dementia found to be the important factors that oral hygiene management assistance by the dental hygienist was necessary. About the intervention time of the dental hygienist, we suggest necessity starting oral hygiene management by the time of mild or moderate on the basis of prognosis of the dementia. Keywords : Oral Hygiene Management, Dependent Elderly, Inventory Survey

PP25 S-127

PROFILE AND TARGET OF MUSICAL CARE ACTIVITIES IN THE LONG-TERM CARE FACILITIES

Su-Feng TSENG, Pei-Lin KUO, Yi-Hsin HO, Cherng-En JIANG, Jia-Yi ZOU, Chung-Chieh LEE, Pai-Lin LEE (Department of Senior Citizen Service and Management, Chia-Nan University, Taiwan)

Introduction : The purpose of the study is to explore the influence of the music care activities at the long-term care facilities; moreover, it analyzed the difference in the various music activities among the

participants. Method : The subjects of this study were 1300 long-term care facilities in Taiwan. The research used the mail questionnaires to collect data. The total number of the returned questionnaires for all participants was 469, with a 36.1% effective return rate. In addition to the background information of the facilities, the contents of the questionnaire included the types of music activities performed at the facilities and the objects that the activities focused on. Results : The majority of the research samples were non-profit facilities (70%). Besides, the primary types of the music care activities at the facilities were singing activities (65.5%), and the others were music movement (42.4%), music appreciation (34%), and music care activities (33.3%). Furthermore, the participants mainly aimed at those who can take care of themselves but slightly disabled. Moreover, people who suffered from dementia mainly participated in the music activities of playing the percussion instruments (47.4%) and music movement (46.2%). Conclusion : Although the music care activities were performed in the long-term care facilities widely, the types of the activities were limited. Besides, the design of the activities for dementia people needed to be enhanced in order to improve the quality of the long-term care service. Keywords : musical care activities, long-term care facilities, patterns

PP25 S-128

MUSIC EFFECTS ON THE HOME CARE SERVICES

Su-Feng TSENG¹, Hsiu-Ling WANG², Chung-Chieh LEE¹, Pai-Lin LEE³ (1. Department of Senior Citizen Service and Management, Chia-Nan University, Taiwan; 2. Institute of Hospital and Health Care Administration, Chia-Nan University, Taiwan; 3. Department of Educational Psychology and Counseling, National Pintung University of Education, Taiwan)

Introduction : Replacing catheters for the bedridden disabled cases mostly brought about their nervous tension and discomfort, thereby affecting the home care service efficiency. Music therapy has gained emphasis due to the improvement of sedation in clinical effects, and thus been applied in the long-term care services. The research on music used in home care, however, is extremely scarce. This study is to explore to what extent the cases perceived positively from home care services in terms of music intervention, and to analyze the physiological characteristics and behavior of the cases in the service process. Method : This study adopted an experimental design to investigate 10 home-care disabled cases, employing classical music tune as a moderate factor. We separately measured and recorded vital signs before and after the music intervention served in treatments, using pair t test to compare and analyze the deviations of the outcomes. Results : The result showed no significant difference between before and after music intervention. Two cases were observed eyes open and head towards music in action; another one reduced times on being reset the gastric tube resulting from choking, and even had been snoring before the treatment ended. Conclusion : Although there was no significant improvement of care treatment incorporated with music listening on vital signs, the influence of music on disability cases existed in light of the reaction of the cases. Therefore, the impact of music listening on home nursing disable cases is worthy of exploring in further in-depth and long-term research. Keywords : Music, home care services, disability

PP25 S-129

A CASE STUDY OF TUBE FEEDING OF ELDERLY PEOPLE WITH COGNITIVE DIFFICULTIES

Takako MIZUOKA, Tsutomu FUJINAMI (Knowledge science, Japan Advanced Institute of Science and Technology, Japan)

Introduction : The progress of medical technology has extended life expectancy. Although the extension is welcome, it has also brought in some unwanted effects. In Japan, if it becomes difficult for an elderly person to eat, tube feeding is often proposed as a 'natural' medical treatment and used to prevent starvation. We will report a case study of a family who chose to feed their elderly parent with cognitive difficulties using a feeding tube. We will describe how the family members adopted tube feeding and how their lifestyle changed. Method : The decision-making process for adopting tube feeding was investigated with a series of semi-structured and informal interviews to the family caregivers. We investigated the everyday life of the elderly parent at home and at a care home. Results : The family invested a good deal of time and effort preparing meals for the 92-year-old mother, who disliked to eat. When heat stroke deteriorated the parent's condition suddenly, they were determined to adopt tube feeding. Two years later, the family reduced the stress and uneasiness due to her not eating. Her 70-year-old son seems to now enjoy interacting with his active and content mother and she now enjoys receiving visitors. Conclusion : Although cultural differences need to be examined, the elderly are not just a target to be cared for even when communication is difficult for them. They exist as an active and contributing member of the family. Tube feeding is effective in order that elderly people can enjoy living 'here and now' as a family's member. Keywords : tube feeding, elderly family members, case study,

PP25 S-130

THE OCCURRENCE AND COPING THE STRESS OF CARE STAFF OF NURSING HOME WITH NEW CARE SYSTEM

Takehiko TANABE (Faculty of Humanities, Hokusei Gakuen University, Japan)

Introduction : So far we examined to the psychological stress of environmental relocation effects to care staff of nursing home for the elderly residents with dementia being converted into group living unit at the preexisting loop corridor-type facility. After that we convinced group living unit care in the currently available facilities of the nursing home for the elderly in Japan was effective for residents. But for care giver, it is difficult to maintain the good care situation with a few person. So we research about the process throughout their interview and clear how to occur and cope with psychological stress. Method : We listened for psychological stress to 20 caregivers about 10 years at 2012. And we analyzed interview data by TEM (Trajectory Equifinality Model). Results : Most of them experienced stress after changing Public Nursing Care Insurance Law (2000,2005,2010). Because changing the law led to the change of system and care technique. We assume that makes care givers being stressful. Furthermore, they could cope with the stress by getting the knowledge about "The care method of group living unit". Conclusion : It is important to make clear procedure for changing in care system to group living unit and to make psychological supports to care staff with public and private situation when the troubles are occurred from new care system. It will lead to preventing psychological stress. Keywords : nursing home staff, group living unit, stress coping

PP25 S-131

RELATIONSHIP BETWEEN ATTAINMENT OF GOALS OF CARE IN FRAIL, OLDER PATIENTS AND CAREGIVER BURDEN

Wei-Chin WONG¹, Cindy Ying Ying YEO², Wendy Khar Gek NG³ (1. Geriatric Medicine, Tan Tock Seng Hospital, Singapore; 2. Continuing and Community Care, Tan Tock Seng Hospital, Singapore; 3. Nursing Service, Tan Tock Seng Hospital, Singapore)

Introduction : Frail, older patients often have multiple problems. Establishing the goals of care in these patients is essential to good medical care. The attainment of goals of care may also reduce the degree of burden perceived by their caregivers. The aim of this study was to determine the relationship between the attainment of goals of care in frail, older patients and caregiver burden. **Method :** Prospective, cohort study involving 51 patients and their caregivers seen at an outpatient clinic. The goals of care and attainment of goals for each patient was established using the goal attainment scaling method. Caregiver burden was assessed using the 12-item Zarit Burden Interview (ZBI) at the initial visit and at 6 weeks. **Results :** The mean age of the patients was 81.3 years. The mean number of goals identified per patient was 1.7. 98.0% of caregivers reported some degree of caregiver burden. The mean ZBI score at the initial visit was 16.5. 68.6% of patients attained the goals of care at the clinically expected level or better than expected level at 6 weeks. Caregivers for these patients reported significantly lower ZBI scores at 6 weeks compared to the initial visit (mean ZBI score: 16.5 at initial visit vs. 12.9 at 6 weeks, $p = 0.04$). There were no significant differences in the ZBI scores reported by caregivers of patients who did not attain the goals of care. **Conclusion :** The attainment of goals of care in this cohort of frail, older patients is associated with reduction in the degree of caregiver burden. **Keywords :** Caregiver burden

PP25 S-132
PHYSICAL HEALTH AMONG FAMILY CAREGIVERS IN JAPAN -BLOOD PRESSURE AND SERUM CHEMISTRY-

Yasuko SASAI¹, Noriko YAMAMOTO-MITANI², Hiroko SHIMADA-HORIKAWA³, Toshiko ICHIRIZUKA⁴, Ai FUJITA⁵, Takashi WADA⁶ (1. Department of Community Health Nursing, School of Nursing, The Jikei University, Japan; 2. Department of Adult Nursing, Graduate School of Medicine, The University of Tokyo, Japan; 3. Department of Nursing, The Jikei University Hospital, Japan; 4. Department of Central Clinical Laboratory, The Jikei University Hospital, Japan; 5. Department of Nursing, Kitasuma Home-Visit Nursing and Rehabilitation Center, Japan; 6. Shimbashi Medical Checkup Office, School of Medicine, The Jikei University, Japan)

Introduction : High burden has been reported among Japanese family caregivers even after the introduction of long-term care insurance. However, the actual impact of caregiver role on their physical health remains largely unknown. The purposes of this study are to evaluate the impact of care-giving on the physical health of family caregivers and to assess how health care professionals can promote caregivers' health. **Method :** We recruited 160 family caregivers (FCs) and 160 sex- and age-matched non-caregiver controls (Cs), and collected data of serum chemistry, blood pressure, and several self-rated health scores. This study was approved by the institutional review board of the researcher's organization. **Results :** The percentage of persons with hypertension among FCs (i.e., systolic blood pressure (SBP) > 140 mmHg, or diastolic blood pressure (DBP) > 90 mmHg, or under medical treatment) is significantly higher than that among Cs. Men's percentage of persons with hypertension were 70.2% in FCs vs. 40.4% in Cs ($p < 0.05$). Women's were 57.5% in FCs vs. 27.4% in Cs ($p < 0.001$). The percentage of persons with estimated glomerular filtration rate (eGFR) < 60 mL/min/1.73m² among female FCs is significantly higher than that among Cs. (44.2% in FCs VS.11.5% in Cs ($p < 0.001$)). **Conclusion :** We still need to continue our analysis to control major influencing factors, yet the results show the possibility of high health risk among FCs. Health care professionals need to teach family caregivers their risk of high blood pressure and renal dysfunction, and to make efforts for early detection of their health problems. **Keywords:**

family caregivers' health, care-giving

PP25 S-133
INTEGRATED DISCHARGED CHRONIC DISEASES ELDERLY CARE WITH ONE-STOPPED SERVICE IN COMMUNITY NURSING SERVICE: A PILOT PROGRAM

P.S. YAU, S.H. LEUNG, K.C. YEUNG (Community Nurse Service, Hospital Authority, Hong Kong)

Introduction : A collaboration pilot program was established for chronic diseases elderly with coordination and joint effect by a proactive multi-disciplinary team in United Christian Hospital (UCH) and home support service since 2008. The program aimed to facilitate early hospital discharge and promote the quality of care for the chronic diseases elderly through patient empowerment to supported self care, community-based care, and multidisciplinary care with interface between health and social care services. **Method :** Over 1,648 targeted discharge chronic diseases elderly were recruited in 4 community centers of UCH from 2008 to 2011. The experienced Community Nurses (CNs) as case managers were appointed for providing comprehensive nursing interventions, timely on-site complex needs identification and care review after discharge from hospital. Functional outcome and care progress were looked into for evaluation of outcome within three months cared by CNs. **Results :** Among 71% (n=1165) of recruited targeted cases were aged over 76 and over 69% were clinically referred from M&G Department. About 62% (n=1026) of them had received home support service in term of meal-on-wheel and personal care. There were 8% of recruited cases with more than 2 chronic diseases. Over 48% of elderly were kept physical stable and functional improved by using assessment tool Barthel Index 20 within 3 months after discharged from hospital. **Conclusion :** This pilot program equipped different professionals to provide timely community home care by strengthening the fragmentation of community services and using a case management approach which is helpful in maintaining their health status, prevent avoidable admission, to enhance the cross-sector collaboration. **Keywords :** Integrated Discharged elderly

PP25 S-134
GLOBALIZATION AND TRANSNATIONAL FAMILIES: EXPERIENCES OF ELDER CARE AMONG ASIAN H1B VISA FAMILIES IN THE UNITED STATES

Yeon-Shim LEE¹, Anoshua CHAUDHURI², Grace Jeanmee YOO³ (1. Social Work, San Francisco State University, USA; 2. Economics, San Francisco State University, USA; 3. Asian American Studies, San Francisco State University, USA)

Introduction : The purpose of this study is to explore the salient sociocultural and economic contexts that influence elder care arrangement and practices in transnational contexts among Korean, Chinese, and Indian H1B visa workers in the San Francisco Bay area in the U.S. **Method :** In-depth semi-structured interviews with 21 Asian H1B immigrants were conducted in 2010 and analyzed using qualitative analysis. **Results :** Results revealed that despite geographical distance and rapid sociocultural changes, Asian H1B migrant workers continue to perform transnational caregiving relations with their aging parents, maintaining important economic and emotional links. Sustaining family connections and participating in caregiving involve a multitude of emotional and practical tasks?regular return visits to the home country to care for their aging parents, remittances of money and gifts, supportive letters and phone calls, and engagement in decisions about matters of health and finance. Findings also demonstrated that caregiving is a culturally-laden construct and a

gender-specific issue in relation to the types of tasks performed. Female migrants as well as their female siblings in home country play a bigger role in providing emotional and physical care, whereas male migrants tend to be more involved in looking after business affairs, repairs, or maintenance issues. Conclusion : Cultural beliefs and values strongly influence the caregiving arrangements (e.g., use of a nursing home), transmitting these values across the generations. This study highlights the importance of kin work among geographically dispersed families. Findings have important implications for health insurance, immigration and workplace policies. Keywords : Elder care, transnational families, Asian migrant workers

PP25 S-135
USING TECHNOLOGY TO SUPPORT CAREGIVERS OF DEMENTIA OR ALZHEIMER'S PATIENTS

Youjeong KANG¹, Kyung Sook CHOI¹, Hyejin KIM¹ (1. Nursing, University of Pennsylvania, USA; 2. Nursing, Chung-Ang University, Korea)

Introduction : Due to a rapidly increasing aging population with a high prevalence of dementias such as Alzheimer's disease, supporting the financial and emotional burden of family caregivers is a growing challenge for healthcare providers in the United States. One innovative method of delivering support to family caregivers is through technology-based interventions. The purpose of this paper is to describe the types of technology-based interventions currently in use and to summarize and evaluate the published empirical evidence about the effectiveness of technology-based interventions designed to support family caregivers. Method : Pubmed, EMBASE, and CINAHL were searched for randomized controlled trials from January 2002 to January 2012 using the MeSH terms "technology" and "interventions" in conjunction with the keyword "dementia" or "Alzheimer's disease". Results : Fourteen studies met the selection criteria. The majority of studies used telecommunications technology interventions to deliver education and support program such as counseling. One study reported that a home-based intervention delivered via telephone reduced the cost of caregiving. A few studies used an internet-based program aimed at reducing the burden of family caregivers of persons with dementia. Overall results indicate that technology-based interventions are useful to effectively assist in managing distress among the groups of caregivers. Conclusion : Technology-based interventions have been shown to be effective to reduce the caregiver burden. Building on the science, future studies may consider incorporating mobile phone-based support network groups instead of impersonal automated telephone-mediated or computer-mediated system. Keywords : Technology, Caregiver, Dementia

PP25 S-136
ASSOCIATIONS BETWEEN PROFESSIONAL HELP-SEEKING ATTITUDES AND BEHAVIORS AMONG JAPANESE FAMILY CAREGIVERS OF FRAIL ELDERLY

Yuki YAJIMA¹, Junko SAKANO² (1. Department of Nursing, Niimi College, Japan; 2. Department of Health and Welfare, Okayama Prefectural University, Japan)

Introduction : Family caregivers face many difficulties when caring for an elderly relative. Seeking help from professionals (e.g. geriatric care manager) is an adaptive means to address these difficulties, but they often reluctant to do so. The purpose of the study was to investigate the characteristics of and attitudinal factors associated with professional help-seeking by Japanese family caregivers of the frail elderly relatives. Method : A cross-sectional survey was carried out from March to May, 2011. Self-administered questionnaires were sent

to a convenience sample of 300 family caregivers who cared for their frail elderly relatives at home in two northern areas of Okayama, Japan. The questionnaire included professional help-seeking, fear for seeking professional help, worry about caregiving, social support, in addition to socio-demographic characteristics and information about care situation. Consequently, 197 family caregivers returned the questionnaire (response rate: 65.6%). Descriptive statistics, one-way analysis of variance with multiple comparisons, and multiple regression analysis were used to describe and analyze data. Results : Seventy-one caregivers (38.1%) had not sought professional help for the last few months. In multiple regression analysis controlling for caregivers' gender, kinship, care situation, support network and level of worry about caregiving, frequency of professional help-seeking was significantly explained by fear of expressing emotion to professionals (std beta = -0.21, p<0.05) and self-help tendency (std beta=-0.21, p<0.05). Conclusion : Findings suggest that fear of expressing emotion and self-help tendency are avoidance factors of seeking professional help in Japanese family caregivers. Reduction of these psychological barriers may allow them to seek and use professional help when needed. Keywords : family caregivers, help-seeking, frail elderly

PP25 S-137
RELEASING OPPRESSED FEELINGS IN THE CAREGIVERS OF JAPANESE PARENTS WITH DEMENTIA: A PILOT INTERVENTION STUDY

Yumi HASHIZUME (Faculty of Medicine, University of Tsukuba, Japan)

Introduction : In 2011, approximately 5 million (16.7% of total elderly population) of Japanese elderly need long-term care. Governmental policy is to promote home-based care and gender equality to encourage family caregiving. However little progress in gender equality has been made and Japanese middle-aged working women caregivers (JMWWC) must balance career and family life with caregiving of their elderly parents or parents-in-law. Research demonstrates that JMWWC experience feelings of oppression for which there are no current services. This is particularly difficult because of the cultural norms for women's responsibilities of family task and the value of keeping harmony in the home. The purpose of this study was to test the short-term outcomes of an educational counseling education program for JMWWC that was developed to reduce this culturally sensitive distress. This study reports on the program's short-term impact. The program is called Releasing Oppressed Feelings in the Caregivers of Japanese Parents with Dementia. Method : The program involved four, 1-hour sessions delivered at 1 to 4 weeks intervals by a Masters prepared nurse. Eleven caregivers participated. Impact was evaluated within a single group design using standardized questionnaires with established reliability and validity. Results : Results showed significant improvement caregivers' coping behavior (p=0.039); depressed mood; and caregiver strain. Self-reported gains included positive appraisal of the amount of conversation and their sense of being valued by the spouse. Conclusion : Positive study outcomes reinforce the importance of a short-term intervention for JMWWC and argue the importance of additional tests with a larger study sample. Keywords : Working-women-caregiver, elderly parent, dementia

PP25 S-138
RELATIONSHIP BETWEEN FUNCTIONAL DEFICIT OF OLFACTORY AND FEEDING OF ELDERLY PEOPLE WITH DEMENTIA ESPECIALLY WITH CONCERNS TO ALZHEIMER'S DISEASE?

Yutaka WATANABE¹, Shiho MORISITA¹, Emiko SATO², Hirohiko

HIRANO³, Ayako EDAHIRO³, Yuki OHARA⁴, Haruka TOHARA⁵, Takao SUZUKI⁶ (1. Oral Diseases Research, National Center for Geriatrics and Gerontology, Japan; 2. Oral Medicine and Oral and Maxillofacial Surgery, Tokyo Dental College, Japan; 3. Research Laboratory, Tokyo Metropolitan Geriatric Hospital and Institute of Gerontology, Japan; 4. Behavioral Dentistry, Tokyo Medical and Dental University, Japan; 5. Dysphagia Rehabilitation, Nihon University School of Dentistry, Japan; 6. Research Laboratory, National Center for Geriatrics and Gerontology, Japan)

Introduction : In the scene of meals of the dementia patient, the problematic behaviors with the independence of meals as difficulty leads to increase of care burden and aggravation of the nutrition condition. We think that decrease in olfactory and taste sensation is a factor influencing the food recognition greatly, and it influences maintenance of the independence of meals greatly. We investigate olfactory and taste sensation, and problematic behavior of meals of the dementia patient. Method : A total of 192 mild cognitive impairment patients with Alzheimer's dementia underwent examination of cognitive function and olfactory and taste sensation, evaluation of vital functions. In addition, they underwent evaluation about problematic behavior of meals of dementia. Results : The olfactory sensation began to deteriorate since dementia was mild. And it deteriorated as the dementia became severe. The taste sensation did not deteriorate at dementia was mild. And it deteriorated gently as the dementia became severe. The taste sensation did not deteriorate at dementia was mild. And it deteriorated gently as the dementia became severe. About the evaluation about eating-related behavioral and psychological symptoms of dementia, the olfactory sensation related to eight of ten items. Conclusion : The result of this study suggested that the devices such as the offer and the maintenance of meals environment in consideration for deterioration of olfactory sensation improvement eating-related behavioral and psychological symptoms of dementia since the early stage of Alzheimer's dementia. In addition, we speculated the possibility that those interpositions could reduce the care burden and malnutrition for dementia patients. Keywords : Dementia, Olfactory, behavior of meals

PP25 S-139

DAY-CARE STAFF MEMBERS' VIEWS ON CARE USERS AND THE RELATIONSHIP OF THOSE VIEWS TO THE CARE THEY PROVIDE

Mami TOYODA, Hong GAO, Shinichi SATO (Graduate School of Human Sciences, Osaka University, Japan)

Introduction : Because of the increasing number of elderly people, care services supplied by various medical facilities are now becoming more important. However, the turnover rates for nursing home staff tend to be high, and lack of manpower is a chronic problem for facilities that provide care for the elderly. For this problem to be resolved, the work environment of these facilities must improve. This study focused on examining day-care staff members' views on care users and the relationship of those views to the care that they provide. Method : Five staff members, working at the same day-care facility (aged 24-57 years), were interviewed regarding their views on care users and the care they provided in the facility. Results : After performing a content analysis, the interview content was classified into 3 categories - views from observation, views from presumption, and attitudes toward work - comprising 9 subcategories. The care that they provided was classified into 2 categories - care that reflected their views or care that did not - also with 9 subcategories. Additional analysis indicated that there were 2 types of staff views: views that were formed primarily by observation of care users and views that were formed by presuming

unknowable information about users. Conclusion : In conclusion, most staff members determined the care they provided by reflecting on the views they held, although they tended not to let all of these views influence their care. Keywords : staff's view on care users, relationship of views to the care, day-care staff

PP25 S-140

ETHICAL CLIMATE, PROFESSIONAL PRACTICE ENVIRONMENT AND INDIVIDUALISED CARE IN CARE SETTINGS FOR OLDER PEOPLE

Riitta SUHONEN¹, Jouko KATAJISTO², Minna STOLT¹ (1. Department of Nursing Science, University of Turku, Finland; 2. Department of Mathematics and Statistics, University of Turku, Finland)

Introduction : The quality of care provision is affected by organisational environments, such as the ethical climate and the professional practice environment. The association between professional practice environment and individualised nursing care has been pointed out. However, we know little about how ethical climate is associated with the level of individualised nursing care delivery. This study aimed to investigate the associations between the ethical climate, professional practice environment, and individualised nursing care in care settings for older people. Method : A cross-sectional explorative and correlational survey design was used. The study was conducted in care settings for older people (62 units) in the vicinity of a Finnish city using a total sample of nurses (N=1513 n=874, response rate 58%) who worked clinically with older people. Survey data were collected using the Hospital Ethical Climate Survey (HECS), Revised Professional Practice Environment (RPPE) scale and Individualised Care Scale (ICS-Nurse-B). Data were analysed using descriptive statistics, Pearson's correlation coefficients and multiple stepwise regression analyses. Results : Statistically significant associations were found between the study variables, ethical climate and individualised care (r=0.371) and between individualised care and the RPPE subscales Leadership and Autonomy (r=0.667), Control over Practice (r=0.359) and Cultural Sensitivity (r=0.354). Multiple stepwise regression showed associations between individualised care, the ethical climate and the internal work motivation, control over practice and leadership and autonomy. Conclusion : Association between individualised care provision, ethical climate and practice environment were found. To increase individualisation within care provision, efforts need to be directed towards organisational aspects requiring the support of nursing leaders. Keywords : nursing care, environment, older people care

PP25 S-141

OLDER PERSONS' EXPERIENCES OF THE ACTUALIZATION OF THEIR OWN FREE WILL IN NURSING HOME

Leena TUOMINEN, Riitta SUHONEN (Department of Nursing Science, University of Turku, Finland)

Introduction : Free will is regarded as patients' right. However, only a few studies have explored older people's experiences of the actualization of free will in nursing home settings. Method : The aim of this study was to describe the experience of the free will of older people and its actualization and promoters in nursing home environment. Data was collected using a purposive sample with open interviews among cognitively intact older people (n=15) with a mean age of 80 years in four nursing homes in Finland. Inclusion criteria were age over 65, over 3 months in long term care and able to take part in the interview. The data were analyzed using inductive

phenomenological approach. Results : Older people described their free will as an action consistent with one's own spirit, opportunity to determine one's personal matters and holding on to one's rights. Actualization was described as an experience of satisfaction to bedtime, dressing and social life with relatives, to one's own room and opportunity to regulate one's privacy. More common experiences were not being able to execute one's own free will, dissatisfaction to possibilities to impact to meals, washing, moving as well as meaningful action and company. The promoters of free will were attitudes of the elderly, health and physical functioning, trust in caring relationship, professional skills and ethical conduct of the nurse and willingness to help. Conclusion : The results can benefit both the ethics education and the development of care quality for older people. Keywords : older people, free will, nursing home

PP25 S-142

CURRENT SITUATION OF DISCHARGE INSTRUCTIONS FOR ELDERLY STROKE PATIENTS RECEIVING NURSING CARE-A REVIEW OF THE JAPANESE LITERATURE-

Zhang PINGPING¹, Otsuka MARIKO¹, Zensho MARIKO¹, Tsuji REIKO¹, Masaki HARUE², Kanagawa KATSUKO³ (1. Faculty of Health Sciences, Department of Nursing, Saitama Prefectural University, Japan; 2. Graduate School of Nursing, Chiba University, Japan; 3. Kobe City College of Nursing, Japan)

Introduction : The present study aimed to clarify the current situation of discharge instructions for elderly stroke patients and discuss nursing responsibilities through a review of the Japanese literature. Method : Relevant reports published from 2007 to 2012 were identified by searching the Ichushi-Web database (version 5) using "elderly", "stroke patients" and "discharge instructions" as key words. The search results were refined by selecting only reports that were [original articles] and [nursing articles]. The selected reports were analyzed. Results : A total of eighteen reports were identified and analyzed. 1) Characteristics of reports: During the 5-year period of interest, most reports were published in 2008. Fourteen authors worked in hospitals and four authors worked in a rehabilitation center, stroke center, city government, or university nursing school. The data collection methods used in the reports were case study, interview, and questionnaire investigation. 2) Main topics of reports: Nine reports focused on individualized interventions based on patient-centered nursing, such as teaching insulin self-injection for patients with dominant hand disorder or assessing the needs for living at home after discharge. Six reports focused on the effects of discharge support that resulted from the effective collaboration of interdisciplinary teams using critical path and other methods. Three reports focused on discharged and rehospitalized patients' satisfaction with discharge instructions received during hospitalization and improvements for future discharge instructions. Conclusion : These results demonstrate the importance of strengthening the systematization of discharge support in an aging society of Japan and the worldwide dissemination of accumulated knowledge regarding nursing responsibilities. Keywords : elderly stroke patients, discharge instruction, nursing care

PP25 S-143

COGNITIVE IMPAIRMENT AND DEMENTIA DIAGNOSIS AMONG INSTITUTIONAL CARE FACILITY RESIDENTS IN ONTARIO, CANADA

Emma BARTFAY¹, Wally J. BARTFAY¹, Kevin M. GOREY² (1. Faculty of Health Sciences, University of Ontario Institute of Technology, Canada; 2. School of Social Work, University of Windsor, Canada)

Introduction : To determine the prevalence of cognitive impairment and potentially undetected dementia among institutional care facility residents in Ontario, Canada, and to identify factors associated with undetection. Method : We utilized a population-based secondary data analysis approach, pertaining data from the Canadian Institute for Health Information's Continuing Care Reporting System from 2009-2011. Potentially undetected dementia was defined as having severely impaired cognitive function and requiring extensive assistance on activity of daily living (ADL) but no records of dementia diagnoses. Cognitive function was measured by a cognitive performance scale (CPS) - 0 (intact) to 6 (very severe impairment), and ADL by a hierarchy scale - 0 (independent) to 6 (total dependence). Results : Of the 242 957 residents who had no records of dementia diagnoses, 11.6% (n=28 078) had a CPS score \geq 4 (severe to very severe impairment) and ADL score \geq 3 (required extensive assistance to total dependence). Data from 11 614 demented residents with corresponding CPS and ADL scores were used for comparison. Residents without dementia diagnosis were younger (77 vs. 84, p<0.001), more likely to have never married (20% vs. 6%, p<0.001), and to have been admitted longer (4 vs. 2.8 years, p<0.001). The most significant factors for no diagnoses were never married (adjusted odds-ratio=2.1, p<0.001), admitted to hospital-based facilities (adjusted odds-ratio=1.58, p<0.001), presence of schizophrenia (adjusted odds-ratio=1.43, p<0.001), depression (adjusted odds-ratio=1.23, p<0.0001) and diabetes mellitus (adjusted odds-ratio=1.32, p<0.0001). Conclusion : Our findings suggest that a large number of residents who had poor cognitive function and inadequate ADL ability do not have dementia diagnoses. Keywords : undetected dementia, institutional care facilities, cognitive function

PP25 S-144

RELATION OF ELDER'S PERCEPTION, ATTITUDE, COPING BEHAVIOR REGARDING SEXUALITY ON SUBJECTIVE QUALITY OF LIFE

Young Mun CHO¹, Chang Hee KIM² (1. Department of Nursing, Young Dong University, Korea; 2. Department of Nursing, Konyang University, Korea)

Introduction : This study aimed to understand the aged sexuality by analyzing the relation between subjective quality of life and perception, attitude, coping behavior regarding sexuality in elders. Method : The participants were 109 elders, aged 65 or over, located in Y city. Data were collected from April to June, 2012 by self questionnaire survey. Data analysis was done by using SPSS WIN 14.0 program including one-way ANOVA, independent t-test, Pearson correlation coefficients, and stepwise multiple regression. Results : The predicting variables affecting to subjective quality of life is sexuality perception (B=0.45, p<.001), sexuality copingsexual behavior (B=0.20, p=0.014) and have 25.75% (R²=26.9) explanatory power for subjective quality of life in elders. Conclusion : To increase subjective quality of life for elderly, it is necessary for positive perception for aged sexuality and expression of positive sexuality coping behavior. Keywords : Aged, sexuality

PP25 S-145

THE EXPERIENCE OF TOKYO ADULT DAY CARE CENTERS AFTER THE TOHOKU EARTHQUAKE

Mio ITO, Kazunori KIKUCHI, Motonaga KOJIMA, Yukie MASUI, Shuichi OBUCHI (Human Care Research Team, Tokyo Metropolitan Institute of Gerontology, Japan)

Introduction : On March 11, 2011, Japan experienced a catastrophic earthquake that devastated Pacific coast areas in the north-eastern

region. The disaster caused chaos to Tokyo as well, where traffic and communication systems were disrupted for several days. Our aim of this study is to describe how staff members of day care centers (DCCs) in Tokyo managed such a critical situation to continue to provide care for older adults. Method : We conducted a mail survey and collected staff members' experiences using a self-administered questionnaire. Of the original sample of 341 DCCs (15.1% of DCCs in Tokyo), we received and analyzed responses from 137 centers. Results : After the earthquake, not all staff members of 66 DCCs (48.2% of the 137 centers) could show up. In 38 DCCs (27.7%), staff members had difficulty providing regular services, such as sending pick-up bus and preparing lunch. They, however, made considerable efforts to continue to serve users. Despite a breakdown of telephone lines, staff members kept contact with older users (68 DCCs, 49.6%) and also with the family members of these users (72 DCCs, 52.6%). Further, in 27 DCCs (19.7%), special services (e.g., taking care of older adults in centers longer as usual) were offered during the chaotic times. It also was found that, using these experiences, staff members of 75 DCCs (54.7%) set a new guideline to provide care in a time of disaster. Conclusion : DCC staff members' experiences after the earthquake should be widely shared to help care providers prepare against disaster. Keywords : Adult Day Care center, Disaster, Experience

PP25 S-146

'VULNERABLE' OLDER ADULTS AND KITCHEN PRACTICES IN THE HOME

Wendy WILLS, Angela DICKINSON, Angela MEAH, Frances SHORT (Centre for Research in Primary and Community Care, University of Hertfordshire, United Kingdom)

Introduction : People aged 60 and above are considered to be at a higher risk of adverse consequences of foodborne illness than younger people. The UK Food Standards Agency (FSA) is working towards developing a better understanding of the factors which contribute to this increased vulnerability. This FSA funded study aims to contribute through an in-depth exploration of the domestic kitchen practices of 20 UK households. Method : The ethnographic case-study design includes households with people aged under 60, 60-79 and 80+ years. The researchers observed people in their kitchens, taking photographs and recording video footage as well as talking to participants and involving them in data collection (e.g. giving participants a diary and a disposable camera and some households generated their own video data). Results : Preliminary analysis of the data suggests that a number of areas of 'kitchen-life' can be examined in relation to the way that 'vulnerability' in older age is defined or understood in relation to food-related practices. For example, the cleaning of utensils and work surfaces are rarely performed as 'standalone' tasks; they are part of wider routines in the kitchen which may or may not be performed with the intention of making something 'microbiologically clean'. Methods of cleaning include using/not using detergent or other products and using cloths, sponges, scourers, kitchen paper or hands to remove food crumbs/other debris. Conclusion : The poster will describe the practices revealed by the research and their potential meaning for food safety policy and practice in relation to safeguarding older people's health. Keywords : Older people, kitchens, food safety

PP25 S-147

AGE-FRIENDLY COMMUNITIES IN CANADA: BUILDING CAPACITY THROUGH ONLINE NETWORKING AND KNOWLEDGE EXCHANGE ACTIVITIES

Anthony LOMBARDO¹, Verena MENEZES², Margaret DENTON³, Janice KEEFE⁴, Louise PLOUFFE¹ (1. Age-Friendly Communities Canada Collaboration, Canadian Association on Gerontology,

Canada; 2. Centre on Aging, University of Manitoba, Canada; 3. Department of Health, Aging & Society and Sociology, McMaster University, Canada; 4. Nova Scotia Centre on Aging, Mount Saint Vincent University, Canada)

Introduction : Over 800 communities in Canada have engaged in becoming more age-friendly, based on the WHO Age-Friendly Cities and the Canadian Age Friendly Rural and Remote Communities models. To support dissemination of research and practice knowledge, the Canadian Association on Gerontology (CAG) is using online initiatives to raise awareness of age-friendly communities stakeholders and their work in Canada and to network stakeholders. Method : To assess needs and next steps for age-friendly communities in Canada, the CAG in 2010 formed the Age-Friendly Communities Canada Collaboration, an initial working group of key stakeholders. In 2011, the CAG participated in a stakeholder consultation to discuss means of fostering knowledge development and exchange for age-friendly communities. Consultations revealed excitement about age-friendly communities and numerous priority areas, including interdisciplinary collaboration; centralized information sharing; and dialogue among all relevant stakeholders. Results : In response, the CAG first developed the "Age-Friendly Communities Canada Research and Stakeholder Inventory," an interactive, online repository to showcase Canadian stakeholders and their initiatives. Next, the CAG, in partnership with the Centre on Aging at University of Manitoba and others, is developing the "Age-Friendly Communities Canada Hub," an innovative online networking and knowledge exchange platform which uses various social media to mobilize knowledge and connect stakeholders. Conclusion : Online media offer opportunities for inclusive dialogue and rapid sharing and mobilization of information. These projects make use of collaborative and inclusive tools like social bookmarking, blogs, Twitter and Facebook to disseminate information and to broker relationships between all stakeholders, from research through community through practice. Keywords : age-friendly communities, knowledge mobilization, Canada

PP25 S-148

DIFFERENT COMMUNITY NEIGHBORHOOD ENVIRONMENTS FOR THE HEALTHY OLDER ADULTS IN INSTITUTIONALIZED HOUSES: ARE RESIDENTIAL AREAS OR CULTURAL AND EDUCATIONAL AREAS BETTER?

Blossom Yen-Ju LIN¹, Chin-Ping WANG¹, Yung Kai LIN², Cheng-Chieh LIN³ (1. Health Services Administration, China Medical University, Taiwan; 2. Division of Cardiovascular Surgery, Taichung Veterans General Hospital, Doctoral Student at Department of Business Administration, National Chung Hsing University, Taiwan; 3. Family Medicine & Geriatric Medicine, China Medical University & Hospital, Taiwan)

Introduction : To meet the potential growth of the older adult population in Taiwan, the government and private health care providers have invested and built institutionalized houses for healthy older adults. This study explores the living satisfaction of older adults living in institutionalized houses in different community types, and explores how they perceive their community environments. Method : A total of 212 residents from 2 institutionalized houses in 2 community areas (i.e., residential versus cultural and educational areas) were recruited for this study and interviewed using a developed structured questionnaire. Community neighborhood environment evaluations covered the dimensions of community design (six items), ambient conditions (seven items), place capability and transportation (five items), shopping and access to medical services (four items), and leisure and walkability (four items). In addition, overall living

satisfaction was measured. Results : The average age of the older adults was 83 years, living for approximately 45 months in the institutionalized houses. Multivariate analyses showed that the older adults of the institutionalized house in the cultural and educational area ranked 'community design' and 'place capability and transportation' as more satisfied than those in the residential area, although these were unrelated to overall living satisfaction. However, the community neighborhood ambient conditions, such as street cleanliness, landscape, fresh air, garbage collection, noise, and management of the community, were related to better living satisfaction for older adults. Conclusion : Different community neighborhood environments lead to different perceptions for healthy older adults in institutionalized houses. Community neighborhood ambient conditions play a key role in healthy older adult living satisfaction. Keywords : community characteristics; institution environment selection; ageing in places

PP25 S-149

GIS-BASED URBAN FORM ANALYSIS OF WALKABILITY AND NEIGHBORHOOD SATISFACTION FOR ACTIVE AGEING

Faysal Kabir SHUVO¹, Ma Shwee Zin NYUNT², Jia Yen ENG², Tze Pin NG² (1. *Architecture, National University of Singapore, Singapore*; 2. *Psychological Medicine, Clinical Research Fellow, Singapore*)

Introduction : The quality of the built environment is an important factor for active ageing. The walkability of the residential neighborhood greatly influences the level of physical mobility and social activity of elderly people. Walkability may be evaluated using objective assessment of the organization of urban form, including residential density, land-use mix and street connectivity/density using geographic information system (GIS) tools. In high density urban living environments, GIS tools provide information on neighborhood walkability that can help better decision making for urban planners and policymakers. Method : In this study, we investigated the association of GIS-measured characteristics of urban form (residential density, land-use mix and street density) with self-reported measure of neighborhood satisfaction among 400 elderly residents in two residential neighborhoods in Singapore. Modified version of Neighborhood Environment Walkability Scale (NEWS) is used for subjective assessment of built environment quality and ArcGIS10[®] of ESRI is used for GIS objective analysis. Results : Neighborhood satisfaction was positively correlated to land use mix, i.e. presence of dissimilar land uses ($r=0.132$, $p=0.008$) but negatively correlated to residential density ($r=-0.124$, $p=0.013$), and was not significantly correlated to street density. Conclusion : The results indicate that elderly people are more satisfied with their neighborhood when they are able to move about for varied purposes within the neighborhood. In urban high density residential neighborhoods, the availability of amenities and facilities is a positive factor, while over-crowding of residences is a negative factor for active aging. Keywords : GIS, walkability, neighborhood, urban form, active ageing

PP25 S-150

DEBRIS IN THE INNOVATIVE SPACE: THE STATE OF QUALITY IMPROVEMENT IN LONG-TERM CARE SETTINGS

Francis ETHERIDGE¹, Yves COUTURIER¹, Jean-Louis DENIS² (1. *Gerontology, Research Center on Aging - Universite de Sherbrooke, Canada*; 2. *Public Administration, Ecole Nationale D'administration Publique, Canada*)

Introduction : A majority of long-term care organizations has difficulty

reaching contemporary expectations regarding the quality of services they produce, but variability is observable in the field. Some organizations appear to have created virtuous cycles while other organizations appear to have created vicious ones. The objective of our study was to explain what differentiates these organizations based on how they initiate and plan change processes. Method : An embedded multiple case study was conducted employing an action research approach in collaboration with four long-term care organizations producing contrasted levels of care and service quality. Using multiple qualitative methods of data collection, we reconstructed the differentiated paths by which change intentions in each organization were translated into concrete change projects. Results : The processes by which long-term care organizations initiate and plan change is driven by their "obligation" to fulfil increasing regulatory requirements more than by a meticulous evaluation of their strengths and needs. This inclination leads to the simultaneous engagement of multiple innovative processes and to the fragmentation of the slim resources devoted to improvement processes. Consequently, the "innovative space" in long-term care organizations is filled by prescriptive programs, or, written otherwise, by "structural debris" which overwhelm change users and foster cynicism towards change. Conclusion : Change agents in long-term care organizations would benefit from establishing a sequence of change priorities specifically adapted to the strengths and needs of their organization. Adapting the regulatory environment to ensure more accurate quality insurance procedures and customized improvement imperatives may ensure more efficient quality improvement processes in long-term care organizations. Keywords : long-term care, innovation, change management

PP25 S-151

WHAT IS COMFORTABLE HOUSING FOR THE ELDERLY? : A SURVEY ANALYSIS OF THE EXPERIMENTAL HOUSE FOR THE ELDERLY IN JAPAN

Go SATO¹, Kei ADACHI², Hidetoshi SATO³, Chisato MASAFUMI⁴, Hiroyuki MURANAKA⁵, Katsuyuki SATO⁶ (1. *Graduate School of System Engineering, Wakayama Univ., Japan*; 2. *Environmental Systems, Faculty of System Engineering, Wakayama Univ., Japan*; 3. *Community-based Comprehensive Palliative Care, Saga Medical School Hospital, Saga Univ., Japan*; 4. *Graduate School of Lifelong Learning Studies, Hokusho Univ., Japan*; 5. *Chitose-town.net, General Incorporated Association, Japan*; 6. *Graduate School of Human Welfare Studies, Hokusho Univ., Japan*)

Introduction : This study is to propose a living environment corresponding to changes under various situations to help the elderly live. Method : We have conducted POE(Post-occupancy Evaluations) for 4 years from 2009 to 2012, and have evaluated design issues based on residential experience of the elderly couple. Results : The experimental house has been designed with special consideration for the elderly to be easy to use and caregivers to make it easier to support. The arrangement was to focus on communication around the living room. For example, kitchen and bedrooms were located the side of the living room. Points to keep in mind were as follows: 1) simple flow lines, 2) elimination of the steps, 3) space of wheelchair rotation (1m50cm), 4) sufficient door width (85cm) and corridor width (85cm). Results of this survey analysis, several problems on the design were found as follow: 1) toilet, wash basin, bathroom, bedroom, dressing room, 2) kitchen, living room, stairs, entrance, approach, 3) cooking facilities, air conditioning, hot water supply, 4) fire and security equipment. Conclusion : According to the elderly couple's residence experience, experimental house could respond to a decrease in their body conditions. As a future work, there are some difference between

how it is used and the original planning. Keywords : the elderly, experimental house, communication

PP25 S-152

OUTDOOR FITNESS FACILITIES IN THE PARK IN TAINAN CITY, TAIWAN

Hsueh-Wen CHOW¹, Guan-Lin WU¹, I-Yao FANG², Tzu-Yao TAI³, Chiang LIU⁴ (1. Graduate Institute of Physical Education, Health & Leisure Studies, National Cheng Kung University, Taiwan; 2. Department of Physical Education, National Taiwan Normal University, Taiwan; 3. Mechanical Engineering, Southern Taiwan University of Science and Technology, Taiwan; 4. Graduate Institute of Sports Equipment Technology, Taipei Physical Education College, Taiwan)

Introduction : Enhancing physical activity has become a high priority for promoting health. Parks, close to residence areas and easily accessible are the preferences of many older citizens for leisure-time physical activities. Recently, many parks installed outdoor fitness facilities; however, no census regarding the available equipment exists neither scientific investigation regarding the conditions of these equipment and seniors' perceptions exists. Method : Thus, this study investigates these facilities in Tainan, Taiwan from field observations and interviews. Results : Results from field observations revealed that 1) 74% labeled the equipment; 2) 58% posts benefits from using the equipment; 3) 47% state the appropriate age range for users; 4) 69% illustrate how to use the equipment, and 23% illustrate that with graphs, 5) the mean score for the appearance of the equipment is 4.2 on a five point scale (5 is best quality); 6) the mean score for condition of the equipment is 4.5 (5 is most well kept); 7) installation of most of the equipment was on the parks' grassy areas. Conclusion : The results provide a reference for developing policies for placement of facilities for promoting health among the aging population. The findings provide park and recreation departments in municipal governments a basis for evaluating and maintenance of fitness equipment. In addition, the results provide statistics for other studies considering related research projects. Keywords : outdoor fitness equipment, park, census

PP25 S-153

INCREASING THE CONVENIENCE OF MEASURING WEIGHT FOR ELDERLY OR DISABLE PEOPLE BY PROPOSING SYSTEM

Huang Ying CHI¹, Tu Shih TE² (1. Administration of Department Specialist, Changhua Christian Hospital Lukang Branch, Lukang, Taiwan, R.O.C., Taiwan; 2. Superintendent, Changhua Christian Hospital Lukang Branch, Lukang, Taiwan, R.O.C., Taiwan)

Introduction : With the increasing in the elderly population, the majority in hospitals patients are elderly people. Therefore, it will be really inconvenient for them to measure their weight if they need. Because they might need their families or hospital staff to help them stand on scales. Additionally, this situation will higher the risk of falling down as well. Method : By recording the weight of every kind of wheel chairs in hospitals, to make elderly people can weight without leaving wheel chairs. Results : By proposing system, it only costs one thousand dollars to make the cards that print the weight of chairs and stick the cards on the wheels chairs. This way will be easier for hospital staff or patients' families to measuring the weight of elderly by subtracting the weight of wheel chairs from the total weight showed on the scales. Conclusion : By proposing system, it solved the long time harassment of weighting elderly people. Now, hospitals can provide their patients and elderly a safety, comfortable, and convenient environment. Keywords : disable people, Proposing System

PP25 S-154

AGING IN PLACE AND REASONS FOR MOVING

Hyun Joo KWON¹, Julia O. BEAMISH², Eunju HWANG² (1. Art and Design, Purdue University, USA; 2. Apparel, Housing, and Resource Management, Virginia Tech, USA)

Introduction : People over 50 in the United States have indicated that they want to age-in-place in their current home, which is often a single-family home. Multifamily housing, the second most popular housing type in the U.S., provides convenience and location advantages that often are not considered by older adults. This study investigates older residents of multifamily housing and their desire to age-in-place, their reasons for considering moving, and their preferences for future housing. Method : This study design was mixed methods, using a self-administered questionnaire. An on-line survey was conducted during February, 2012. The target population was people age 65 and over living in multifamily housing in the U.S. (N=242). Results : Participants indicated that they desired to age-in-place. Chi-square analysis and ANOVA detected that participants who were older and homeowners were more likely to remain in their home as long as possible. Almost 45% of the total participants answered that they might consider moving and described their reasons for moving using an open-end question. Most frequently mentioned reasons were related to cost, aging, size or design of housing, closeness of relatives, and local services. Participants who would consider moving showed significantly higher preferences for multifamily housing and housing communities for all age groups, and lower preferences for any type of services in a housing community. Conclusion : Older adults in multifamily housing had strong intentions for aging-in-place; however, they were concerned about declines in financial and health status. If they were to move, they prefer to live independently in multifamily housing located in a non-age-restricted community. Keywords : aging-in-place, moving, multifamily housing

PP25 S-155

THE EFFECTS OF HAUSGEMEINSCHAFT (HOUSING COMMUNITY) AS INNOVATIVE APPROACH IN GERMAN NURSING HOME CARE ON THE DAILY LIFE OF RESIDENTS

Joachim WILBERS, Susanna RE (Headquarters, Project Care Ruhr, Germany)

Introduction : The Hausgemeinschaft (Housing Community - HG) was first described in Germany by Winter (1995). HGs are a special type of household consisting of a limited number of people needing care in a nursing home setting. The aim is "normalcy" in contrast to institutionalization. Method : The daily life of N=151 residents in 12 HGs compared to N=47 residents in a conventional nursing home setting is analyzed by questionnaires and interviews. Results : HG residents have a higher degree of autonomy; they are less dependent on a tight schedule of the nursing staff and they enjoy the possibility to choose what to eat and take part in preparing the meals. The HG also leads to more influence of relatives due to the family-like setting. It is shown that HGs lead to more activity of the residents, a better satisfaction of staff and relatives, and an improved image of the nursing facility. As a result the higher influence on the menu leads to less variation than the professional meal plans but to a higher degree of satisfaction. The influence of relatives fosters a better atmosphere but also tends to more conflict about daily life with the professional team than in traditional homes. Conclusion : Thus HGs are an innovative approach in nursing home. The aim of normalcy can be accomplished but more options in daily life need more communication and a different training of the nursing home staff. Keywords : nursing home

PP25 S-156

USE OF EVERYDAY TECHNOLOGY: A COMPARISON STUDY OF ELDERLY PEOPLE WITH DEMENTIA IN JAPAN AND SWEDEN

Kazue NODA¹, Toru NAGAO¹, Rumi TANEMURA¹, Lena BORELL²
(1. Graduate School of Health Sciences, Kobe University, Japan;
2. Department of Neurobiology, Care Sciences and Society Division of Occupational Therapy, Karolinska Institute, Sweden)

Introduction : We describe the use of everyday technology (ET) by elderly people with dementia in Japan and Sweden and how it impacts their daily lives in their home. **Method :** Our study group consisted of five elderly Japanese persons [age: 75-83, mini-mental state examination (MMSE) 4-23] and five elderly Swedish persons (age: 63-87, MMSE 13-27). They were living alone or were alone during the day. We interviewed them and the Everyday Technology Use Questionnaire (ETUQ) was completed. We observed them using the same ET appliances: stoves, a code-operated lock, a telephone and a microwave oven. **Results :** 1. Two Japanese persons used the gas stove, but no Swedish person used a gas/electric/IH-stove. 2. Swedish persons were unable to use the code-operated door phone and lock, but all Japanese persons were able to use the key-operated door lock. 3. All Japanese persons and three Swedish persons were able to use the telephone. 4. All Japanese persons were able to use the microwave, but no Swedish person was. **Conclusion :** Elderly people with dementia can use ETs that have been adapted with large touch pads, pre-set numbers, or dial-type timers. Manufacturers should adapt ETs so that they can be safely used by elderly people with dementia. Once they are able to use the ETs, elderly people with dementia can safely live alone at home. Occupational therapists should advise elderly people with dementia on which ETs are suitable for them. **Keywords :** Dementia, Everyday Technology, Safety

PP25 S-157

STIGMA: A BARRIER TO HELP-SEEKING AT THE RESIDENTIAL END OF THE CONTINUUM OF CARE

Maggie GIBSON (Veterans Care Program, St. Joseph's Health Care London, Canada)

Introduction : Stigma is the product of negative and unfavourable attitudes and the negative behaviours that result from those attitudes. Stigma is recognized as a major barrier to help-seeking. Self-stigma, stigma by association and public stigma may all compromise help-seeking behaviour by those who would benefit from residential care. There is a need to combat the stigma associated with the residential end of the long term care continuum in the interests of rational and supportive help-seeking and decision-making about care needs and options at different life stages. The goal of this project was to produce resources that could contribute to stigma reduction. **Method :** Several literatures were explored to develop a conceptual framework for understanding the associations among aging, health, help-seeking and stigma. Stigma reduction strategies (education and contact) were deployed. **Results :** A resource titled 'Understanding Long Term Care Homes as Communal Living Environments: A Discussion Guide for Staff' was developed. The Guide is aligned with the Alzheimer Society of Canada (ASC)'s culture change in long term care initiative and is available for download from the ASC website. A video was developed to highlight the communal living aspects of the target service and made available for viewing on the organization's website. **Conclusion :** Communal living has many benefits for people who need a significant level of care but stigma among other factors can compromise timely help-seeking at residential end of the continuum of care. Stigma reduction practices are relevant to confronting this barrier. **Keywords :**

stigma, long term care, communal living

PP25 S-158

PATTERNS IN THE PRESENTATIONAL SENSE OF WELL-BEING OF THE ELDERLY: THE IMAGERY INHERENT IN EVERYDAY HOME LIFE

Masao KOBAYASHI (Design, Nexus A.L., Japan)

Introduction : The purpose of this study is to extract the visual imagery presented by the elderly on expressing their sense of well-being in daily life, and to clarify the relation between that visual imagery, the attributes of the subjects, and their family relationships. **Method :** The subjects were 11 elderly men and women over seventy years old. The study was performed as follows 1) Subjects were asked to visualize the happiest scene in their everyday life. Once that image was established, the subjects were interviewed. 2) All interviews were recorded using an IC recorder. 3) The subject described a visual image in words. As the description progressed, it was checked for consistency in order to attain greater accuracy. 4) Comparisons were made between the subject's attributes, family relationships, and the subject's presentation of visual image. **Results :** 1) The images described as evoking the greatest sense of well-being most commonly took place in the living room or dining room, and focused on scenes of eating or talking with other family members. 2) A high rate of correlation was observed with scenes of child-raising and interaction with other family members. **Conclusion :** The presentation of a sense of well-being by the elderly appears to have a relationship to their experiences in raising their children. **Keywords :** Inherent sense of well-being, Visual imagery, Patterns in the presentational sense

PP25 S-159

HOW AGE-FRIENDLY IS THIS CITY? STRATEGIES FOR MEASURING AGE-FRIENDLINESS

Michelle DELLAMORA¹, Aleksandra ZECEVIC², Donna BAXTER³, Anita CRAMP² (1. Health & Rehabilitation Sciences, Western University, Canada; 2. Faculty of Health Sciences, Western University, Canada; 3. Recreation, Neighbourhood & Children's Services, City of London, Canada)

Introduction : The Age-Friendly Communities (AFC) initiative has gained momentum under the guidance of the World Health Organization as a global response to population aging. Communities around the world and Canada have developed age-friendly projects and strategies for the implementation and evaluation of their AFC programs. Currently, there is no universally accepted tool for measurement of the baseline age-friendliness of a community, so that meaningful comparisons can be made to assess future progress. The purpose of this study was to review assessment tools for measuring the age-friendliness of a community. The objective was to present the strengths and weaknesses of available questionnaires and surveys, and to determine the best tools for large-scale quantitative measurement of age-friendliness. **Method :** A comprehensive review of peer reviewed and gray literature was utilized to examine presently available age-friendly assessment tools. Communities across Canada were contacted and tools were gathered from personal communications. **Results :** There is a paucity of published research on this topic. Assessment surveys vary greatly in terms of topics covered, total number of questions and number of questions per eight AFC domains. Only three of 20 assessed surveys had reliability and validity information available. The Community Assessment Survey for Older Adults emerged as the best tool for measuring age-friendliness. **Conclusion :** A considerable number of assessment tools are available to assess various aspects of age-friendliness. Only the most comprehensive of

these tools can be recommended for effective baseline assessment of the age-friendly features of a community. Keywords : age friendly communities, assessment surveys

PP25 S-160

A COMPREHENSIVE APPROACH TO THE LIVING CONDITION OF RURAL ELDERLY FOR A SENIOR-FRIENDLY INDUSTRY

Mihee OH¹, Suna PARK² (1. *Social Welfare, Youngdong Univ, Korea*; 2. *Social Welfare Policy, Dankook Univ, Korea*)

Introduction : The purpose of this study is to suggest a way for letting them know of a real efficiency of developing welfare medical device through the investigation of the life condition of rural elders and the survey of the recognition of a senior-friendly industry. Method : 731 of the elders in the rural areas its population is around 50,000 turning super-aged society were surveyed and interviewed for this study. Results : For residence, most elders live in an undetached house without cohabitant and his or her caregiver is also the elder. They consider getting geriatric care alone or going to the nursing home if necessary. For economy, most answer that they have not prepared for their elder life. For health, it turns out that many of them have musculoskeletal disease and hypertension. Conclusion : According to the result of the study, the demand for a senior-friendly devices and welfare service is expected to increase; however, considering the low income level of the elder, it is necessary to develop the inexpensive for the elders. The devices for the elders such as health information system and oriental medical devices, interior or outdoor space moving system, in-and- out of the house - moving system and nurse-caring system are necessary to set up first. Moreover, from now on, it is necessary to enlarge the investigation of the demand of Older People in Rural Area to activate a senior friendly industry more. Keywords : Senior-friendly industry, rural elders, elderly Living status

PP25 S-161

HOUSING AND DEMOGRAPHIC CHARACTERISTICS OF ELDERLY HOUSEHOLDS IN THE SOUTHERN UNITED STATES

Sung-Jin LEE¹, Mira AHN², Kathleen R. PARROTT³ (1. *Department of Family and Consumer Sciences, North Carolina Agricultural and Technical State University, USA*; 2. *School of Family and Consumer Sciences, Texas State University - San Marcos, USA*; 3. *Department of Apparel, Housing, and Resource Management, Virginia Tech, USA*)

Introduction : With an increasing U.S. elderly population, important considerations are that a majority of older adults experience health problems and the 2009 recession influenced their financial and housing sustainability. Particularly, elderly households living in the Southern U.S. face more housing challenges due to relatively lower median incomes and a decrease in home equity. This study examines current housing and demographic characteristics of these challenged elderly households in the Southern U.S. Method : A secondary dataset, the biennial 2011 American Housing Survey (National and Metropolitan Data) of the U.S. Department of Housing and Urban Development and the U.S. Census Bureau, was employed. Detailed profiles of 8,411 elderly householders were presented, utilizing descriptive statistics. Results : Selected findings were: Almost 78% were homeowners, and 73% lived in single, detached housing. Average age was 75 years old, and majority lived in urban areas. Almost 60% were not married and 30% were minorities. Almost 75% reported family income as less than U.S. median income (\$50,502), but only 10% received government assistance. Almost 43% spent more

than 30% of income for housing, exceeding the national standard for affordability. Conclusion : This profile of elderly Southern U.S. households shows a high percentage of single homeowners with below median incomes who pay an excessive portion of their income for housing costs. Thus, the housing affordability issue for these aging households needs more attention. This analysis implies that housing affordability is a critical issue to consider in planning housing assistance programs and services for the target population.

Keywords : Elderly Populations, Southern U.S., Housing

PP25 S-162

WHAT KINDS OF FACTORS MAKE IT POSSIBLE THAT JAPANESE ELDERLY PEOPLE LIVING IN PUBLIC APARTMENTS KNOW THE LOCATION OF THE SHELTER IN DISASTERS?

Noriko YAMASHINA¹, Naoto KAMIDE², Akie KAWAMURA², Yoshitaka SHIBA², Hiroshi HAGA¹ (1. *Graduate School of Gerontology, J.F. Oberlin University, Japan*; 2. *School of Allied Health Sciences, Kitasato University, Japan*)

Introduction : Japan is a disaster-prone country such as earthquake; elderly people are the most vulnerable to disasters. It would be important for health care providers to know how elderly people obtain information about evacuation means. The aim of this study was to investigate what kinds of factors make it possible that Japanese elderly people living in public apartments know the location of the shelter in disasters. Method : 60 year and older people who were living independently in public apartments, which were provided for low-income people in Kanagawa, Japan, were participated in this study. Factors, which make it possible that Japanese elderly people living in public apartments know the locations of the shelter, were investigated from four aspects; (1) cohabitation status with family, (2) social networks and support with family, (3) social networks and support with neighbors or friends, (4) presence of access to information supplied by the administrative organ. Age, sex, residence year, instrumental self-maintenance ability and depression were also investigated. Results : 270 subjects (70.8±5.8 years old) were included in this analysis. From the results of multiple logistic regression analysis, we found that information about the location of the shelter in disasters was associated significantly with access to information from administrative organ and residence year. Other factors were not related to information significantly. Conclusion : Our study suggested that dissemination of information from the administrative organ and aid for people who have shorter residence year were important to get information about the location of the shelter in disasters among elderly people living in public apartments. Keywords : disaster prevention, information supplied by the administrative organ, residence year

PP25 S-163

THE IMPORTANT CHARACTERISTICS OF DAYCARE CENTER: FROM TAIWAN'S PROMOTE EXPERIENCE SINCE 2008

Potsung CHEN (Institute of Gerontology, National Cheng Kung University, Taiwan)

Introduction : Faced with the problem of an aging population, the Taiwanese government is actively promoting long-term care insurance for the elderly. Daycare centers play a crucial role in this approach, and this study focuses on the provision of appropriate care services and the enhancement of the social status of the elderly by daycare centers in Taiwan. Method : The objective of this paper was to conduct a participant observation experiment in 45 newly established daycare centers in Taiwan for a period of 5 years so as to examine how these

centers provide appropriate care services and promote the welfare of the elderly in the community. Results : Most of the daycare centers towards the following goals: (1) to help the elderly construct new social networks and obtain social support, (2) to encourage the elderly to help one other, (3) to encourage autonomy in the elderly, (4) to provide supportive and personal care, (5) to enhance the quality of life for the elderly, (6) to provide a variety of options and activities for the elderly, (7) to preserve the cultural heritage and build a sustainable community for the elderly, and (8) to create awareness of cultural issues in the community. Conclusion : In conclusion, daycare centers can play a critical role in improving the quality of life of the elderly, helping them earn respect and recognition from others, and enhancing their social status. Keywords : aging in place, elderly, daycare

PP25 S-164
SUITABILITY OF HANDRAIL HEIGHT FOR DISABLED OLDER PEOPLE

Shinya HISANO (*Graduate School of Health Sciences, Kyushu Nutrition Welfare University, Japan*)

Introduction : The purpose of this study was to evaluate a method for determining the suitability of handrail height for disabled older people with different body sizes, diseases, locomotion assistance aids, methods of use, and standing postures. Method : The subjects were 39 disabled older people (8 males, 31 females, mean age 86.9±6.7 years). We recorded the subjects on video tape while using a standard handrail in a nursing home. Video tapes were analyzed to determine the subjects' greater trochanter height and gait motion. The suitability of the handrail height was analyzed based on greater trochanter height, body size, disease, locomotion assistance aids, methods of use, and standing postures. Results : The subjects' mean greater trochanter height was 716 mm±57 mm. A handrail height 38-82 mm higher than subjects' greater trochanter height was most suitable. In subjects with bad posture, a handrail height 98-125 mm higher than their greater trochanter height was most suitable. Conclusion : The present results suggest that the suitability of handrail height varies among older people. The current method of determining the suitability of handrail height according to body size could be applied for disabled older people in nursing homes. Keywords : disabled older people, handrail height, body size

PP25 S-165
PROCEDURE OF ENVIRONMENTAL DESIGN IN THE CREATION OF A HOMELIKE ENVIRONMENT FOR THE ELDERLY WITH DEMENTIA

Tetsuya AKAGI¹, Kei ADACHI² (*1. Department of Architectural Design, School of Architecture, Kogakuin University, Japan; 2. Department of Environmental Systems, Faculty of Systems Engineering, Wakayama University, Japan*)

Introduction : The purpose of this study was to research and clarify the relationship between psychological and physical factors in the perception of the quality homelike, and to implement this understanding in the physical design of the activity spaces of a nursing home for the elderly with dementia. Method : Three main surveys, psychological, physical and observational, were conducted. The nature and degree of homelike in the activity spaces was analyzed by the semantic differential method. The number, kind and locations of the physical elements were recorded, and the person-environment transaction in the spaces was analyzed by measuring the verbal behaviors of all residents and staff. Results : The study demonstrated the procedure of environmental design in the creation of a homelike environment in three stages. First is the Overall factor, which creates

an environment by which a homelike atmosphere can be called to mind. Next, each Single factor that fits well with the Overall factor must be carefully examined. Finally, each Single factor must then be appropriately arranged to contribute to the Combined factor. Conclusion : Seven physical environment factors were shown to be the fundamental factors which uniformly exist in activity spaces. This was deeply reflected in this research in deciding the Overall factor in the procedure of the environmental design. This environmental design procedure is developed as a design tool so that it can be fully utilized in a wide range of care environments not only by specialists in planning and design but by on-site care staff. Keywords : environmental design, homelike, elderly with dementia

PP25 S-166
DISSOLVING THE EDGE: BUILDING CAPACITY THROUGH DIGITAL PHOTOGRAPHY

Theresa GARVIN (*Human Geography - EAS, Human Geography - University of Alberta, Canada*)

Introduction : In many societies, some older adults live 'on the edge.' They live on the edge politically through exclusion from decision-making. They can live on the edge socially through isolation and economically via reduced retirement incomes and lost social programs. They live on the edge physically by increasingly being found in low-density suburbs and rural areas. As a result of these, some older adults live on the edge emotionally as they struggle to cope with all of these as well as their own age-related capabilities. Method : This small-scale, community-based project sought to build capacity in a small group of seniors by conducting a participatory digital photography exercise on their physical environment. Using digital cameras and focus group discussions, the project built on existing interests and further developed digital photography skills of participants. The project included a set of four group interview discussions based on digital photographs taken by participants. Participants then reflected on what they had learned through the process and how they might build on their skills in the future. Results : Participants were enthusiastic about learning to use digital media and noted that it gave them increased status both within their extended families and their communities. Community service workers and support groups indicated that the photography skills were being passed on within their communities and that there was an impact beyond the length of the research project. Conclusion : Providing equipment and instruction for digital photography increased the capacity of older adults to speak for themselves and developed individual and group confidence. Keywords: capacity, digital photography, community

PP25 S-167
EXPLORING SOCIAL INEQUALITIES IN HOUSING TENURE AMONG OLDER ADULTS. FINDINGS FROM THE BELGIAN AGEING STUDIES

An-Sofie SMETCOREN¹, Nico DE WITTE², Tine BUFFEL¹, Tinie KARDOL¹ (*1. Faculty of Psychology and Educational Sciences, Vrije Universiteit Brussel, Belgium; 2. Faculty of Psychology and Educational Sciences, University College Ghent - Vrije Universiteit Brussel, Belgium*)

Introduction : The purpose of this study is to investigate whether housing tenure differs among older people in terms of socio-demographic variables, physical health, income and marital status. Housing tenure refers to the legal status under which someone lives: homeownership, private rented housing, social rented housing and others (e.g. living with children, beneficial interest). The study also explores the relationship between housing tenure and housing quality.

Method : Data are derived from the Belgian Ageing Studies among people aged 60 and over (N=48.889) living in 138 municipalities across Belgium. To answer the research questions, frequencies and bivariate analyses are performed. **Results :** The results indicate that homeowners have a higher income, a better physical health and are more likely to be married or widowed in comparison with older renters. Differences are also found between older people living in private rented housing and those who live in socially rented housing. Renters on the private market appear to be the most vulnerable category: they are more likely to have a lower income, a poorer physical health and they are more likely to be divorced or cohabitant than older people who live in social housing. Furthermore the results pointed out that older renters are more likely to be living in inadequate housing than older homeowners. **Conclusion :** The findings revealed the importance of recognizing the various multidimensional inequalities in housing tenure among older adults. This study could yield practical and policy recommendations, such as the need for more adapted and affordable housing for older renters. **Keywords :** Housing tenure, housing quality, equality

PP25 S-168

CURRENT STATUS AND SUBJECT OF LIFE SUPPORT PROVIDED IN THE NEWLY-ESTABLISHED SERVICE-ADDED ELDER PERSONS' HOUSING IN JAPAN

Tokiko INOUE, Mari KINUKAWA (*Research Dept., Institute of Elderly Housing Sciences, Japan*)

Introduction : The new housing is required to provide consultation and safety confirmation as service in principle. However, another life support services are not defined clearly, which life support provision depends on operators. This research focuses on the current status of life support to obtain subjects to develop this newly-established housing as one with quality from the elderly persons' vision who need to relocate from their homes. **Method :** Monthly surveys of the information provided by Ministry of Land, Infrastructure, Transport and Tourism were conducted to grasp overall status of the housing. Questionnaire survey to 500 operators was also performed. About 360 responds were collected and the results were categorized to show function of life support in comparison with the status of another assisted living residence in Japan. **Results :** The process of providing meals and care depends. Some provide as individual fee-based services categorized as "out of the long-term care insurance". Some seem to be insufficient and some overloaded. On the other hand, assisted-living residence provides 24-hour comprehensive care services under the insurance. However, it is categorized as "institution" where elders live in institutionalized life environment. The comparison indicates that further survey is necessary to define appropriate service volume and system to sustain elderly life in housing environment. **Conclusion :** Further research is underway to find how the life support should be to meet the individual needs of the elderly who relocates to the housing. The current status of life support in the housing is "various", which leads us to find various study cases for the study. **Keywords :** Service-added Elder Persons' Housing, Aging in Place, Life Support

PP25 S-169

LONG DISTANCE EVACUATION WAS WHOLESOME FOR REFUGEES OF THE 2011 TOHOKU EARTHQUAKE

Yasuko ABE, Norihiko IZUMIMOTO, Tomomi HAKAMADA, Kenji TOYOSHIMA, Marie YAMAUCHI, Eiji KANEKO, Kentaro SHIMOKADO (*Geriatrics and Vascular Medicine, Tokyo Medical and Dental University, Japan*)

Introduction : On March 11, 2011, the huge earthquake attacked

Tohoku district of Japan and caused large damage. Total number of the fatalities and the missing on the seventh day after the earthquake was over 20,000, whereas refugees over 386,000 were able to live at the shelters prepared by the government or autonomies. Mitsuke, one of the cities in Niigata prefecture, also offered shelters for the refugees who evacuated from Fukushima prefecture. We conducted health research of refugees and has prepared medical care for them. **Method :** On April 30 and November 26 in 2011, the medical checkups for refugees to investigate their health conditions were held at Mitsuke city hospital. We used a cross sectional survey design to collect data from the medical checkups reports. Participants were administered the blood test and questionnaire about mental health. **Results :** 333 refugees lived in Mitsuke city on April 30 and 150 refugees were on November 26. A total of 53 participants underwent the first medical checkup, 18(34%) of whom were over 65 years old. A total of 125 participants underwent the second medical checkup, 13(10.4%) of whom were over 65 years old. No one suffered from severe depression and nutrition disorder. **Conclusion :** Refugees transferred about 300km from Fukushima prefecture to Mitsuke city. This distance was distinctly longer than that of refugees who moved within Fukushima prefecture. But refugees in Mitsuke city were in good health. We conclude that long distance evacuation of refugees from terrible disasters area is one of the effective provisions for the health of refugees. **Keywords :** refugee, earthquake, health checkup

PP25 S-170

AN OPINION SURVEY AMONG HEALTHCARE PROFESSIONALS, TO ASSESS "AGE-FRIENDLINESS" OF THE CITY OF ATHENS, IN ORDER TO PROMOTE "ACTIVE AGEING" IN THE OLDER ATHENIANS

Christos PLIAKOS (*Centre for Sustainable Development, University of Central Lancashire-Greek Institute of Gerontology and Urban Sociology on Ageing, United Kingdom*)

Introduction : There is an international debate and collaboration in establishing sustainable social policies and developing a new research agenda, including policy makers, researchers, practitioners and older people, to ensure healthy livable cities for promoting "Active Ageing". The World Health Organization has prioritized the design of 'Age-friendly cities', publishing objective criteria and standards for the removal of barriers and difficulties occurring in the urban environment to enforce active participation of older people, while providing them adequate support and protection. The survey aims to explore current attributes of the city of Athens concerning "Age-friendliness", as perceived by healthcare professionals with an active interest in working with older people and study the perspective of creating an 'Age-friendly city' for all citizens, promoting "Active Ageing" in the older Athenians. **Method :** Quantitative survey targeted a convenience sample of 514 healthcare professionals, using semi-structured questionnaires heavily based on the WHO-Guidelines-Checklist form. **Results :** Found current status of the city poor and troubled, against the WHO guidelines in six out of eight domains of urban life, as perceived by the healthcare professionals, recording the feedback of the unmet criteria (65% of responses holds a negative perception, 23% a positive one and 12% is neutral). Found different perceptions concerning "Age-friendliness" among healthcare professionals, depending on the kind of profession. **Conclusion :** The paper based on the survey's findings, in light of the relative literature, attempts to make some recommendations to the local policy makers to act towards an urban regeneration plan creating an 'Age-friendly' city of Athens. **Keywords :** Age-friendly cities, PATH project, Active Ageing

PP25 S-171

PHYSICAL ACTIVITY AND MENTAL HEALTH OF POLISH OLDER ADULTS

Alina ZUREK¹, Grazyna DABROWSKA², Grzegorz ZUREK³
(1. Dept. of Psychology, University of Wrocław, Poland; 2. Dept of Physiotherapy, University School of Physical Education, Poland; 3. Dept. of Biostructure, University School of Physical Education, Poland)

Introduction : Physical activity (PA) performed by the elderly can result in improvement of the physical health and comfort; it can also influence the mental functioning providing benefits in the emotional and intellectual sphere. The aim of the research was to analyze psychological variables ? of anxiety and of subjectively understood mental health in a group of older adults who were very active and in a group of those, who were moderately active or almost inactive. **Method :** The participants of the research were 101 older adults who were meeting together in a University of Third Age. They were divided into two groups: displaying high level and low level of PA. The GHQ-28 was used together with the STAI. GHQ-28 allows to describe the mental health globally as well as in the four areas: somatic symptoms, anxiety, insomnia, functioning disorders, symptoms of depression; STAI is used to diagnose anxiety as a state and anxiety as a personality trait. **Results :** Statistically significant differences within the scope of anxiety as a trait were observed in the respective groups of the highly physically active and of those showing low levels of PA, while the intensity of anxiety experienced is low in both groups. The GHQ-28 results mark the mental health of the persons examined in the global sense and in every of the areas distinguished in GHQ-28. **Conclusion :** Mental health of Polish older adults is satisfactory. The intensification of anxiety may be a significant subjective psychological indicator of undertaking PA by the elderly in order to reduce tension. **Keywords :** physical activity, mental health, older adults

PP25 S-172

THE QUALITY OF LIFE OF THE SENIOR ADULT PARTICIPATING IN SENIOR EMPLOYMENT PROJECT

Keunyun RYU¹, Kyuryang HAN² (1. Dept. of Social Welfare, Korea National Univ. of Transportation, Korea; 2. Department of Social Welfare, Korea National University of Transportation, Korea)

Introduction : The purpose of this study was to investigate the effect of the life quality of seniors participating in the Senior Employment Project, and the intermediation effect of the psychosocial factors. The total of 511 seniors was recruited from the institutions participating in the Senior Employment Project in Chungchungbuk-do. The survey was chosen as a primary study method, and the data was gathered through self-reporting questionnaire and interview. **Method :** The direct and indirect effect and the factors that influence on the life quality of seniors were analyzed with SPSS 11.0 Statistical program, and frequency analysis and __ analysis on the personal characteristics and the actual conditions of the Senior Employment Project were carried out. **Results :** The survey results showed that life satisfaction of seniors influenced by working in the Senior Employment Project was 14.4%, and the variables that explain the outcome of participation were 53.6% and directly and indirectly turned out to affect the results of the project. **Conclusion :** The following senior welfare policies are proposed based on the result of this study: First, since the Senior Employment Project is the critical factor that influences the life quality of seniors, it is necessary to create a variety of jobs to improve the quality of senior life. Second, it is necessary to create jobs requiring professional abilities considering the motivation and the level of satisfaction of the seniors. Third, Educational programs that strengthen the psychosocial competence of the seniors should be planned to

improve the life quality of seniors who joins the Senior Employment Project. **Keywords :** The life quality of seniors, The Senior Employment Project, The senior welfare policies

PP25 S-173

EFFECTS OF AGE AND PHYSICAL ACTIVITY LEVEL ON NEUROELECTRIC INDICES OF RESPONSE INHIBITION

Geoffroy BOUCARD¹, Cedric A. BOUQUET², Abdelrhani BENRAISS³, Michel AUDIFFREN³ (1. Sport Sciences, University of Poitiers / CNRS, France; 2. Psychology, University of Poitiers / UMR CNRS 7295, France; 3. Sport Sciences, University of Poitiers / UMR CNRS 7295, France)

Introduction : Physical activity (PA) is a moderator of age-related cognitive decline, particularly in tasks involving response inhibition. In a Go/NoGo task, two event-related potentials (ERPs) allow to assess the efficiency of inhibitory processes: (1) The NoGo-N2 that would be produced by the right inferior frontal cortex (rIFC), a cortical area involved in premotor inhibition processes; (2) The NoGo-P3, focused over the medial frontal areas and that would be related to motor inhibition processes. The aim of this study is to determine the effects of PA level on the different inhibition-related ERPs in aging. **Method :** Twenty-four young and 24 older adults were classified as physically active or sedentary, based on measures of past (PA questionnaire) and present (accelerometer) PA. Reaction Time (RT) and ERPs amplitudes were the main dependent variables. **Results :** Concerning RT, young participants (415 ms) were faster than older participants, and active older participants (574 ms) were faster than the sedentary older participants (664 ms). Concerning ERPs, the NoGo-N2 was larger in active older participants (-2.5 μ V) than in sedentary older participants (-1 μ V), only at the right inferior frontal area, while there was no effect of PA level in young participants. The NoGo-P3 was smaller at FCz in older participants (4.3 μ V), compared to young participants (8.8 μ V), but this effect was not modulated by PA level. **Conclusion :** These results suggest a positive effect of PA level on premotor inhibition in aging people. This is consistent with other neuroimaging studies showing that physically-trained older adults exhibit volumetric and functional improvements in the rIFC. **Keywords :** Lifestyle, Electroencephalography, Reaction time

PP25 S-174

AN INTERVENTION STUDY ON PHYSICAL ACTIVITY AND COGNITIVE FUNCTIONING IN PEOPLE WITH PARKINSON'S DISEASE

Maud ROUILLARD¹, Michel AUDIFFREN², Cedric T. ALBINET³, Gaetan GARRAUX³, Fabienne COLLETTE⁴ (1. Sport Sciences, University of Liege, Belgium; 2. Sport Sciences, University of Poitiers / UMR CNRS 7295, France; 3. Neurology, University of Liege / Cyclotron research center, Belgium; 4. Neuropsychology, University of Liege / Cyclotron research center, Belgium)

Introduction : At this time, very few intervention studies were interested to assess the effects of physical activity on cognitive functioning in people with Parkinson's disease (PD) and most of their results were inconclusive. The principal aim of the present study was to re-examine the causal relationship between physical activity and cognitive efficiency in people with PD. **Method :** Twenty-seven volunteers with PD participated to this study (Mean age = 65.33 years; Mean Hoehn-and-Yahr score = 1.59). Twelve participants were involved in a 12-week physical activity (PA) program including 90-min sessions of aerobic or resistance exercises twice a week, while fifteen controls did not change their sedentary habits. All participants performed a series of neuropsychological tests before and after the 12-

week period, which assessed global cognitive performance (MMSE and Mattis), psychomotor speed (letter comparison task), attention (SDMT), memory (Rey word list recall), executive functions (WCST, running span letter, random number generation, orthographic and verbal fluency, Stroop task) and visuospatial functions (JOLO). Results : Significant interactions between Group (PA program vs. control) and Time (before vs. after training program) were observed for global cognitive performance, executive (orthographic fluency and Stroop) and visuospatial functions. The performances of the control group decreased from pre- to post-test while those of the group involved in the PA program remained stable. Conclusion : These results suggest that regular PA could slow down the cognitive impairments induced by PD. Future studies will be needed to confirm these results and to determine if PA could be a new and effective therapeutic approach to PD. Keywords : Chronic exercise, Executive functions, Compensatory mechanisms

PP25 S-175

PREDICTORS FOR SUBJECTIVE WELL-BEING OF CROSS-NATIONAL OLDER ADULTS

Sofia VON HUMBOLDT, Isabel LEAL (*Research Unit in Psychology and Health, R&D, ISPA-Instituto Universitario, Portugal*)

Introduction : Aims: This research aims to explore a causal model of subjective well-being predictors in a cross-cultural older population. Method : Methods: Measures were completed using a variety of culturally appropriate methods, including mail-outs, self-administration and interviews. For the purposes of this study, the Positive and Negative Affect Schedule (PANAS), the Satisfaction with Life Scale (SwLS), the Adjustment to Aging Scale (ATAS) one measure of cognitive functioning - the Mini-Mental State Examination (MMSE) and demographics, were included. All variables had fewer than 1% missing values and complete data were available for 709 older adults (M = 82.4, SD = 6.45, (range 74-102)) from eight different nationalities. Structural equation modeling was used. Controlling for age, gender and country of origin, we assessed the level of subjective well-being of elderly people, and its predictors. Results : Results: Subjective well-being is predicted, not only by age progression, but also by adjustment to aging, among other variables. Age was significantly associated with cognitive impairment ($\beta = .387$; $p = .003$) and perception of health ($\beta = -.172$; $p = .004$). All estimates were statistically significant ($p < .01$). Conclusion : Conclusions: Subjective well-being appears to be a catalyst to attitudinal markers of maturity and internal development, across cultures. This study highlights the predictors of subjective well-being in older age, warranting further study across cultures among frailer populations over time. Recommendations for future research on older adults' well-being measures and clinical practice are also presented. Keywords : Predictors, structural equation modeling, older adults, subjective well-being, adjustment

PP25 S-176

DOES HOSPITAL-BASED VOLUNTEERING FACILITATE ACTIVE AGING?

Erin SHEPPARD, Halina Gajlewicz KUSZ, Anne DOHRENWEND (*Medical Education, McLaren Flint Health Care/Michigan State University, USA*)

Introduction : Previous research supports a positive relationship between volunteering and health. (1,2,3). Our study sought to establish the benefits of volunteering in a hospital-based program, on the elderly population's health and process of active aging, as defined by the World Health Organization and as measured by mental health, and

physical and social functioning. Method : In May 2011, we mailed an anonymous survey to 294 volunteers at McLaren Health Care. The RAND 36-Item Health Survey TM (Version 1.0) was used as the quality of life measure. Demographic questions, including gender and age, were added. Responses were collected for 8 weeks. We used Quality Metrics' Health Outcomes Scoring Software 4.0 to evaluate volunteers' scores. Our group scores on physical functioning (PF), mental health (MH), and social functioning (SF) were compared to the general population and same age and gender norms. Results : We had 133 participants return completed surveys, resulting in 45% response rate. Majority were female, ages 75-84. Our volunteers' mean scores compared to the general US population norms were: PF 67.45 (84.2), MH 81.76 (74.7), SF 82.86 (83.3), respectively. Conclusion : While across all domains of quality of life our volunteers are not statistically significantly different compared to the general population norms, they did score higher compared to same age and gender norms. This suggests that volunteering in a hospital-based program promotes active aging and health in elderly people. Keywords : Active Aging and Voluntary Work

PP25 S-177

RECOGNITION OF HAPPINESS FROM DYNAMIC VISUAL CUES IS NOT PRESERVED IN DEMENTIA

Despina MORAITOU¹, Georgia PAPANTONIOU², Pantelis GINOS¹, Theofilos GKINOPOULOS³, Daphni KOTSELIDOU¹, Magdalini NIGRITINO¹ (*1. School of Psychology, Aristotle University of Thessaloniki, Greece; 2. Department of Early Childhood Education, University of Ioannina, Greece; 3 School of Psychology, Panteion University, Greece*)

Introduction : Difficulties in recognizing emotional signals might have serious implications for social interactions. Neurodegenerative diseases affecting neural networks involved in emotional displays processing may thus be connected with a disproportionate impairment in social life. The few dementia studies that have investigated emotion perception indicate that perception of happiness is relatively spared compared with other emotions. However, it has been argued that such findings may be due to ceiling effects in identifying happiness that is usually presented as a very intense emotion in static stimuli tests. The purpose of the present study was to examine the ability to decode happiness from dynamic emotional displays in mild to moderate dementia. Method : Thirty older adults diagnosed as mild to moderately demented, and 30 gender-matched healthy controls were administered a measure of emotion evaluation. The groups did not differ significantly in age and educational level. The emotion evaluation test used in the study was designed to examine a person's ability to visually identify basic emotions and discriminate these from neutral expressions, when they are expressed as dynamic, subtle, day-to-day expressions. Results : Patients with dementia were significantly impaired in happiness decoding and systematically tended to confuse happiness with positive surprise, compared to healthy older adults who had an almost excellent performance. Conclusion : Happiness recognition is not preserved even in mild dementia. Given that the same ability is well-preserved in healthy ageing, happiness decoding might be used as a marker of early cognitive decline. Keywords : emotion decoding, mild dementia, naturalistic emotional displays

PP25 S-178

"COMING TO TERMS WITH AGING" AS AN ADAPTATION PROCESS FOR AGING

Etuko KAKIYAMA, Keiko YAMAMOTO (*Nursing, Kyushu University of Nursing and Social Welfare, Japan*)

Introduction : Aging is an irreversible and universal process, and few studies have clarified the process by which elderly individuals adapt to aging. In the present study, we analyzed the ways in which elderly individuals adapt to age-related changes based on data obtained from interviews. **Method :** Semi-structured interviews were conducted with a total of 12 elderly individuals living independently at home. The present study was approved by the ethics committee of the researchers' university. **Results :** Subjects included eight women and four men with a mean age of 82.5 years. Because subjects had maintained lifestyles conducive to the prevention of lifestyle-related diseases from an early age, they did not have a conscious awareness of adaptation to aging. Subjects dealt with age-related changes following manifestation of subjective symptoms, and they were aware that similar changes occurred in friends of the same age, thereby making a with the feeling of "resignation". **Conclusion :** While subjects were aware of aging, they accepted it as a natural course of life and engaged in the same types of coping behavior as their contemporaries rather than actively adapting to changes, and thereby made a "Coming to terms with aging". Nevertheless, the possibility of delays in detection of age-related diseases was suggested. **Keywords :** Coming to terms aging, adaptation, aging

PP25 S-179

FACTORS RELATED TO PERCEIVED ENACTMENT OF AUTONOMY AMONG OLDER ADULTS IN JAPAN

Miho MATSUI (*School of Nursing, Nara Medical University, Japan*)

Introduction : The principle of promoting personal autonomy underpins many of the guidelines for improving the quality of care in a range of settings. Despite the assertion by many older people themselves that autonomy and independence are important to a good quality of life, little is known about perceived enactment of autonomy in Japanese older adults. The aim of this study was to examine related factors to autonomy among both healthy and frail older adults in Japan. **Method :** A cross-sectional design was adopted using a questionnaire consisted of demographics and measurement regarding autonomy. Three hundred and sixty-nine older adults consisting of 220 for senior center and 149 for long-term care users participated in this study. PEA Short version contains 13 positively and negatively worded statements. There are 3 subscales: Voluntariness (4 items), Individuality (5 items) and Self-Direction (4 items). **Results :** The sample had a mean age of 76.9 years, and half of the subjects (51%) were male due to stratified sampling. Living arrangements were that 42% couple, 31% alone, and 18% three generations. Self-reported health status showed 31% good, 37% fair, and 30% bad. PEA scores were observed that 7 of 13 items were significantly different between two groups. In addition, Senior center users indicated significantly higher score Voluntariness although total score of PEA in both groups were similar. Factors related to autonomy were health stats and social support in both groups. **Conclusion :** These results suggest that health stats and social support are important factors to maintain autonomy among older adults. **Keywords :** autonomy, social support, Japan

PP25 S-180

WHAT MAKES PEOPLE ANXIOUS ABOUT LIFE AFTER THE AGE OF 65? EVIDENCE FROM INTERNATIONAL SURVEY RESEARCH IN JAPAN, THE UNITED STATES, CHINA, AND INDIA

Yoshihiko KADOYA (*Institute of Social and Economic Research, Osaka University, Japan*)

Introduction : Due to the aging population, many governments with limited budgets are required to focus available resources on the direct

causes of people's anxieties about aging. **Method :** This study investigates what makes people anxious about their old age. It analyzes micro data concerning individuals aged 40 or above in the countries with different social contexts: Japan, the United States, China, and India. The data used for this research are from the international household data in these countries. **Results :** This study uncovered three major causes of people's anxieties about life after the age of 65. First, the speed of population aging does not always make people anxious. Second, high financial status effectively lessens people's levels of anxiety in Japan and the United States. Third, living with a child does not necessarily lessen people's concern about life after 65. **Conclusion :** The research revealed several facts concerning people's anxieties about aging issues in an aging era. However, further research is required to identify the causes of the anxieties and to provide insights into the social issues those anxieties create or represent. **Keywords :** future concern, social security

PP25 S-181

ETHNIC IDENTITY AND ISSUES OF AUTHENTICITY: THE MIDLIFE PERSPECTIVES OF SECOND-GENERATION KOREAN-AMERICANS

Linda Sujin PARK, Clifton BARBER (*Human Development and Family Studies, University of Wisconsin-Madison, USA*)

Introduction : This study focuses on ethnic identity from the perspective of middle adulthood for second-generation Korean-Americans. Of particular interest is the issue of authenticity, wherein individuals grapple with being viewed both as a "racial foreigner" in one cultural context and as a "cultural foreigner" in another. **Method :** In semi-structured interviews using the life course perspective, 16 middle-aged second-generation Korean-American participants shared retrospective thoughts and experiences about being racial foreigners in predominantly white communities and being cultural foreigners within their co-ethnic community. **Results :** The experience of being a cultural foreigner was highlighted as more distressing than being a racial foreigner. Issues of authenticity arose from an unawareness of the competing perspectives between the U.S and Korea for the social construction of race. This difference in perspectives generated some misunderstanding in the definition of being a Korean. Additionally, Koreans' rooted sense of ethnic nationalism (deeply connected to culture and language) created strong in-group and out-group boundaries. These boundaries go beyond separating Koreans from non-Koreans but extend to the way first and 1.5 generations treat the second-generation Korean-Americans through "othering" and exclusion. Many participants recounted incidents of exclusion during college stemming from the strong "in-group" solidarity of the 1.5 generation Koreans. **Conclusion :** Participants' lack of fluency in the Korean language impeded their inclusion into the Korean community then. Although participants continued to lament their lack of heritage language skills, especially in regards to issues of authenticity as a cultural foreigner, at midlife they developed a sense of appreciation for their Korean heritage which was formerly absent. **Keywords :** midlife, ethnic identity, cultural foreigner, life course

PP25 S-182

THE CAUSAL ASSOCIATION BETWEEN GENERATIVE CONCERN AND GENERATIVE ACT IN OLD AGE

Megumi TABUCHI¹, Takeshi NAKAGAWA², Yasuyuki GONDO²
(1. *Psychological Science, Kwansei Gakuin University, Japan*;
2. *Psychological Science, Osaka University, Japan*)

Introduction : The purpose of this study was to reveal the causal association between generative concern and generative act in old age.

Generativity, suggested by E. H. Erikson (1950; 1963) as a developmental task in middle-age, is the concern of contributing to the well-being of others, especially younger generations. According to the “anatomy of generativity” (McAdams & Aubin, 1998), the generative concern has an impact on generative act, and the person of high level generative concern acts positively for contributing to the well-being of young generations. On the other hand, some studies reported that necessary inter-generational relationships, such as child and grandchild rearing, influenced on the development of generative concern, and actions came before concerns. Method : We conducted longitudinal survey, and 400 older adults aged 62-87 years responded to the questionnaire at 2 time points that were 12 months apart. Generative concern was assessed with a Japanese version of the Loyola Generativity Short Scale. Generative acts were measured by the generative acts checklist. Results : Cross-lagged effects model conducted by simultaneous analysis of several groups showed that the both impacts, from generative concern to generative acts and from acts to concern, were significant in men. On the other hand, only the impact from acts to concern was significant in female. Conclusion : These results showed the gender difference in the relationship between activities and psychological development in middle and old age. Keywords : generativity, generative act, generative concern

PP25 S-183

DEVELOPMENTAL CHANGES IN PERCEPTIONS AND THE SENSE OF RESPECT FOR THE ELDERLY AMONG ADOLESCENTS

Tomoya TAKAHASHI (*Environment and Information Science, Yokohama National University, Japan*)

Introduction : Changes in the sense of respect for the elderly and perceptions of the elderly among adolescents were investigated. Method : Participants were early adolescents in junior high school (N = 190, 88 boys and 102 girls) and late adolescents attending universities (N = 202, 126 men and 76 women) in City A that responded to the questionnaire. Considerations regarding the protection of their privacy were explained to the participants and they were handed a document detailing these. The study utilized the “Sense of Respect towards the Elderly among Adolescents Scale” (Takahashi, 2012) and “Perceptions towards the Elderly Scale” (Cheng et al., 2000) as well as face sheets to create the questionnaire. Results : Results indicated that the sense of respect for the elderly increased during adolescent maturation, but perceptions towards the elderly become more negative. These results supported a previous claim by Nakano (1996) suggesting, “Positive perceptions towards the elderly during youth become negative during maturation.” Our results also supported Chen’s (2007) finding that “There is a disparity between attitudes towards filial piety and following through with filial piety”. Conclusion : We predicted that a factor mediating between the positive effect of maturation and the sense of respect towards the elderly might be the acquisition of social awareness. Moreover, the negative effect of maturation on the perceptions towards the elderly might be caused by the realization of the large burden that the younger generations must carry to support the growing elderly population in Japanese society. Keywords : Perceptions of the Elderly, Sense of Respect for the Elderly, Adolescence

PP25 S-184

TRAJECTORIES OF DEPRESSIVE SYMPTOMS IN LATER LIFE: A MULTIPLE-INDICATOR MULTILEVEL GROWTH MODEL

Yu-Jing GAO (*Department of Psychology, Fu Jen Catholic University, Taiwan*)

Introduction : Research has focused on the dynamic nature of depressive symptoms in later life. Little research has treated depressive symptoms as a latent variable from multiple indicators. This article examines depressive symptoms over a 19-year period (from 1989 to 2007) in a sample of 3,957 Taiwanese elders using a multiple-indicator multilevel growth model (MIML) which incorporating measurement models into the growth curve of the latent variable. Inter-individual differences on perceived health status, autonomy, and age attitude were also considered into the growth model. Method : Data taken from the Survey of Health and Living Status of the Elderly in Taiwan (TLISA) were used in analysis. Depression was measured by the 10-item version of CESD. Perceived health status and age attitude was measured by a single item 'What do you think about your health status?' and 'Do you think it is a bad thing about getting older?' respectively. Autonomy was measured by the Instrumental Activities of Daily Living (IADL). Results : The depressive symptoms were not correlated with age at initial stage but increased with age. Initial perceived poor health status, less autonomy, and negative age attitude had a positive effect on latent baseline depression ($\beta = .536$, $\beta = .486$, and $\beta = .176$, $p < .01$, respectively). Initial less autonomy enhanced the increase trend of depression across time ($\beta = .175$, $p < .001$). Conclusion: The results show that perceived health status and autonomy play an important role for both intercept and slope growth factors of depression. Age is an important predictor only for the slope growth of depressive symptoms. These results are consistent with previous research. Keywords : Depressive symptoms, Latent growth modeling, Temporal measurement invariance

PP25 S-185

THE ACCESS LIFE COURSE RESEARCH INFRASTRUCTURE - A NORWEGIAN BASED INFRASTRUCTURE FACILITATING ACCESS TO HIGH QUALITY LIFE COURSE DATA

Kristine KOLØEN¹, Marijke VEENSTRA¹, Morten BLEKESAUNE¹, Thomas HANSEN¹, Katharina HERLOFSON¹, Lars DOMMERMUTH², Trude LAPPEGARD² (*1. NOVA, Norwegian Social Research, Norway; 2. SSB, Statistics Norway, Norway*)

Introduction : Improving knowledge for meeting tomorrow's sociopolitical challenges requires high quality longitudinal data that are easily available to researchers. The ACCESS Life Course Research Infrastructure establishes a research platform for interdisciplinary, cross-national research analysing life course patterns, in particular within the fields of ageing and demography. ACCESS provides data from two large-scale surveys: The Norwegian panel study on life course, ageing and generation (NorLAG) and The Life Course, Generation and Gender study (LOGG). Method : The first wave of NorLAG was conducted in 2002-03. The sample was drawn from the non-institutionalised population aged 40-79 years in 30 municipalities and townships in Norway. In the second wave of data collection (2007-08), NorLAG was merged with the United Nations-initiated Generations and Gender Survey (GGS) and also includes a nationally representative sample of persons aged 18-79 years. Response rates are 67 % (N=5,559) for the first wave of NorLAG and 61 % (N=14,892) for the second wave of data collection. In wave 2, 71.6 % (N=3,774) of the respondents from wave 1 were retained. Data sources include survey and annual updates from the public registers. Results : Easy-to-use data on the following main topics are available: work and retirement, family and intergenerational relations, mental health and quality of life, health and care, fertility histories and partnership dynamics. ACCESS provides easy-to-use data files and facilitates access by providing cleaned and tested data, detailed documentation of datasets and variables, and ready to use scales and measures.

Conclusion : The infrastructure has generated an increase in new users of the data. Keywords : survey data, infrastructure, life course

PP25 S-186

THE INFLUENCE OF PERSONALITY TRAITS ON PAIN IN OLDER ADULTS: FINDING FROM THE SNAC-B STUDY

Lena W. SANDIN WRANKER¹, Mikael RENNEMARK², Johan BERGLUND³, Solve ELMSTAHL⁴ (1. Department of Health Sciences, Division of Geriatr, Lund University, Lund, Sweden; 2. School of Education, Psychology and Sport Science, Linnaeus University, Sweden; 3. School of Health and Sciences, Blekinge Institute of Technology, Sweden; 4. Department of Health Sciences, Division of Geriatric Medicine, Lund University, Sweden)

Introduction : The experience of pain may vary depending on personality traits and individual characteristics. The aim of this study was to investigate possible associations between pain and the personality dimensions, (the big five), and to explore if it is equally gender expressed among older adults. The possible covariates age, insomnia, cash margin, and education will be controlled for. Method : The Swedish National Study on Aging and Care (Blekinge) sample includes 1402 individuals aged 60-96 years out of whom 769 (55%) reported pain. This sample of elderly people is being followed over time. Information on personality traits were obtained by using the personality SGC1 questionnaire; a Swedish (60 questions) version of Costa & McCrae's FFM questionnaire. . Multivariate logistic (forward) regression analyses were conducted to provide odds ratios (Ors). All analyses were carried out using the SPSS program, version 17.0. Results : Among women insomnia gave the highest odds for experiencing pain (OR 2.18), $p < 0.001$, followed by neuroticism (OR 1.05), $p < 0.001$, and belonging to the younger part of the older adult cohort (OR 1.02), $p < 0.035$. In men, only insomnia yielded high odds ratio for pain (OR 2.02), $p < 0.003$. Conclusion : Insomnia was the most influential factor for both genders but neuroticism contributes in the experience of pain among older adult women. This study adds, a suggestion that older adults with pain may share particular personality characteristics, but also that there are gender differences. Thus, to better understand older individuals who suffer from pain, personality traits should be taken into account. Keywords : Personality, pain, older

PP25 S-187

THE INCREASING IMPACT OF GEROTRASCENDENCE ON MENTAL HEALTH WELL-BEING ASSOCIATED WITH A REDUCTION IN SOCIAL RESOURCES OF OLD AGE

Yukie MASUI¹, Yasuyuki GONDO², Takeshi NAKAGAWA², Madoka OGAWA¹, Yoshiko ISHIOKA², Yukiko TATSUHIRA², Marina KOZONO², Megumi TABUCHI³, Hiroki INAGAKI⁴, Kazunori IKEBE⁵, Kei KAMIDE⁶, Yasumichi ARAI⁷, Tatsuro ISHIZAKI¹, Ryutaro TAKAHASHI⁸ (1. Human Care Research Team, Tokyo Metropolitan Institute of Gerontology, Japan; 2. Graduate School of Human Sciences, Osaka University, Japan; 3. Department of Psychological Science, Kwansai Gakuin University, Japan; 4. Research Team for Promoting Independence of the Elderly, Tokyo Metropolitan Institute of Gerontology, Japan; 5. Graduate School of Dentistry, Osaka University, Japan; 6. Graduate School of Medicine, Osaka University, Japan; 7. School of Medicine, Keio University, Japan; 8. Research on Social and Human Sciences, Tokyo Metropolitan Institute of Gerontology, Japan)

Introduction : The purpose of this study is to examine the impact of gerotranscendence on mental health well-being of older adults who have few social resources. Method : A questionnaire survey was administered to 1,973 community-dwelling Japanese older adults

(Mean age=74.9 years; SD=5.0) to assess gerotranscendence and mental health well-being using the Japanese Gerotranscendence Scale Revised (JGS-R) and the WHO-5 Well-being Index, respectively. Principal component analysis was performed to assess the social resource score, which was combined with the size of social network, the frequency of interactions, and the social support scale. We utilized the multiple population analysis of structural equation modeling, while controlling for age, sex, and IADL, and ascertained the impact of the eight subordinate factors of gerotranscendence on mental health well-being with a comparison of higher- and lower-scoring groups on social resource. Results : The results revealed that "Awareness of 'arigatasa' and 'okage'", "Releasing from social self", and "Let it go" of the subordinate factors of the JGS-R significantly influenced mental health well-being in the both higher- and lower-scoring groups on social resource. Furthermore, the standard partial regression coefficient of 'Awareness of 'arigatasa' and 'okage' to mental health well-being was significantly larger ($p < 0.05$) for those with lower scores ($\beta = .26$) on social resource than for those with higher scores ($\beta = .16$). Conclusion : These findings were consistent with the hypothesis of Erikson & Erikson (1997) that psychological adaptation is promoted by the development towards gerotranscendence when various resources such as physical abilities and social resources decrease in the late old age. Keywords: gerotranscendence, psychological well-being, social relationship

PP25 S-188

USING PATH ANALYSIS TO EXAMINE THE EFFECT OF PHYSICAL ACTIVITY, DEPRESSION, SOCIAL SUPPORT, ON SPIRITUAL WELLNESS AMONG INSTITUTIONALIZED OLDER PEOPLE

Chiang-Fang CHU¹, Yi-Heng CHEN², Yu-Han WANG² (1. School of Nursing, China Medical University, Taiwan; 2. School of Nursing, Mackay Medical College, Taiwan)

Introduction : Spirituality is considered as a critical component of institutional care for elders, under the higher risk of life-threatening events, chronic illness or disability. Literature investigating the interrelationships between spiritual wellness and associated variables is extremely limited, and causality among these variables have not been fully tested in this group. The study was to investigate the causal relationships between spiritual wellness and relevant variables including physical function, depression and social support in institutionalized older people. Method : This is a cross-sectional study, and a total of 176 eligible older people in central Taiwan were recruited. The structured questionnaires including Barthel index, Geriatric Depression Scale (GDS), Interpersonal Support Evaluation List (ISEL), and Spiritual Well-Being Scale (SWBS) were used to measure the major concepts. Results : The results of bivariate correlation analysis showed that moderate relationships existing between spirituality and each other variables, as the authors predicted. Further, we investigated the causal relationships by path analysis and found that although both social support and depression had direct impacts on existential well-being, physical function influenced existential well-being through social support or depression among institutionalized older adults. Moreover, depression was found as a mediator between social support and existential well-being. The results indicated that physical function could influence social support and then indirectly increased spirituality through depression. Conclusion : The study evidenced that physical function, depression and social support all had influence on threaten older adults' spiritual wellness. Thus, a more comprehensive biopsychosocial treatment strategy is recommended to integrate into the future care plan for institutional residents. Keywords : path analysis, spiritual wellness, older people

PP25 S-189

THE REQUIREMENTS FOR SUCCESSFUL AGEING

Audrey GUY (*Business, Law and Governance, University of Canberra, Australia*)

Introduction : In all stages of life people need to have a purpose which provides a definition of who they are in society. Prior to retirement this need is filled by employment which provides necessary status in people's lives. Employment may also provide social contacts, another human need. Older people and the community in which they live need to be aware of this and both groups should actively seek to fill these gaps for retirees. Method : Employees who enjoy their work have no desire to retire but for others retirement creates a new gap in their lives. This needs to be filled by a substantial interest, or purpose, which gives meaning to life and can also provide social contacts. Isolation and physical impairment are no longer barriers in a digital world in which people are just a keystroke away from involvement. Results : Encouraging successful ageing through any community involvement, paid or unpaid, benefits the person through better health, particularly mental health, and benefits the nation through increased social and financial participation. Older people no longer have the fear of failing and can branch out into previously untried fields, such as setting up a new business or entering a new occupation, possibly with government assistance. Conclusion : We should regard the later stage of life as one of enjoyment, achievement and self-fulfilment, not as a time of being merely a burden on the community, lacking self-respect. It is a stage in life when we should be free to follow our dreams. Keywords : Status, purpose, ageing

PP25 S-190

USING TECHNOLOGY TO IMPROVE HEALTHY AGEING: DEVELOPING A RESEARCH AGENDA

Ilan KWON, Paul FREDDOLINO (*Social Work, Michigan State University, USA*)

Introduction : Ageing populations mean increased health care costs. Information and Communication Technologies (ICTs) are often seen as solutions to this growing need, but how to obtain the most potential benefits from ICT-based programs is unclear. Method : Findings from Korean and U.S. literature raise important questions for program development and research. These findings suggest the broad outlines of a research agenda that builds on progress in digital inclusion in many countries. Results : Several Korean surveys report elders with computer use or training are more confident getting health information via Internet, and expanding their social network and social participation. In the U.S., several empirical studies using quasi-experimental designs indicate that older adults with little prior computer experience can and will learn to use ICTs, and also feel more comfortable with technology. Even though training can facilitate elders to reach some level of e-inclusion, desired outcomes in specific areas of interest to families, caregivers, and the government (such as health and social support/social networks) generally do not reach hypothesized levels. Conclusion : The proposal for discussion is that we need to develop and implement a research agenda that assesses the healthy ageing potential for ICT training targeted toward specific, high-value content areas like health and social support. Such training must go beyond how to use computers, the Internet, Skype, etc. Training must be targeted, include active participation and homework, and incorporate some rewards/motivators. We will briefly present one model being implemented and evaluated, and we hope to discuss others' ideas for a research agenda. Keywords : Information and Communication Technologies (ICTs), healthy aging

PP25 S-191

SELF-REPORTED ADJUSTMENT TO AGING AND SUBJECTIVE AGE: A QUALITATIVE STUDY WITH ANGOLAN AND PORTUGUESE COMMUNITY-DWELLING OLDER ADULTS

Sofia VON HUMBOLDT, Isabel LEAL (*Research Unit in Psychology and Health, R&D, ISPA-Instituto Universitario, Portugal*)

Introduction : Individual differences concerning the aging experience influence the ways the aging self adapts to challenges that are related to late adulthood in various cultural settings. Purpose: This study aims at examining the indicators of adjustment to aging (AtA) and subjective age (SA) reported by older adults and at investigating the latent constructs that can work as major determinants in AtA and SA in an older Portuguese and Angolan community-dwelling population. Method : Questionnaires were completed, using a variety of appropriate methods, including demographics and interviews. Complete data were available for 102 older adults aged between 75-99 years (M = 80.5, SD = 5.76). Data was subjected to content analysis. The correlational structure and latent constructs of indicators of AtA and SA were analyzed by a Multiple Correspondence Analysis (MCA). Results : 'Social support' was the most reported indicator of AtA (25.4%) and 'in harmony' (22.3%) was indicated as the most frequent SA response. Adjustment and age was explained by a three-factor overall model: 'integrated', 'congruent' and 'concerned' for Angolan participants whereas 'fulfilled', 'reconciliated' and 'driven' was indicated as a best-fit model for Portuguese elderly. Conclusion : The findings presented in this paper emphasized the deepening of the concept of AtA in this population and its association with SA, in an overall model. Keywords : Adjustment to Aging; Multiple Correspondence Analysis; Community-Dwelling Older Adults

PP25 S-192

ASSOCIATIONS OF SUCCESSFUL AGING AWARENESS WITH RETIREMENT PREPARATION: A STUDY OF WORKERS IN A MEDICAL CENTER

Yi-Ling CHOU¹, Hui-Chuan HSU², Shu-Nu Lee CHANG², Haung-Yu YANG³, Yi-Hui SUNG⁴ (*1. Chung Shan Medical University Hospital, Chung Shan Medical University, Department of Nursing, School of Nursing, Taiwan; 2. Asia University, Department of Healthcare Administration, Taiwan; 3. Yuanpei University, Department of Healthcare Management, Taiwan; 4. Chung Shan Medical University Hospital, Department of Nursing, Taiwan*)

Introduction : The purpose of this study was to explore the elements of their awareness in successful aging and retirement preparation, and the relationship between successful aging awareness and retirement preparation among the workers in a medical center before retirement. Method : The questionnaire was designed according to literature review and the results of a pilot qualitative interview. The samples were from the employees in a medical center who were 45 years old or more. In total 174 persons were included in the analysis, with response rate of 69.6%. Factor analysis and multiple regression models were used for analysis. Results : (1) Six factors were extracted from the items of successful aging awareness : learning and social life, economy and health expense, environment and society welfare, family relationships, health, and positive thinking (with variance explained 68.4%). (2) Seven factors were extracted from retirement preparation items: learning and social life, environment and social welfare, family relationships, economic security, psychological and physical health, social relationships, spirituality and religion (with variance explained 69.3%). (3) In general, the higher awareness of successful aging in learning and social life, environment and social welfare, economy and

health expense, and health, the more retirement preparation behaviors were found. Conclusion : Stronger successful aging awareness predict better retirement preparation. The successful aging components are suggested to be added in the education for the pre-retirement population. The sample size and the scope of medical institutions as well as the longitudinal design are suggested in the future studies. Keywords : successful aging^o retirement preparation

PP25 S-193

COMPLEXITY OF WORK AND LATE-LIFE COGNITIVE FUNCTION

Yoshiko ISHIOKA¹, Yasuyuki GONDO¹, Madoka OGAWA², Yukie MASUI², Takeshi NAKAGAWA¹, Yukiko TATSUHIRA¹, Kazunori IKEBE³, Kei KAMIDE⁴, Yasumichi ARAI⁵, Ryutaro TAKAHASHI² (1. Human Sciences, Osaka University, Japan; 2. Human Care Research Team, Tokyo Metropolitan Institute of Gerontology, Japan; 3. Graduate School of Dentistry, Osaka University, Japan; 4. Graduate School of Medicine, Osaka University, Japan; 5. School of Medicine, Keio University, Japan)

Introduction : Previous studies demonstrated the association of occupational complexity with cognition in the elderly. To measure complexity, most of studies used the score based on the Dictionary of Occupational Titles. It is a very useful tool because each occupational title has own complexity score. However, occupational complexity might be diverse even in the same occupation, because it depends on how much people devote cognitive effort to their work. This study examined the association between complexity of work measured by our own score and late-life memory and reasoning performance. Method : We conducted venue surveys with 1000 community-dwelling people aged from 69 to 71 years, who were chosen from resident registry of four districts in Tokyo and Hyogo prefectures. Evaluation of complexity of work with data, people, and things was developed based on the Japanese job complexity score that enables to rate more precise work complexity score. Results : Multiple regression analyses revealed that after controlling for sex, school records, and educational achievement, more complex work with people was associated with higher memory performance and more complex work with data was associated with higher reasoning performance. Moreover, in relation to reasoning performance, an interaction effect was found between complexity of work with data and sex: in men, high complexity of work with data was associated with high reasoning performance. Conclusion : These findings suggest that high complexity of work is associated with the maintenance of cognitive function in later life. Future research using longitudinal data is required to investigate whether complexity of work predicts cognitive decline. Keywords : cognitive function, individual differences, life environment

PP25 S-194

DOSE THE POSITIVITY EFFECT IN UNINTENTIONAL PROCESS RETRIEVAL?

Daisuke UENO¹, Yasuyuki GONDO¹, Shinichi SATO¹, Kouhei MASUMOTO² (1. Graduate School of Human Sciences, Osaka University, Japan; 2. Graduate School of Human Development and Environment, Kobe University, Japan)

Introduction : Socioemotional selectivity theory cites the positivity effect to explain higher memory performance for positive than negative materials in aging. Previous research suggests that older adults intentionally retrieved more positive than negative materials compared with younger adults, but it is unknown whether the positivity effect occurs unintentionally. To test whether the positivity effect is shown unintentionally, this study examined age differences in

the effect of emotional valence on explicit and implicit memory. Method : In experiment 1, 48 younger adults (mean age 22 years) and 48 older adults (mean age 70 years) encoded neutral words to which emotional valence was added by subsequent presentation of positive, negative, or neutral pictures. After the encoding phase, participants completed a free recall task (explicit memory). In experiment 2, 27 younger adults (mean age 20 years) and 30 older adults (mean age 69 years) completed a word completion task (implicit memory) after an encoding phase with the same procedure as experiment 1. As a covariate, positive and negative mood were measured before the encoding and retrieving phases in both experiments. Results : Explicit memory in the negative condition was highest in younger adults, but revealed a positivity effect in older adults. Implicit memory in the positive and negative conditions was higher than in the neutral condition in both age groups. Conclusion : This study revealed that the positivity effect is shown in explicit memory. This study suggests that the positivity effect does not occur unintentional process, supporting the socioemotional selectivity theory. Keywords : positivity effect, emotional memory, socioemotional selectivity theory

PP25 S-195

VALIDITY OF FEAR OF CRIME SCALE TO ASSESS THE ELDERLY IN TAIWAN

Chih-Ping LI (Health Industry Management, Kainan University, Taiwan)

Introduction : This research explores issues associated with an increasingly fear of crime among elderly people. Previous studies investigate whether elderly people have a significantly higher fear of crime using the fear of crime scale by crime type. However, with the emergence of new crime types targeted at elderly people in Taiwan, such as fraud, harassing phone and contamination, it is necessary to develop fear of crime indicators according to the experiences of elderly people in Taiwan. Method : EFA and CFA were performed with a sample of 176 elderly people aged 65 years or older from a community of Taiwan and established reasonable fit for 19-item fear of crime scale. Confirmatory factor analyses were conducted by using the LISREL program with maximum likelihood estimation of covariance matrices. Results : The EFA was performed on the 19 items located on the elderly. The result revealed a clear pattern of item loading across the two factors named 'concrete fear' and 'formless fear'. The CFA was performed on the total sample (N=176). Although Chi-square and RMSEA were somewhat below expectation; however, the CFI of 0.9, the IFI of 0.9, and the SRMR of 0.091 were demonstrated good fit between the data and the proposed measurement. Conclusion : The fear of crime scale is a relatively brief 19-item instrument that can be administered for a focused assessment of the elderly. It would be useful to extend the research by exploring the relationship between fear of crime and quality of life or investigating the gender difference in elderly people's perceptions of the link between fear of crime and quality of life. Keywords : elderly people, fear of crime

PP25 S-196

A CASE STUDY OF THE NURSE EXPERIENCE IN CARING DEMENTIA

Chinghua LIU¹, Chih-Ping LI² (1. Department of Nursing, Cardinal Tien Junior College of Healthcare And Management, Taiwan; 2. Department of Health Industry Management, Kainan University, Taiwan)

Introduction : In this study, the experiences of the researcher in establishing a care program for the elder with dementia and the

contribution of the researcher in reducing the anxiety of the elderly with dementia were described. The location of collected data was elderly daycare center. Method : The period of data collection was from 18 October to 14 December 2012. The studying case was firstly denoted as an elderly female with dementia and serious anxiety based on the record of her patient record, oral description of her family members, and nursing works. Then the subject was evaluated by person centered approach for understanding her favor of choice in daily life. The results showed that the subject liked to do housework, scrimp her household, and fold clothes. Results : The program for reducing her anxiety was designed for her to fold clothes with other member in care home. The ability of communicating with others was improved, but repetition, anxiety and eye uncomfortable were eliminated. Conclusion : We suggest that a consideration of subject's need is essential to understanding of how respond to the impact of dementia, then provide the various types of 'work' that is required. Keywords : dementia, case study, person centered approach

PP25 S-197

GENERATIVITY OF ELDERLY PEOPLE IN WESTERN MEXICO

Jazmin CUEVA-CONTRERAS¹, Elva Dolores ARIAS MERINO¹, Neyda Ma. MENDOZA-RUVALCABA², Martha Judith ARIAS-MERINO³, Martha Elena VAZQUEZ-ARIAS³ (1. *Public Health, CUCS, University of Guadalajara, Mexico*; 2. *Health Science, CUTONALA, University of Guadalajara, Mexico*; 3. *Maestria en Gestion y Politicas de la Educacion Superior, CUCEA, University of Guadalajara, Mexico*)

Introduction : Generativity is composed of seven psychosocial characteristics: cultural demands, inner desire, and concern of next generation, commitment, belief in the species, the action and storytelling, and the expression of generative behavior which focus on individual and social objective of providing future generations. A high level of generativity has positive influence in elderly people. Method : This study was developed from Self-perception of Aging Study in the CASOENAC project, FONCICYT-94670 (EU-CONACYT). A cross-cultural study in western Mexico, with a sample of 1564 people aged between 60 and 108. The battery of self-perception of aging included a scale of generativity. Analysis was performed on SPSS program. Results : Mean age was 70.78±8.4, 51.7% female, 54.3% reported being married, 59.9%, only the 7.0 obtained an upper level degree, and 31.4% have elementary school. In average more people lives in the same household (3.2). The concern about generativity was associated with age (p=.019) social exclusion (p=.025) and educational level (p=.037), the doubts about generativity showed an associated with self-perfection of aging (p=.012), burden of society (p=.012), the identification with the age group (p=.007) and dissociation with age group (p=.000). Conclusion : In Mexico there were more doubts about generativity, which means that people are unsure of their contributions for the betterment of the community and whether they have passed on their knowledge and skills so that others will remember for a long time. Keywords : Generativity, Self-perception,

PP25 S-198

RISK FACTORS OF GERIATRIC DEPRESSION IN TAIWAN: A TEN-YEAR LONGITUDINAL STUDY

Hui-Wen LIN¹, Miao-Yu LIAO², Chi-Hua YEN³, Meng-Chih LEE¹ (1. *Department of Family Medicine, Taichung Hospital Department of Health; Insititute of Medicine of Chung Shan Medical University, Taiwan*; 2. *Department of Geriatrics, Taichung Hospital Department of Health; Insititute of Medicine of Chung Shan Medical University, Taiwan*; 3. *Department of Family Medicine, Chung Shan Medical*

University Hospital, Taiwan)

Introduction : Depression, one of the most common mental disorders among the geriatric population, is often used as an index of psychological health. This study aimed to identify the risk factors of depression among the elderly in Taiwan. Method : The data were drawn from the "Survey of Health and Living Status of the Elderly in Taiwan", a nationally longitudinal study launched in 1989. We recruited the community-dwelling respondents without depressive symptoms or disorders since 1993, and followed them over a ten-year period. Of the eligible 1,540 respondents, 535 and 142 individuals did not complete the follow-up in 2003 due to death and uncompleted interview, respectively. Depressive symptoms were assessed by the ten-item Center for Epidemiologic Studies Depression Scale (CES-D). Independent variables, including age, sex, education, marital status, living arrangement, poverty level, chronic diseases, physical functions, leisure activities, and mental support systems, were gathered at baseline in 1993. Multivariate logistic regression analysis was used to evaluate. Results : The 863 respondents completed the ten-year follow-up, and there were 304 individuals having the depressive symptoms, accounting for 35.2%. Our results revealed disability and being female were independent predictors for geriatric depression in Taiwan, and the OR was 8.74 (95% CI = 1.04~73.57) and 1.80 (95% CI = 1.28~2.51), respectively. Conclusion : The prevalence of depression among the elderly was very high in Taiwan according to our research. Furthermore, female gender and disability were the independent association factors for geriatric depression. Functional maintenance and health promotion to prevent further disability is the major issue dealing with the geriatric depression. Keywords : geriatric depression, disability

PP25 S-199

THE PREVALENCE OF DEPRESSION SYMPTOMS AND INFLUENCING FACTORS AMONG COMMUNITY DWELLING OLDER ADULTS IN KOREA

Jaesoon YOO¹, Hyun Sook KIM², Hyon-Jin YON³ (1. *Department of Nursing, Chungbuk National University, Korea*; 2. *Department of Social Welfare, Korea National University of Transportation, Korea*; 3. *Mental Health, Chungwon-gun Mental Health Center, Korea*)

Introduction : The aim of this study was to determine the prevalence of depression symptoms and influencing factors among community dwelling older adults in Korea. Method : Home-dwelling older adults living in three cities in one province of Korea (size: 833 from 3 different sample groups) were recruited as a model sample group of this study. A cross-sectional survey was conducted using face-to-face private interviews. The structured questionnaire that includes questions on descriptive characteristics and the Korean version of Geriatric Depression Scale-short form (GDS-SF) were administered to each older adult. A simple descriptive statistical method and multivariate regression were used to analyze 774 meaningful data screened out of all collected responses. Results : The prevalence of depression symptoms among the older adults in sample groups was 49.6%. The multivariate regression analysis revealed that influencing factors of the depression symptom were the level of life satisfaction, health status, experiences of stressful life events, ADL dependency, social support, and presence of chronic disease. The clients of customized home visiting health care service by public health center showed higher prevalence of depression symptoms than those of Kyong-Ro-Dang (community house for senior citizens) or the senior welfare center. Conclusion : This study shows that there are high levels of prevalence of depression symptoms in older adults. Especially, the clients of customized visiting healthcare service of public health center are high

risk group. Keywords : depression, Home-dwelling older adult

PP25 S-200

ALCOHOL CONSUMPTION AND COGNITIVE IMPAIRMENT AMONG KOREAN OLDER ADULTS: DOES GENDER MATTER?

Jiyoung LYU, Seungah Hannah LEE (*Gerontology Institute and Department, University of Massachusetts Boston, USA*)

Introduction : The purpose of this study was to examine the relationship between alcohol consumption and cognitive impairment among individuals aged 65 and older in South Korea. **Method :** The study sample was drawn from a nationally representative data set, the Korean Longitudinal Study of Ageing (KLoSA) wave 1. The final sample was subdivided into female and male groups, which consisted of 2,250 and 1,535 subjects, respectively. Cognitive impairment was measured based on the Korean version of the Mini-Mental State Exam (K-MMSE). The drinking status variable consisted of four categories (never drinker, past drinker, moderate drinker, and heavy drinker). **Results :** Adjusted for confounding variables, a multivariate analysis showed that compared to moderate drinkers past drinkers were more likely to be cognitively impaired for women, while never drinkers and heavy drinkers were more likely to be cognitively impaired for men. **Conclusion :** These findings suggest that there may be a curvilinear association between drinking patterns and cognitive function in later life, such that a moderate level of alcohol consumption may be associated with reduced risk of cognitive impairment. **Keywords :** alcohol, cognition, korean older adults

PP25 S-201

THE APPLICATION OF MMSE IN PREDICTION OF COGNITIVE DETERIORATION

Jui Hung LIN (*Psychiatry department, Taichung Veterans General Hospital, Chia-Yi Branch, Taiwan*)

Introduction : Cognitive deterioration is common observed phenomenon. Many factors are supposed to be related to this situation. This study focused on demographic information and medical condition to determine what factors could be the predictor for cognitive deterioration in the elderly. **Method :** Two hundred and twenty four elderly in the veteran nursing home were included in a 2-year follow-up study from 2010 to 2011. Demographic information including education and medical records were reviewed. Mini-mental status examination (MMSE) was performed for cognitive evaluation at the same time. Descriptive statistics, and liner regression was performed for further analysis. **Results :** The average age in this study population is 83.63 years old. (SD=7.04). The elderly with higher education level (Above junior high school, n=60, 26.8%) had higher MMSE score (21.83 versus 18.87, p<0.01). The average decline of the MMSE score is 0.78 (SD=3.47) after 1-year follow-up survey. The age, education, baseline MMSE, systemic disease (Hypertension, stroke, diabetes, COPD, dementia) were under considered, the linear regression indicated that only baseline MMSE and dementia could predict further decline in cognitive function. (R=0.288, p<0.01). **Conclusion :** The MMSE scores could be the predictor for cognitive deterioration. The worse of MMSE score is, the poor cognitive function found in follow up. To sum up, it is important for physician to take the MMSE score as regular tools in cognitive screening. **Keywords :** Cognition, MMSE,

PP25 S-202

THE RELATIONSHIP BETWEEN MENTAL DISTRESS AND INDIVIDUAL-LEVEL COGNITIVE SOCIAL CAPITAL AMONG COMMUNITY-DWELLING ELDERLY ADULTS

Koji FUJITA, Yoshihiro KANEKO, Yutaka MOTOHASHI (*Department of Public Health, Akita University Graduate School of Medicine, Japan*)

Introduction : This study examines the relationship between mental distress and individual-level cognitive social capital among community-dwelling elderly adults. **Method :** We conducted a population-based cohort study, using self-administered questionnaires, in a rural community in Akita, Japan (population aging rate: 34.8%). The baseline survey was conducted for all residents aged 30 and over in July 2010, and the follow-up survey was conducted in August 2012. Responses to the follow-up survey were obtained from 1,018 of the 1,808 respondents of the baseline survey who were aged 65-89 years at baseline (follow-up response rate: 56.3%). Mental distress was assessed using the 6-item Kessler Psychological Distress Scale (K6). Scores on K6 ranged from 0 to 24, and scores of 9 and over signified psychological distress. Cognitive social capital (CSC) was assessed using the 5-item Social Capital Scale (Motohashi and Kaneko), and scores falling in the 1st quartile on this scale indicated low CSC. Logistic regression analysis was used to examine effect of low CSC on mental distress, adjusting for potential confounders. **Results :** Of the 866 subjects without mental distress at baseline, 65 (7.5%) had mental distress at follow up. Multiple logistic regression analysis adjusted for age and sex revealed that the adjusted odds ratio of low CSC vs. high CSC for mental distress was 4.71 (95% CI: 2.30-9.62). **Conclusion :** Low individual-level cognitive social capital is a risk factor for mental distress among community-dwelling elderly adults. **Keywords :** mental distress, cognitive social capital

PP25 S-203

THE EMOTIONS AND VARIABILITY OF THE CARDIORHYTHM: SOME ASPECTS OF NEURO-PSYCHOLOGY OF TEMPERAMENT

Nataliia PROKOPENKO (*Social Gerontology, State Institute of Gerontology of the Ukrainian Academy of Medical Sciences, Ukraine*)

Introduction : We studied peculiarities of the autonomic reactions related to emotional experiences in persons with different characteristics of their individuality. **Method :** During emotional tests, cardiointervalographic indices of the subjects were examined. The following properties of the individuality were taken into account: extraversion/introversion (temperament parameter), externality/internality (characteristic of the locus of psychological self-control), extrapunitivity/ intropunitivity (characterological feature manifested in frustration situations). **Results :** Sympathico-parasympathic influences were more powerful than central influences in regulation of the cardiorhythm in tested subjects with clearly "externally directed" reactions to emotiogenic factors (extraverts, externals, and persons with an extrapunitive type of reaction). Vice versa, shifts of the autonomic balance toward activation of the sympathoadrenal link, relatively low efficacy of baroreflex regulation, and strain of regulatory systems of the organism were observed at a high level of introversion in examined persons. Physiological adaptation to the action of the various stressors, including the emotional ones, is realized mostly by the system cerebral cortex - hypothalamus - hypophysis - adrenal cortex. In turn, the release of adrenalin by adrenal glands activates the reticular formation and, via this structure, the hypothalamus and cerebral limbic system. **Conclusion :** Thus, it can be supposed that extraverts are characterized by higher thresholds of the emotional sensitivity, which correspond to a higher threshold of activation of the reticular formation and more intense inhibitory cortical influences upon subcortical formations. This is why extraverts manifest weaker, in general, activation of the

regulatory mechanisms of the cardiovascular system after the influence of extero- and interoceptive stimuli, while in introverts such activation is more intense. Keywords : temperament, emotions, variability of the cardiorythm, limbico-reticular system

PP25 S-204

THE RELATIONSHIP BETWEEN PHYSICAL FUNCTION AND WELL-BEING FOR THE ELDERLY

Sheng-Te LIN¹, Ming-Hung CHEN¹, Ming-Yueh CHOU¹, Chih-Kuang LIANG² (1. Department of Recreation Sport and Health Promotion, National Pingtung University of Science and Technology, Taiwan; 2. Geriatric Medicine Center, Kaohsiung Veterans General Hospital, Taiwan)

Introduction : The purpose of this research was to investigate the relationships between physical functional and well-being of the elders. Method : A total of 323 elderly people who were over 65 years old and lived in Veterans Home were chosen as the research subjects in this study. All of the respondents had to take the functional fitness test designed for elderly people. Then completed the psychological well-being questionnaire, which included three parts: 1) active participation; 2) unstable relationships; and 3) past roles. Results : The test item of right hand grip, 2-min step, chair sit-and-reach, single standing stance-eyes open, 3m up-and-go and 6m walk, the older the respondents, the worse their test results. The test results of the left hand grip, 30-s chair stand and back scratch test were relatively worse when the respondents were more than 90 years old. The overall sense of psychological well-being showed a significant positive correlation with the left hand grip, right hand grip, chair sit-and-reach, single standing stance-eyes open, 30-s chair stand and number of 2-min step. And a significant negative correlation with the seconds of 6m walk. Conclusion : The physical function of the respondents in this study is generally low. Nonetheless, the research results show that the better the physical function and the higher the life satisfaction, the higher the participation and the higher the overall sense of psychological well-being. Keywords : elderly, physical function, well-being

PP25 S-205

QUANTITATIVE ANALYSIS ON LITERATURES ABOUT COGNITIVE AGING STUDY IN CHINA IN THE LAST 30 YEARS

Shiyong XIA (Beijing Normal University, China)

Introduction : Objective To describe the cognitive aging study in China in the last 30 years. Method : Quantitative analysis in 244 articles was used via indexes like percentage, frequency, etc. Results : ①One third of the papers focused on memory, which was the main concern of cognitive aging research; ②The cognitive aging mechanisms had gradually become focus area in the last decade; ③Cooperative research had become the trend; ④More than 90% subjects came from city, whereas little from rural areas. Conclusion : It is necessary to develop more collaborative researches between institutions and regions, To resolve problems with society aging, more researches on cognitive aging mechanisms and interventions should be developed. Keywords : cognitive aging; quantitative analysis

PP25 S-206

PREDICTING MODELS OF THE DEPRESSION AND LIFE SATISFACTION AMONG THE MIDDLE AGED AND YOUNG OLD IN KOREA

So Jin LIM¹, Seongyeon AUH², Sun Ah PAIK¹, Jeeun KIM¹, Bo Ryeom SEO¹, Yoon Ji LEE¹, Ji Hae LEE¹, Kwangdeok BYEON¹ (1. Dept. of Family Studies, Chung-Ang University, Korea;

2. Dept. of Family Welfare, Chung-Ang University, Korea)

Introduction : The purposes of this study were to examine the predicting variables of depression and life satisfaction among the middle aged and young old in Korea. Method : To accomplish the goals, the survey data drawn from a randomly selected 649 convenient sample during the period of January and February, 2011, were analyzed with SPSS attempting the correlations and hierarchical multiple regression on the depression (study1) and the life satisfaction (study2). Results : Results from Study1. The education was the robust predicting variable of the depression as the model proceeded. With the education and assets, in the final stage where we examined the influences from the environmental contexts, housing satisfaction, satisfaction on the retirement provisions, and satisfactions on the neighborhoods were the significant predictors of individual's depression. Results from Study2. In the predicting model of life satisfaction, education and homeownership were the significant predictors at the first stage, and at the second stage, education, age and satisfaction on the retirement provisions were significant variables whereas the effect from homeownership was faded away. At the final stage, education, satisfaction on the retirement provisions, satisfaction on the housing, and the satisfaction on the neighborhood were the significant predictors. Conclusion : Based on the results from this study, some policy implications were discussed to enrich the lives among the middle aged and young olds in Korea. Keywords : life satisfaction, depression, middle aged and young old

PP25 S-207

ADJUSTMENT TO AGING, AGE REPRESENTATION AND SUBJECTIVE AGE: ANALYSING LATENT CONSTRUCTS FOR OLDER ADULTS

Sofia VON HUMBOLDT, Isabel LEAL (Research Unit in Psychology and Health, R&D, ISPA-Instituto Universitario, Portugal)

Introduction : Aims: To investigate latent constructs that can act as major determinants in the adjustment to aging (AtA), age representation (AR) and subjective age (SA), and to explore relations between these constructs in an older adults cross-cultural population. Method : Methods: Measures were completed using a variety of culturally appropriate methods, including demographics and interviews. Complete information on 33 older adults aged between 74-101 years (M=86.2; SD = 5.4) from eight different nationalities, was available. The data was subjected to content analysis. Representation of the associations and latent constructs were analyzed by a Multiple Correspondence Analysis (MCA). Standardized instruments measured regular cognitive abilities. Results : Results: Findings showed a model for each pre-category. SA was explained by a two-factor model: 'age-cautious' and 'young-at-heart'. A three-dimension model formed by 'maximizers', 'optimizers' and 'essentialists' was indicated as a best-fit solution for AtA, and AR was best explained in a three-dimension model by 'past-oriented', 'present-oriented' and 'future-oriented'. AtA is shown to bear associations with individuals' SA and AR in a model composed by 'enjoyers', 'engaged', 'regardful' and 'conciliated'. Conclusion : Conclusions: AtA is related to SA and AR in older adults. Enhancing AtA on shared perceptions of SA and AR might be an important target to improve older adults' interventions' outcomes in aging well. Keywords : Key Words: Adjustment to Aging, age representation, older adults, subjective age, latent constructs.

PP25 S-208

TRAJECTORIES OF WELL-BEING AMONG OLDER ADULTS IN TAIWAN

Yu-Jing GAO (Department of Psychology, Fu Jen Catholic University,

Taiwan)

Introduction : Emotional support is considered to be an important factor to successful aging. A large body of research has documented significant association between social support and well-being among elderly (Merz & Consedine, 2009). But less studies explored this issue adopting a developmental perspective. Hence, the contribution of emotional support to the developmental trajectory of well-being in Taiwanese elderly from 1999 to 2007 was examined. **Method :** Data were taken from the "Survey of Health and Living Status of the Elderly in Taiwan". Well-being was constituted by the absence of negative affect, the presence of positive affect and life satisfaction. Emotional support was measured by four items such as the degree to which family/relatives/friends care about you and so on. The data analysis was conducted using Mplus 5.0. **Results :** The results indicated a good model fit for the growth model (CFI=.94 and TLI=.92; RMSEA=.03 and SRMR=.08). In an initial stage, a negative relationship between age and well-being was found ($\beta = -.14, p < .01$). With time passing, the level of well-being at the baseline was correlated with the slope of well-being negatively ($\beta = -.42, p < .05$). And the result demonstrated that emotional support contributed to elders' well-being at each wave ($\beta = .51, p < .001$; $\beta = .47, p < .001$; $\beta = .42, p < .001$, respectively). **Conclusion :** With a decreasing trend of elders' well-being in Taiwan, the trajectory of well-being of Taiwanese older adults were confirmed to be promoted by their emotional support. This result is similar to previous findings (Reinhardt, Boerner, & Horowitz, 2006). As a supportive evidence of SST (Carstensen, Fung, & Charls, 2003), old people regulate their social goals to gain emotional support and enhance their well-being. **Keywords :** Trajectory analysis, Well-being, Taiwan

PP25 S-209

AN INNOVATIVE PRACTICE OF NON-FORMAL LEARNING FOR ELDER ADULTS

Lingjie FANG, Dan TANG (*The School of Sociology & Population Studies, Renmin University of China, China*)

Introduction : This was a study involving older adult learners who participated in Non-formal learning through their university courses and research practice. This research was to evaluate the Elder Learning Research Project 2011-2012 which was an innovative program to encourage elder adults to learn how to do academic research in the Elder Academy at Lingnan University in HK. **Method :** This study utilized a qualitative approach to find out the effects of the Elder Learning Research Project. Several sessions of focus group discussions were organized to serve as a primary component of the study. Depth-interviews and literature research were used as supplementary methods of this research. **Results :** The Elder Learning Research Project was an effective model for elder adults to gain academic research knowledge and other learning skills. It promoted the happiness of participants through team cooperation, boosted the sense of worth of the elders, enhanced the willingness of life-long learning, and facilitated the social participation of the elder learners. **Conclusion :** The elder participants' successful completion of their research indicated that the elder adults truly had potential to develop their cognitive capacities. They showed that they were capable of achieving high levels of intellectual complexity and acquiring advanced ways of knowing if they were provided the opportunities. This research shows that elder adults can still be productive citizens in our communities. **Keywords :** elder learning, nonformal-learning, elder academy

PP25 S-210

UNDERGRADUATE TEACHING IN GERIATRIC MEDICINE USING COMPUTER AIDED LEARNING IMPROVES STUDENT PERFORMANCE IN EXAMINATIONS

Laura DAUNT¹, Patience UMEONUSULU¹, John GLADMAN¹, Adrian BLUNDELL¹, Simon CONROY², Adam GORDON¹ (*1. Health Care of the Older Person, Nottingham University Hospitals NHS Trust, Queen's Medical Centre, Derby Road, Nottingham NG7 2UH, United Kingdom; 2. Health Care of the Older Person, Clinical Sciences Building, Leicester Royal Infirmary, Leicester, LE1 5WW, United Kingdom*)

Introduction : Computer Aided Learning (CAL) is increasingly used to deliver teaching, but no studies have evaluated its impact on learning within geriatric medicine. At the Universities of Nottingham and Leicester, we have developed and implemented CAL packages on falls and continence, and evaluated the effect on student performance. **Method :** Traditional ward based and didactic teaching was replaced by CAL packages; either as a compulsory exercise prior to an interactive session (Nottingham); or as a link to supplement learning (Leicester). Examination scores were compared for cohorts of medical students receiving traditional learning and those receiving blended learning (CAL package combined with traditional teaching methods). Control questions were included to provide data on cohort differences. **Results :** In both Nottingham and Leicester, scores were significantly better in the blended learning group ($p < .01$), and a smaller number of students achieved low scores. There was a trend towards some of the improvement being a cohort effect, but this did not achieve significance (Nottingham $p = 0.051$, Leicester $p = 0.752$ respectively). Feedback from students about the CAL packages was positive, although uptake rates where CAL was non-compulsory were less than fifty percent. **Conclusion :** At both university sites, blended learning was associated with a significant improvement in student exam performance, regardless of the setting or the methods adopted, and without increasing teaching time. In addition, CAL was well received by students. Our findings support the use of CAL in teaching geriatric medicine and this method has been adopted for teaching other topics in the undergraduate curriculum. **Keywords :** Computer, Learning, Education

PP25 S-211

MULTIDISCIPLINARY GERONTOLOGY EDUCATION OUTCOMES: A SYSTEMATIC REVIEW

Barbara B. COCHRANE¹, Nancy R. HOOYMAN² (*1. School of Nursing, University of Washington, USA; 2. School of Social Work, University of Washington, USA*)

Introduction : Goals for education in aging include increasing knowledge and competencies; improving attitudes; and attracting students into aging-related fields. Research evidence documenting these student outcomes is needed to guide the development of higher education offerings that address demographic trends in aging. The University of Washington Elder-Friendly Futures Initiative, guided by faculty from Nursing, Social Work and Pharmacy, includes innovative strategies for enhancing university systems and educational programs that prepare students for an aging society. A systematic review of gerontology education research was undertaken to inform these strategies by identifying curricular components associated with improved student outcomes. **Method :** Full issues of gerontology education journals were reviewed and key bibliographic databases searched using the terms gerontology, geriatrics, aging, and older adults concatenated with education, curriculum, and training. Abstracts from these sources were evaluated to identify research articles in the past ten years on higher education programs and curricular offerings

with gerontology or geriatrics content that documented student outcomes. Information was compiled into an evidence table outlining the following study components: offering type, student characteristics, study design, and outcomes. Results : Although over 100 articles met review criteria, most involved limited program evaluations of knowledge and attitude change. Long-term outcomes and educational impact on aging-related career choice and retention were rarely measured. Additionally, few multidisciplinary or interprofessional educational offerings were evaluated. Conclusion : There is limited outcomes-based evidence to guide or sustain gerontology educational offerings. Given current aging trends and fiscal pressures in higher education, such evidence is urgently needed to support effective gerontology curricula. Keywords : Higher Education, Education Outcomes, Systematic Review

PP25 S-212

MOBILIZING THE LBGTT SENIORS GROUP TO PROVIDE DIVERSITY TRAINING TO THE COMMUNITY

Deana JOHNSON¹, Chris RABIDEAU² (1. West Region, Ontario Network for the Prevention of Elder Abuse, Canada; 2. Artistic Director, Windsor Pride, Canada)

Introduction : This paper will explore the strategies used to bring education and understanding to the community related to the struggles and experiences of LBGTT seniors. Through the sharing of this information it is expected that the general public and, for example, health service agencies will receive diversity training in a powerful and creative way. The 50+ Proud committee produced a book of personal stories, 'Out and Aging', that gives a glimpse at the history of LBGTT lives, aging in the community. Using excerpts from the book, diversity training was provided to social service and health agencies. Of special concern was that older members might go 'back into the closet' if they felt unwanted and un-included in life in the Long-Term Care Facility. To further the discussion and education, a one-act play ('Our Stories, Our Hope: A Living Library') was developed, produced and performed at a community theatre. This Social Justice play was used as a tool to affect social understanding and change. This was an opportunity to reveal even more of the history, in a non-threatening, visceral manner. The Play itself and the making of the Play were videotaped in a documentary that emphasizes the importance of not only the end product but the process used in its development. These strategies were part of a total community effort to enhance inclusivity. Method : Community education including the production of a book, diversity training, the production of a play and development of a documentary. Results : Products developed. Conclusion : Diversity training was enhanced. Keywords : LBGTT seniors education

PP25 S-213

ELDERCARE TRAINING IN THE CHURCH

Elaine Chi-Ling PANG (Research and Development, Educational Services Exchange with China, Inc. (ESEC), USA)

Introduction : Religious organizations are increasingly recognized as valuable resources for care and services to the growing elderly population. In many parts of the world, Christian churches are collaborating with government and private eldercare programs. Training of caregivers has become an important part of this effort. This study investigates training programs among the churches in China and in the United States. Method : This study is based on development and implementation of eldercare training programs in China and in the United States during the last 15 years, and research in the literature. Eldercare training programs included curriculum development, workshops, conferences, symposia and retreats conducted through

exchanged programs between church leaders in China and the United States. Results : This investigation shows that, in China, when the government began to encourage religious organizations to provide social services, the churches took the initiative to provide eldercare by adapting traditional family care to organized care. Training of caregivers followed. From basic eldercare training in the beginning, to-day's eldercare training has advanced to including the latest technologies and senior housing management. The churches in the United States appeared to follow a reversed trend. Senior citizens historically received government support and care provided by private and non-profit agencies, with little church involvement; but the approaching "age wave" and economic instability recently propel the churches to participate in integrated public eldercare programs. Conclusion : Within the boundaries of organized religion, the pedagogical input from leaders in the fields of aging can create programs that benefit elders in communities around the world. Keywords : Eldercare , Training, Churches, China, United States

PP25 S-214

THE FEASIBILITY OF INTRODUCING 'AGE-FRIENDLY PRIMARY HEALTH CARE CENTRES TOOLKIT' IN JAPANESE PRIMARY HEALTH CARE SETTING

Hiroto YAMANASHI¹, Morito KISE², Machiko INOUE³, Yoko SUNAGA⁴, Hiroshi TAIRA⁴, Akira TAKAYANAGI⁵, Miwako TAKAMURA⁶, Koya ARIYOSHI⁷ (1. Clinical Medicine, Tropical Medicine, Department of Clinical Medicine, Institute of Tropical Medicine, Nagasaki University, Japan; 2. Family Medicine, Kuji Clinic, Japanese Health and Welfare Co-operative Federation, Japan; 3. Epidemiology, Teikyo University, Japan; 4. Family Medicine, Torimachi Clinic, Japanese Health and Welfare Co-operative Federation, Japan; 5. Family Medicine, Maebashi Kyoritsu Clinic, Japanese Health and Welfare Co-operative Federation, Japan; 6. Primary Care Clinic, Japanese Health and Welfare Co-operative Federation, Japan; 7. Clinical Medicine, Tropical medicine, Department of Clinical Medicine, Institute of Tropical Medicine, Nagasaki university, Japan)

Introduction : The World Health Organization (WHO) assumes Primary Health Care (PHC) plays the important role to promote health of elderly people in all over the world, and that Primary Centres and should adapt to what elderly people need. WHO had issued an "Age-Friendly Primary Health Care Toolkit" (Toolkit) in 2008, to assist PHC in preparing for the rapid ageing of the population, in order to promote "active ageing". Although Japanese society is highly aged, the quality of the elderly care provided is considered variable. The Japanese Health and Welfare Co-Operative Federation (JHWCF) has launched a project to implement and disseminate Toolkit in Japanese PHC setting. Method : JHWCF translated and published the Japanese version of Toolkit. We made a committee, and the implementation method of Toolkit was selected to be workshop (WS) style. We also prepared the manual to make each participants conduct WS easier. From 2009 to 2012, 62 clinics participated this program. During implementing WS, clinic leaders were required to submit a process evaluation sheet after each WS. We provide the periodic annual conference. Results : Total 38 PHC clinics (out of 62) in 2012 completed the program. The feedback from clinic leaders suggested that the program provided the opportunities to discuss issues of elderly care with multidisciplinary staff and to raise awareness of improvement of quality among participants. However, the achievement degree varied a great deal in each clinic. Conclusion : Implementing Toolkit has feasibility in Japanese PHC clinics under the support of the introduction manual, and a follow-up system. Keywords : Active ageing, Age-Friendly Primary Health Care Centres

Toolkit, Comprehensive Geriatric Assessment

PP25 S-215

EFFECT OF ILLITERACY LEVEL ON LANGUAGE TASKS IN KOREAN ILLITERATE ELDERLY

Jungwan KIM¹, Jihye YOON², Hyanghee KIM³ (1. Department of Speech and Language Pathology, College of Rehabilitation Sciences, Daegu University, Korea; 2. Department of Speech Pathology and Audiology, College of Natural Sciences, Hallym University, Korea; 3. Graduate Program in Speech and Language, Department and Research Institute of Rehabilitation Medicine, Yonsei University College of Medicine, Korea)

Introduction : In Korea, illiteracy rates in elderly are high. Neuropsychological assessment of elderly with literacy problems is a difficult task that requires both to know the effects of literacy on language competence, and to use specific and standardized tools in this population. Thus, we studied the effects of illiteracy level on language tasks. **Method :** We compared the performance of language tasks of healthy elderly who were pure illiterate (n=34, mean age=78.91), with those who were functional illiteracy (n=24, mean age=77.71), and semi-literacy (n=83, mean age=77.2). Tasks included the Mini-Mental Status Examination (MMSE), the animal naming test (30 sec), brief-Boston naming test (15 item), verb naming test (12 item), ASHA-FACS(functional communication), sentence comprehension (12 item, 1/4 choice) and the attention task.(each 3 level: sustained, selective, and divided attention, 3 point scale). **Results :** In the between-group analyses, the scores of the MMSE, the animal naming test, and brief-Boston naming test could distinguish the functional illiteracy and semi-literacy from pure illiterate. In the multiple regression analyses, we found that illiteracy level was a better predictor of language ability than was years of education. **Conclusion :** These findings suggest that the impact of illiteracy level on language tasks performance is an important aspect of cognitive-communication evaluations for elders. Thus, the analysis of illiteracy can significantly increase the understanding about brain organization of cognition under normal and abnormal conditions. **Keywords :** illiteracy, language ability, elderly

PP25 S-216

A LONGITUDINAL STUDY OF LIFE SATISFACTION AMONG ELDERLY FARMERS IN TAIWAN: LIFESTYLE AND ACTIVITY PARTICIPATION

Ju-Ping LIN, Chia-Wen YU (Human Development and Family Studies, National Taiwan Normal University, Taiwan)

Introduction : Although there is abundant research on life satisfaction among older people, few studies specifically focused on life satisfaction among elders retired from agriculture. This population faces multiple difficulties related to living and aging in rural area (limited access to services and practitioners). However, these difficulties may be counter-balanced by advantages related to healthier lifestyle and richer social support. This study is aimed at exploring the lifestyles and activities participation of retired farmers, as well as at examining the effect of some influential factors and their relationships with life satisfaction. **Method :** In partnership with nine farmers' organizations, this study included 306 participants (aged 65 and over), were recruited from the "Farm Retirement Scheme" (Council of Agriculture, Executive Yuan, 2009). The study started in 2009, with two follow-up visits over 3 years. Data were gathered by means of an interview that included activities participation and life satisfaction (by applying the Life Satisfaction Index A, LSIA). **Results :** The freedom after retirement gave farmer opportunity to create a new lifestyle. For the retired farmer, the purpose of agricultural activities in life was

changed from the economic activities of the past into leisure activities. Family involvement predicts a high life satisfaction. Moreover, participation in educational activities relates positively and significantly to life satisfaction. **Conclusion :** The results of this study support the activity theory, and enhance understanding of the role of activity participation in achieving a high level of life satisfaction among retired farmers. **Keywords :** life satisfaction, elderly farmer, activity participation

PP25 S-217

FACTORS INFLUENCING NURSING STUDENTS' IMAGE OF AND COMMUNICATION WITH DEMENTED ELDERLY PERSONS

Nobuko AIDA¹, Mika MIURA², Hiroshi GOHMA³, Shin-Ichi SUGIURA³, Yoko NAGAYA⁴, Naoko KOBAYASHI⁵, Akemi OGATA⁶ (1. Graduate School of Medicine (Health Sciences), Nagoya University, Japan; 2. Department of Nursing, Seirei Hamamatsu General Hospital, Seirei Social Welfare Community, Japan; 3. Graduate School of Medicine, Nagoya University, Japan; 4. Department of Nursing, The National Hospital for Geriatric Medicine, National Center for Geriatrics and Gerontology, Japan; 5. School of Nursing, Japanese Red Cross Toyota College of Nursing, Japan; 6. Department of Nursing, Association Medical Corporation MEISHOKAI, Total Support Clinic, Japan)

Introduction : We administered an anonymous, self-report questionnaire to a total of 120 first- and fourth-year nursing students (response rate, 73%) in order to elucidate factors influencing their image of demented elderly persons as well as their communication with them and thereby obtain suggestions for approaches to education regarding basic nursing for elderly with dementia at our university. **Method :** The method was used an anonymous, self-report questionnaire, and the study was approved by the Nagoya University School of Medicine Life Ethics Committee School of Health Sciences. **Results :** Compared to first-year students, fourth-year students had a significantly greater knowledge of the general facts of aging (FAQ), but also had a significantly stronger image of demented elderly persons as having "loss of independence" and "psychiatric disorders". No significant differences between grades were observed for characteristics of communication settings involving demented elderly persons. Approximately 10% and 50% of students in both grades engaged in "questioning/cross-examination/inquiry" in settings simulating elderly residents' lifestyle, and "explanation/persuasion/encouragement" in settings simulating medical settings, respectively. The explanation/persuasion group and questioning/cross-examination group in regard to communication settings involving demented elderly persons had a large variation in their image of demented elderly persons, and students with a weak image were thought to lack not only knowledge of dementia, but also opportunities to interact with elderly individuals. **Conclusion :** Based on the above, we discussed the necessity of practical training in lifestyle and medical settings using elderly patients with dementia as subjects, as well as the importance of specialized nursing role models for demented elderly persons. **Keywords :** dementia, nursing student, image, communication

PP25 S-218

LEARNING OUTCOMES IN THE EDUCATION OF NURSING FOR OLDER PEOPLE - A SCOPING REVIEW

Sanna KOSKINEN, Leena SALMINEN, Helena LEINO-KILPI (Department of Nursing Science, University of Turku, Finland)

Introduction : The education of nursing for older people and its research are expected to meet for their part the increasing service

demands in a high-quality manner. Learning outcomes are realized when nursing students move on to the labour market. Today, older people nursing is not the highest priority among students for a career. In this study, we analysed published empirical studies about the education of nursing for older people and especially learning outcomes to find out the main research areas. Method : Scoping literature review was conducted. Three electronic databases (MEDLINE, CINAHL, ERIC) were searched. The retrieval process was systematically conducted by two researchers applying inclusion and exclusion criteria. Finally, 56 articles were included in the analyses. Results : Learning outcomes is one of the main research areas in the education of nursing for older people. In these studies, students' attitudinal views and knowledge were dominant topics. For attitudinal views, studies were concerned with students' perceptions, feelings, views and attitudes towards older people and ageing. Studies about students' knowledge covered topics like common geriatric conditions, gerontology and ageing. Students' clinical skills were less studied. For clinical skills, topics like students' ability to communicate and reminisce with older people and their cultural skills were studied. Conclusion : Knowledge about the learning outcomes seems to be limited. Required knowing for providing nursing care for older people might be under-recognized, when it also becomes difficult to define what learning outcomes to study. There is a risk that this leads students not to find older people nursing as a diverse speciality. Keywords : education, nursing students, older people

PP25 S-219

ERROR PATTERN ANALYSIS IN VERBAL FLUENCY TASK IN THE NORMAL ELDERLY WITH DIFFERENT EDUCATION LEVELS

Hyang Hee KIM¹, Seon Ha LEE² (1. Graduate Program in Speech and Language Pathology, Department of Rehabilitation Medicine, Yonsei University College of Medicine, Korea; 2. Graduate Program in Speech and Language Pathology, Yonsei University, Korea)

Introduction : Error patterns (i.e., intrusion, perseveration) in semantic fluency task have been found to be sensitive to cognitive status. The purpose of this study was to investigate the influence of educational levels on the error patterns of the animal naming task for old adults. Method : The sample included 71 old adults, ranging from 65 to 87 years (M = 74.9 ; SD = 5.9) and they were stratified into four educational groups (group 1: 0 year; group 2: 6-8 years; group 3: 9-11 years; and group 4: more than 12 years). All subjects scored within the normal range (M = 26.4 ; SD = 2.2) on the MMSE. The total number of errors was counted and error patterns were divided by intrusion and perseveration. Results : Results showed that the number of total errors during the entire 30 s was significantly different between group 1 and group 4 (p= .029). Perseveration errors were more observed than intrusion errors. In addition, perseveration errors were more observed in group 1 and group 2 than in group 3 and group 4. Conclusion : Groups 1 and 2 are low-educated groups compared with groups 3 and 4. Low-educated groups have less stable semantic network systems and lower working-memory capacities than high-educated group. Thus, Groups 1 and 2 make more perseveration errors and seem to have difficulty in controlling the suppression of previously recalled items. Keywords : verbal fluency task, error pattern, perseveration error

PP25 S-220

THE EFFECT OF MULTIFACTORIAL INTERVENTION PROGRAMS (MUFIPS) ON HEALTH BEHAVIOR AND SYMPTOMS CONTROL AMONG COMMUNITY-DWELLING OVERWEIGHT OLDER ADULTS WITH KNEE

OSTEOARTHRITIS

Yuwadee SARABOON¹, Suparb AREE-UE², Suchinda Jarupat MARUO² (1. Ramathibodi School of Nursing, Faculty of Graduate Studies, Mahidol University, Thailand; 2. Ramathibodi School of Nursing, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Thailand)

Introduction : The purpose of this study is to examine the effect of Multifactorial Intervention Programs (MUFIPs) on osteoarthritis knowledge, illness representation, and health outcomes in terms of health behavior, knee pain, physical ability, joint range of motion, and body weight in overweight older Thais with knee osteoarthritis. Method : Eighty older Thais with knee osteoarthritis living in communities (mean age of 67.41 ± 6.70 years), whose body mass index between 23 and 29.9 kg/m², were randomly equally assigned into two groups. The intervention group received MUFIPs including health education, weight reduction / control program, quadriceps exercise training class-based sessions followed by home-based exercise program, and home visit program. In relation to the control group, participants received a telephone health counseling if they had any health problem. The changes in osteoarthritis knowledge, illness representation, and health outcomes were assessed at baseline and 8-week follow-ups. Data were analyzed by using descriptive and independent t-test analyses. Results : Findings revealed that the participants in the intervention group had significant improvement in osteoarthritis knowledge, illness representation, health behavior, physical ability, joint range of motion and reduction in knee pain and body weight after enrollment compared with their initial status. Additionally, there was a statistically significant difference in study variables, except body weight, when compared between the intervention and control groups. Conclusion : The MUFIPs shed in light in the improvements in health outcomes in overweight older Thais with knee osteoarthritis, which break down the progression of the disease among these persons. Keywords : Multifactorial Intervention Programs; overweight older Thais; knee osteoarthritis

PP25 S-221

LEADERSHIP AND PERSON-CENTEREDNESS - IMPORTANT FACTORS OF JOB STRAIN AND STRESS OF CONSCIENCE AMONG NURSE ASSISTANTS' WORKING IN RESIDENTIAL CARE

Anneli ORRUNG WALLIN¹, Ulf JAKOBSSON², Anna-Karin EDBERG³ (1. Department of Health Sciences, Lund University, Sweden; 2. Center for Primary Health Care research, Faculty of Medicine, Lund University, Sweden; 3. Department of Health and Society, Kristianstad University, Sweden)

Introduction : It is important to investigate the job strain and stress of conscience (SC) of NAs not only for the sake of nurse assistants (NAs), but also due to the impact on the quality of care they provide. Thus, the aim of this study was to investigate job strain, SC and associated variables among NAs working in residential care. Method : NAs (n=225) completed questionnaires, including job strain, SC and potentially associated variables. The variables were compared concerning high and low job strain and SC and were explored with multiple linear regression analyses. Results : Organisational and environmental support, personalised care provision and, a positive caring climate were associated with low job strain and SC as well as NAs receiving a supportive leadership. In addition, having compulsory schooling in comparison with upper secondary schooling was associated with low job strain and SC. Factors related to health complaints and work-related information were associated with high job strain and SC. Conclusion : Exploring and adopting a broader

perspective of factors which are connected to strenuous aspects of NAs' work situation in residential care are important for the provision and management of nursing-care. In order to ensure the wellbeing of NAs and in turn the quality of care, both the NAs and their leaders need to be addressed simultaneously. Person-centeredness concerns the actual care-provision and the care climate which need to be implemented into the care system/care philosophy. This highlights the importance of the leaders' role as crucial when implementing or sustaining person-centred care in residential care for older people. Keywords : job strain, stress of conscience, residential care

PP25 S-222

RELATIONSHIP BETWEEN WORKING MOTIVATIONS AND THE MECHANISM OF SUBJECTIVE WELL-BEING OF JAPANESE ELDERLY PEOPLE

Hiroto MUROHASHI¹, Ikuko SUGAWARA², Naomi YATOMI¹, Kouji SHIBASAKI¹, Katsuya IJIMA¹, Nobuhiro MAEDA¹, Yoshihiko SATO¹, Hiroko AKIYAMA¹, Jun GOTO¹, Yuichi HIROSE¹, Mikihiro OIDA¹, Tetsuo TSUJI¹, Minoru KAMATA¹ (1. Institute of Gerontology, The University of Tokyo, Japan; 2. Institute of Social Science, The University of Tokyo, Japan)

Introduction : Working in the neighborhood is drawing attention as a method to encourage elderly people's social participation. It is also expected to promote physical and mental health in older age. In this study, we examined the elderly people's motivations for working, the mechanism of older people's subjective well-being, and their association to obtain basic knowledge to facilitate elderly working. Method : The researchers conducted an attitude survey on Japanese older people aged 60 or over who participated in seminars about elderly working. With respect to motivations for working, older persons rated the importance of eight motivations in 5-point scale. With respect to subjective well-being, elderly people gave scores to their satisfactions with nine aspects of life from 0 to 100. Results : Elderly people's motivations for working were revealed to be grouped into three different categories; accomplishment and compliment, contribution to others, and healthy and social life. Subjective well-being for whole life was verified to be affected by satisfactions with one's mood, relationship with family, relationship with friends and economic condition. In addition, some of the effects on whole life satisfaction were confirmed to vary with the levels of motivations for working. Conclusion : It was confirmed that the older people's motivations for working and the mechanism of subjective health have much in common with those of general adult, but they are not perfectly-equal. If one considers the moderator effect of working motivations for the mechanism of subjective health, elderly working can enhance participants' quality of life more efficiently. Keywords : elderly working, working motivation, subjective well-being

PP25 S-223

CONSTRUCTING A JAPANESE VERSION OF NVQ: SELECTION PROCESS AND VALIDITY TEST OF SKILL ASSESSMENT ITEMS FOR CARE STAFF

Takako TSUTSUI¹, Sadanori HIGASHINO², Masaaki OTAGA³, Alexis COTTENCIN¹, Sumie TSUTSUI³ (1. Department of Health and Social Services, National Institute of Public Health, Japan; 2. School of Management and Information, University of Shizuoka, Japan; 3. Department of Social Rehabilitation, Research Institute, National Rehabilitation Center for People with Disabilities, Japan)

Introduction : In 2008, the total number of care staff in Japan reached 1,280,000 persons. However, considering the on going ageing of the society, this number is expected to double by 2025, leading to a

quantitative issue for securing human resources. Moreover, Japan also faces a qualitative issue, as practice skill assessment is considered insufficient in the current system of care staff certification. For this reason, the government aimed to implement a Japanese version of NVQ (National Vocational Qualification). To do so, it was necessary to identify the basic nursing skills of care staff. This research explains the research process that led to this selection of care staff skills and tests the validity of the selected assessment items. Method : A survey was conducted over 843 care staff divided in 140 locations all over Japan and providing residential or home-care services to test 227 candidate items, grouped in 4 subscales, assessing care staff skill. The survey took into consideration the characteristics and experience of each care staff and certified statistically the validity and reliability of the items. Results : Skill possessed by more than 90% of care staff, and skill with a correlation coefficient over 0.8 were identified and regrouped based on clinical knowledge to finally represent 148 items grouped in 3 subscales. Conclusion : Results from this research were used to identify the skills that care staff should possess and to construct a certification system based on these skills. It should provide crucial information to support the currently under-developed on-the-job training system of Japan. Keywords : care staff skill assessment, Japanese version of NVQ (National Vocational Qualification), validity

PP25 S-224

ELDERLY EMPLOYMENT IN AN AGING SOCIETY: PRODUCTIVE AGING AND INSTITUTIONALIZED AGEISM

Mihwa LEE (School of Social Work, University of Minnesota, USA)

Introduction : The rapidly changing demographics of older adults have expanded the concept of productive aging in social welfare policies in Korea. Although elderly employment centers play a major role in serving the government policies to increase the elderly social participation, very little research has been done on this topic. Method : This study examines the role of elderly employment centers as mediators in elderly job market. Specifically, the study looks at the ways in which elderly employment centers increase elderly employment and how effective these strategies are. To explore this role of elderly employment centers, an in-depth case study was conducted in Seoul, Korea. Results : Findings show that the employment center focused on assisting the elderly to understand the reality of elderly job market and encouraging the elderly to accept low-paid, low-skilled, and temporary jobs. Given that both age and appearance were more important than ability and skills in elderly employment, the employment center emphasized that elderly job seekers look young and neat. Elderly people who started working eventually quit after two-three months due to low pay and health problems. Conclusion : The Korean government made efforts to boost the senior citizen workforce, injecting them into the labor market. However, these efforts reinforced certain types of jobs for the elderly rather than satisfying the senior citizen's desire to participate and achieve success in the workforce. Findings suggest that the government needs to apply continual effort to improve the elderly employment environment, considering elderly socioeconomic status, education level, and health conditions without discriminatory and prejudicial attitudes. Keywords : Productive aging, Elderly employment, Institutionalized ageism

PP25 S-225

ACCEPTANCE INDONESIAN NURSES TO JAPAN

Nur HANIFAH (Innovation Management and Environmental Sciences, Yokohama National University, Japan)

Introduction : In 2008, EPA (Economic Partnership Agreement)

between Indonesia and Japan was conducted for Indonesian nurses to work in Japan. Due to number of nurses decreasing by having problem of aging society, Japan needs more nurses. Meanwhile, Indonesia has plenty nurses that look for a chance to work in Japan. In this sense, both nations have common interest. However, the system has number of controversies. Method : This study focused on nurses visiting Japan through EPA program to reveal various problems and the impact upon Indonesia in EPA system. The interviews had been conducted to 9 nurses. Results : In this research, some problems were revealed. In general, the cause of the problem is the ignorance of the system for the needs of people actually working at site. Next problem is that the study period for nursing students to prepare themselves to pass nurse examination is short. If they miss the chance, they cannot work as nurse in Japan and have to go back to Indonesia. Besides, no support is provided by the Government for the exam. Therefore, majority of the student nurses feel more burdens. As the result, passing ratio of the exam is dropping as well as the number of nurse candidates from Indonesia. Conclusion : Seeing the problem, there are many improvements need to make in both nations. Working environment must be prepared in the dispatching nation and the receiving nation. Only when it is accomplished, the system will be worthy of its real meaning and value. Keywords : EPA, nurses, Indonesia

PP25 S-226

INFLUENCE OF UNEMPLOYMENT DURATION ON SOCIAL NETWORK IN JAPANESE ELDERLY

Naomi YATOMI¹, Ikuko SUGAWARA², Hiroto MUROHASHI¹, Kouji SHIBASAKI¹, Kastuya IJIMA¹, Hiroko AKIYAMA¹
(1. Institute of Gerontology, The University of Tokyo, Japan;
2. Institute of Social Science, The University of Tokyo, Japan)

Introduction : According to a survey conducted by the Japanese government, 43.6 percent of Japanese elderly are working, and 89.6 percent of them wish to continue to work as long as possible. Japanese people tend to live work-centric lives and at the expense of the leisure activities and social interactions. This study aims to examine the effects of duration of unemployment on social network in Japanese elderly who want to get job. Method : Subjects were 68 participants of employment seminar for senior citizen that was sponsored by the University of Tokyo. Fifty five participants complete a questionnaire which includes various items from health, and psycho-social domain as well as items related to employment. The average age of the subjects was 68.2 years (SD=5.8yrs). Subjects were comprised of 35 male (63.6percent) and 20 female (36.4). The average age of the unemployment duration was 6.4 years (SD=4.8yrs). Partial correlation analysis between log-transformed unemployment years and social network by controlling age and sex were conducted. Results : The result shows that the longer unemployment duration related with the more free time ($r=.343$; $P<.012$), the less leisure activities ($-.436$; $p<.001$), the less frequency of talking with friends and acquaintances who live in places other than the neighborhood ($-.315$; $P<.022$), and the less frequency of using home telephone ($-.316$; $P<.021$). Conclusion : The results suggested that the unemployment in Japanese elderly may reduce the social interaction with others and leisure activities. Perhaps this would be a reflection of the Japanese work-centric culture. Keywords : Unemployment, social network, leisure activity

PP25 S-227

CORRELATION BETWEEN HEARING LOSS AND HEARING HANDICAP IN INSTITUTIONALIZED OLDER PEOPLE

Stefani RIBEIRO¹, Cristina SOLDERA², Angelo Jose G. BOS¹, Isabela MENEGOTTO² (1. Institute of Geriatrics and Gerontology,

Pontifical Catholic University of Rio Grande do Sul, Brazil;
2. Audiology, UFCSPA, Brazil)

Introduction : Few studies have addressed the possible relationship between hearing loss and hearing handicap in institutionalized older people. Method : We assessed hearing handicap using "The Hearing Handicap Inventory for the Elderly ? HHIE" questionnaire and the hearing thresholds were measured in a group of institutionalized elderly. The sample consisted of people resident of a long-term institution for the elderly who had results from the HHIE questionnaire and an audiometric evaluation. Results : The study included 41 individuals, of which 30 were females, aged between 63 and 92 years old. All participants presented some degree of hearing loss being the most with mild degree. Only 34% of the participants has a hearing handicap resulting in a weak positive correlation and statistically not significant with hearing loss. Conclusion : The prevalence of hearing loss was high in the sample studied, but less than half of study participants presents auditory handicap. We hypothesize that nursing home residents with mild hearing loss perceive more intensely their hearing handicap than those with more severe loss. Nursing home residents with severe hearing loss would restrict their daily life activities and social participation, not perceiving the hearing handicap. Keywords : Homes for the aged, Social participation, Presbycusis

PP25 S-228

PARTICIPATION FOR SUCCESSFUL AGEING

Audrey GUY (*Business, Government and Law, University of Canberra, Australia*)

Introduction : In every stage of our lives, including the later stage, we need to have a purpose, a reason for living. This purpose provides us with our status in society. This presentation will look at different options for participation for older people. It can include physical involvement in the local community and also communication with people who have similar interests through correspondence or, with the modern method of communication, the internet, which enables us to age better through the digital world. Method : Older people need to be aware of the need to keep fit, both physically and mentally. Exercise of the body is easy to identify but mental fitness is more difficult. The old idea that we lose brain cells as we age is being challenged by modern research which suggests that if we provide stimulation to our brains we can develop new connectors between the cells, possibly challenging dementia. Social participation, including volunteering, can provide the social contacts we need as humans and the challenge to our brains required for mental fitness. This presentation will address the conditions needed to adequately fulfil this, including the amount of time required to be devoted to such participation to benefit from it. Results : Promotion of this concept of involvement will help to reduce, perhaps eliminate, the current downsides of ageing such as depression, loneliness and the feeling of older people that they have no role in society. Conclusion : Older people need to be encouraged to actively participate in society to enable successful ageing. Keywords : Ageing, Participation

PP25 S-229

THE IMPACT OF SOCIAL CAPITAL ON DEPRESSION AMONG OLDER CHINESE AND KOREAN IMMIGRANTS: SIMILARITIES AND DIFFERENCES

Bum Jung KIM¹, Erica AUH², Lesley Maradik HARRIS³, Wesley LUM⁴, Erica SOLWAY⁵ (1. School of Social Work, University of Hawaii at Manoa, USA; 2. Graduate School of Social Welfare, Ewha Womans University, Korea; 3. Department of Social Welfare, University of California at Los Angeles, USA; 4. Executive Office on

Aging, State of Hawaii, USA; 5. Health and Aging Policy Fellows Program, Health and Aging Policy Fellows Program, USA)

Introduction : This study aimed to examine the relationship between social capital and depression among older Chinese and Korean immigrants in the U.S. **Method :** A cross-sectional study of 172 older Chinese and 205 older Korean immigrants (aged 65 years and older) was conducted in Los Angeles County. Independent variables included age, gender, marital status, income, and social capital (social norms, trust, partnership with the community, information sharing and political participation). Depression was the dependent variable. Multiple regression analyses were employed separately for the Chinese and Korean groups. **Results :** For older Chinese immigrants, partnership in community ($\beta = -.16$, $p < .05$) and political participation ($\beta = -.20$, $p < .05$) were significantly associated with depression. Among older Korean immigrants, social norms ($\beta = -.12$, $p < .01$), partnership in community ($\beta = -.36$, $p < .01$), and information sharing ($\beta = -.14$, $p < .05$) were significantly associated with depression. Also, being younger ($\beta = .21$, $p < .01$), being female ($\beta = -.34$, $p < .01$), and having higher income ($\beta = -.34$, $p < .01$) were associated with lower levels of depression. **Conclusion :** Implications for this study include a better understanding of how the social capital of older Asian individuals contributes to depression. Social workers or social service agencies must consider examining older adults' existing social capital in searching for ways to improve mental health of older Chinese and Korean immigrants. **Keywords :** Social Capital, Depression, Older Chinese/Korean Immigrants

PP25 S-230

INTEREST-BASED PARTICIPATION IN ACTIVITIES AND PHYSICAL TEST RESULTS OF OLDER JAPANESE INDIVIDUALS

Hiroimi NAKAMURA-THOMAS¹, Makoto KYOUGOKU²
(1. Occupational Therapy, Saitama Prefectural University, Japan;
2. Occupational Therapy, KIBI International University Graduate School of Health Sciences, Japan)

Introduction : Active engagement of occupational therapists in physically focused examination and programs is gaining importance, because one of the target domains in the recently established government policy is physical functions. Identifying the relationship between interest responses and physical functions seem to be important for occupational therapists who have traditionally used interest responses to support clients' engagement in activities. This study examined physical functions in two groups divided on the basis of interest-based participation in the activities. **Method :** The research protocol was reviewed and approved in the first author's organization. Participants were 673 healthy older Japanese individuals. Physical functions were assessed using the handgrip strength, one-leg stance, timed-up-and-go and 10-meter walking-speed tests. The 25 activities in the Japanese Interest Checklist for the Elderly were used for data collection. The frequencies of respondents were separately calculated for men and women for each activity. Data for each physical test were separately compared for men and women between the interest-based participated group and no participated group in relation to each activity. **Results :** All 25 activities were associated with significant differences in physical test results among women, whereas 6 activities (sewing, personal care, visiting acquaintances, enjoying literary activities, watching TV/movies and gate-ball) were not associated with any significant differences in physical test results in men. **Conclusion :** This study identified that activity numbers associated with significant differences in physical test results were different between men and women, emphasizing the importance of maintaining physical

functions to sustain interest-based participation for old women. **Keywords :** activity and participation, community-dwelling older people, Japanese Interest Checklist for the Elderly

PP25 S-231

A NEW ERA FOR COMMUNITY VOLUNTEER SERVICE (CVS) : COLLABORATION BETWEEN HOSPITALS COMMUNITY PARTNERS FOR DISCHARGED FRAIL ELDERLY PATIENTS

Hon Wai Felix CHAN (*Medicine & Geriatrics, TWGHs Fung Yiu King Hospital, Hong Kong*)

Introduction : Over 300 volunteers from 13 non-government organizations (NGOs) were trained to provide regular home visits and phone contacts to discharged frail elderly patients. Working alongside with health care professionals to provide good neighbor and psychosocial support. **Method :** Patients with a computer generated "Hospital Admission Risk Reduction Program for the Elderly" (HARRPE) score of >0.17 were recruited. Volunteers, matched according to their place of residence, provided basic health check reminded elders on drug compliance and medical follow-up. When social problems were encountered, volunteers could consult the social workers of their respective NGOs. Protocol-driven telephone triage nursing service was available to deal with ad hoc medical problems, and for booking of early appointments in the outpatient clinics. Hospital services utilization pre & post 90 days after receiving the service were compared by paired t-test. **Results :** From April 2008 to Dec 2011, 1993 patients were recruited. Their mean age was 80.2 years old ($SD=7.4$), 74.7% of the elders were previously not engaged in community social services. CVS resulted in significant decrease in the number of A&E attendance -52.5% , number of A&E admission -58.5% , and length of stay -55.2% respectively. In the user satisfaction survey, 98% of the discharged elderly & volunteers indicated "satisfied" or above satisfaction level to the project. **Conclusion :** With the collaborative effort of HK West Cluster hospitals and local NGOs, an effective and caring community network was built to promote aging in place. **Keywords :** Community Volunteer Services

PP25 S-232

GOVERNMENT SERVICES TO PROMOTE COMMUNITY SERVICE ACTIVITIES BY ELDERLY CITIZENS

Kyeongah LEE, Takashi KOIKE, Yoshiko FUJIWARA, Takatoshi ANDO (*Innovation Management and Environmental Sciences, Graduate School of Environment and Information Sciences, Yokohama National University, Japan*)

Introduction : Recently, community service activities by elderly citizens have become a focus of attention. The government expects the elderly to tackle the issue of aging population by providing a helping hand in social welfare services within the community. **Method :** A survey was conducted in the 18 districts of Yokohama to understand the current state of government support services to promote community service activities by the elderly. Interviews were conducted with workers at the "Center for Support of Lifelong Learning and Civic Activities" in the 18 districts, which were used to promote "consultations", "information transfer" and "provision of facilities". Interview questions focused primarily on the objectives of the administrative system that was controlled externally from the center and the functional workings of the consulting service that was under the control of the center. **Results :** Results of the interviews indicated two main findings. First, the workers at the center acknowledged the need for collaboration with public facilities. However, the administrative system did not have a structured plan to

foster this type of collaboration. Second, different measures depending on each situation were taken in the 18 districts in order to balance the various needs of middle-aged and elderly citizens with their desire to participate in community service activities. Conclusion : Government services to promote community service activities by the elderly are still developing. Therefore, there is a need for further research to examine the future directions of government services. Keywords : social participation of elderly citizens, government support services

PP25 S-233

ACTIVE AGEING IN A SCANDINAVIAN CONTEXT: PATTERNS OF VOLUNTEERING AMONG GROUPS OF OLDER PEOPLE IN SWEDEN

Magnus JEGERMALM¹, Eva Jeppsson GRASSMAN² (1. Institute of Gerontology, Jonkoping University, Sweden; 2. Institute for the Study of Ageing and Later Life (NISAL), Linkoping University, Sweden)

Introduction : The current gerontological debate on active ageing often implicitly targets the third age. This presentation, however, analyses the role not only of 'old' (60-74) but also 'old-old' (75+) people as 'active citizens' in Sweden, carrying out unpaid work in the form of volunteering in voluntary organizations. Method : The discussion is based on results from a national survey that was conducted 2005 and 2009. Results : The results indicate that almost half in the age group 60-74 but also a third in the age group 75-84 were engaged as volunteers. Both groups were substantially engaged, with many hours of involvement. These volunteers, also the oldest age group, had extensive informal social connections, in line with other age groups of volunteers. Many membership-based social organizations in Scandinavia have a "we for us"-character. They often have members among the oldest age groups who are providers as well as recipients of unpaid care of a reciprocal nature in these organizations. Conclusion : It appears relevant to use the framework of active ageing also for 'old-old' people in the population. Old-old people are not just consumers of services but rather to a high degree also contributors to society as well as being an important force in creating social capital, in a welfare state that is characterized with comprehensive welfare arrangements financed by the public sector. Keywords : active ageing, volunteering, welfare state

PP25 S-234

EFFECTS OF VOLUNTARY MOTIVATION OF THE ELDERLY ON THE DEVELOPMENT OF SELF-EFFICACY AND PSYCHOLOGICAL WELLBEING

Mi Jung KWAK¹, Se Na YOON² (1. Doctoral Student, Kyunggi University Graduate School, Korea; 2. Master Degree Student, Shungshin Women's University Graduate School, Korea)

Introduction : The purpose of this study is to understand what effects the elderly volunteer's motivations work has on their self-efficacy and psychological wellbeing. Most researches strength of volunteer activities without considering their motives. So the characteristics of this study is to empirically verify the effects of voluntary motivations which influences the senior self-efficacy and psychological wellbeing. Method : This study surveyed three hundred and forty senior citizens who are over sixty years old and use the welfare center of Jecheon City, it used 310 copies of survey questionnaires. After collecting the questionnaires, it verified the reliability and used statistical techniques and a regression analysis by applying quantitative research methods. Results : First, the effects of motives for volunteer activities of the elderly on their sense of self-efficacy may vary depending on their sexes. Male senior citizens show higher inner motives with principles for activities while the analysis of female seniors' motives reveals that

their motives for self-development and the advice of others also affect their sense of self-efficacy. Secondly, senior citizens' motives affect all of the sub-factors of their psychological well-being. In terms of different sexes, male seniors' motives more affect their psychological well-being, and female seniors' motives for self-development, and their motives with external factors and for leisure more affect their psychological-wellbeing. Conclusion : Volunteer activities during an old age are an important factor of experiencing a successful old age. Volunteer activities of senior citizens have positive effects of improving their self-efficacy and psychological wellbeing. And the volunteer activity of elderly had better consider the gender deeply. Keywords : Motivation to participate in volunteer work, self efficacy, psychological wellbeing

PP25 S-235

PRODUCTIVE AGEING IN RURAL AUSTRALIA

Sandra DAVIS¹, Natalie CROTHERS² (1. Palliative and Supportive Services, Flinders University, Australia; 2. Rural Health, LaTrobe University, Australia)

Introduction : Being involved in community life is good for individuals and good for society. However, we know very little about the participation of and contribution by people aged 50 and over in rural communities. This research aimed to develop a better understanding of productive ageing in different types of communities in rural Victoria, Australia. Method : An anonymous self-complete postal questionnaire was distributed to a sample of 20,000 households in twenty rural communities using the Australia Post Unaddressed Select Service. Measures of social and civic engagement, familiarity with community, trust, reciprocity, group membership, leadership and social demographic information were included. Householders 50 years of age and older were invited to complete the survey. Results : 4003 surveys were returned, of which 3925 were included for analysis. Although civic involvement is low, the majority of older people living in rural communities continue to be involved in a range of social and community group activities even in very old age, despite barriers. Feelings of obligation were not the reason for higher levels of community group involvement and group civic involvement found in declining communities. Enjoyment, wanting to give something back to the community and to learn how to do new things were the most common reasons for being involved. High levels of generalised and personalised trust were evident, particularly in declining communities. Group membership is common, and reciprocity an integral part of community life. Conclusion : Older people in rural Australia maintain strong community connections and well-functioning social capital. They play a vital role in community sustainability. Keywords : rural, productive ageing, community sustainability

PP25 S-236

VOLUNTEER ACTIVITY AND FUNCTIONAL CAPACITY AMONG COMMUNITY-DWELLING OLDER ADULTS IN JAPAN: A 3-YEAR LONGITUDINAL STUDY

Sangyoon LEE¹, Tami SAITO², Hyuntae PARK¹, Hiroyuki SHIMADA³, Ichiro KAI⁴ (1. Section for Physical Functioning Activation, National Center for Geriatrics and Gerontology, Japan; 2. Section for Social Welfare and Community Care, National Center for Geriatrics and Gerontology, Japan; 3. Section for Health Promotion, National Center for Geriatrics and Gerontology, Japan; 4. Emeritus Professor of Social Gerontology, University of Tokyo, Japan)

Introduction : Previous studies have demonstrated that volunteer activity in productive activities has a beneficial effect on physical

health for older adults. However, the volunteering commitment's longitudinal effect on functional capacity remains unclear. The purpose of this study was to determine the role of volunteer activity on functional capacity using data from Japanese older adults. Method : Subjects were 382 independently living older adults aged 65 to 74 years, who live in a suburban area of Tokyo and took part in this longitudinal study from 2001 to 2004. Volunteer activity was composed of 10 categories based on the Law to Promote Specified Nonprofit Activities of Japan and functional capacity was measured by the Tokyo Metropolitan Institute of Gerontology (TMIG)-index of competence. Parameter estimates using the GLM univariate procedure by SPSS were conducted to predict independent association between volunteering time and functional capacity after 3 years, controlling for job characteristics, education, economic status, age, gender, health condition at baseline and other productive activities, such as housework, caregiving, hobby or continuing education activities. Results : The main findings demonstrate that older adults who participate in their volunteer activities and who engage in more hours of volunteering are associated with a higher functional capacity, especially more than 52 hours per year, than non-volunteers. In addition, volunteering hours was curvilinearly associated with functional capacity. Conclusion : Further research utilizing 3-wave over a longitudinal and representative sample will be needed to identify the relationship between volunteering time and health condition. Keywords : volunteering, volunteering commitment, longitudinal study

PP25 S-237

MUNICIPALITIES, NEIGHBORHOODS AND VOLUNTEERING: A MULTILEVEL ANALYSIS

Sarah DURY, Liesbeth DE DONDER, Dominique VERTE
(*Educational Sciences, Vrije Universiteit Brussel, Belgium*)

Introduction : This contribution explores the relationship between features of the municipality, neighborhood and participation in volunteering. Relatively strong evidence of the influence of place on older people's physical and mental health exists. However, the question how municipalities and neighborhoods promote or hinder volunteer participation remains under-explored. Method : The data for the present research are derived from the Belgian Ageing Studies, a project which uses structured questionnaires to collect information about various aspects of quality of life among older adults at the municipality level. Using data from Belgian older people (N=67,144), a multilevel multinomial logistic regression model is applied, with personal characteristics, neighborhood features and municipality-level measures to predict volunteer participation. Results : At the individual level, results reveal that the more people are involved in the neighborhood, the more likely they are to volunteer. At the municipality level, the extent and quality of facilities increases volunteer participation, while higher aggregated rates of older residents decrease volunteer participation. Conclusion : The discussion highlights the potential of the local environment as promoters or barriers for volunteering. Keywords : Neighborhood volunteering multilevel

PP25 S-238

THE CORRELATION RESEARCH ON ACTIVITIES OF DAILY LIVING, PARTICIPATING IN LEISURE ACTIVITIES AND SOCIAL EVENTS FOR THE OLDER PEOPLE IN TAIWAN

Ching Show LIN, Shou Wen CHENG (*Department of Gerontechnology and Service Management, Nan-kai University of Technology, Taiwan*)

Introduction : Taiwan has already an aging society in 1993, the population of older people aged 65 and over has 2.5 million people and accounted for 10.6 percent of the total population. Participating in leisure activities and social events to enhance the quality of life in their spare time after retirement. The purpose of this study is to explore the current status of activities of daily living, leisure activities and social events participation of the older people and to analyze the correlation among activities of daily living, leisure activities and social events participation. Method : The study used the long-term follow-up survey data of the Health and Living conditions of older adults conducted by the National Health Agency, Department of Health in 2007. The total subjects are 2700 elderly people aged 65 and above. Results : The results showed that the older the people are, the worse the activities of daily living, instrumental activities of daily living and basic activities of daily living get and the number of participation in leisure activities and social events also are less. The participation in leisure activities and social events and their three activities of daily living were positively correlated. The better the activities of daily living are, the more participation in leisure activities and social events are. Conclusion : The older people should enjoy their retirement time by participating in health promotion activities and live an independent life to enhance the quality of life. Keywords : Physical activity, Leisure activities, Social participation

PP25 S-239

LIVING LONGER- LIVING BETTER: THOUGHTS ON LIVING WELL IN LATER LIFE

Terence Anthony SEEDSMAN (*School of Sport and Exercise Science, Victoria University, Australia*)

Introduction : This paper represents an attempt to examine a set of core elements considered essential for positioning human life, particularly during later life, within the framework of a personal journey in which 'living well' is the outcome of a complex mix of a) personal responsibility b) societal responsibility c) respect for human rights and d) the extent to which support exists for the promotion of age-friendly environments . Older people do not live in a vacuum and while the influence of socio-economic factors play a role in influencing the sense of 'living well' the older person is by nature a self determining entity who can choose to live with enthusiasm and anticipation despite experiences involving loss, illness and suffering. For some older people, personal ageing is more than a time of despair but rather a time to engage new ventures and accomplishments. Living well in old age is characterized by a person who is linked productively to other lives. It is recognized, however, that society has a moral mandate to consider and act upon the understanding that 'living well' in older age requires new thinking about ways of enhancing opportunities for social and civic participation of older people. Addressing barriers in the built environment as well as advocacy for a human rights approach is deemed essential for understanding the true essence of 'living well' in later life. Method : Oral presentation by Emeritus professor Terence Seedsman/ not part of symposium/ individual presentation/ presentation using power point. Results : Not applicable. Conclusion : Not applicable. Keywords : not applicable

PP25 S-240

FACTORS ASSOCIATED WITH USE OF COPING STRATEGIES OPTIMIZING SOCIAL PARTICIPATION IN OLDER ADULTS

Veronique PROVENCHER¹, Johanne DESROSIERS², Louise DEMERS³ (*1. Geriatric Unit, Research Centre, Centre hospitalier affilié universitaire de Québec, Canada; 2. School of Rehabilitation, Université de Sherbrooke, Research Center on Aging, Canada;*

3. School of Rehabilitation, Universite de Montreal, Research Center-
Institut universitaire de geriatrie de Montreal, Canada)

Introduction : Older adults often use behavioral coping strategies to optimize their social participation (daily activities and social roles). However, the types of strategies used and factors associated with their use have hardly been explored. This study aimed to 1) determine the behavioral coping strategies (housework, mobility, communication, purchasing consumer goods, reading, personal care, taking medication) that are most strongly correlated with optimal social participation and 2) identify the personal and environmental factors associated with the use of these coping strategies. Method : The sample was comprised of 201 community-dwelling older adults (≥ 75 years) living independently. Coping strategies and social participation were respectively measured using the Inventory of Coping Strategies Used by the Elderly and the Assessment of Life Habits (LIFE-H) questionnaires. Information about personal and environmental factors was also collected during the interview. Results : Linear regression analysis showed a strong relationship between the use of mobility-related coping strategies and optimal social participation (R_{change}: 0.282; F=.309; p<.001). Personal factors (older age, female, low self-perceived level of activity, heart disease, osteoporosis) and environmental factors (availability of technical aids) were significantly associated with increased use of these strategies (adjusted R_c: 0.309; F=16.35, p<.001). Conclusion : Our results support the importance of including mobility-related coping strategies in programs designed to promote older adults' social participation. The knowledge generated by this study also helps to pinpoint which personal and environmental factors to consider in order to optimize implementation of these strategies. Keywords : coping strategies, activities of daily living, social roles, aged 75+

PP25 S-241

THE EFFECT OF INTERGENERATIONAL PROGRAM "REPRINTS" ON THE DEPRESSIVE MOOD THROUGH THE DEVELOPMENT OF SENSE OF COHERENCE: 3-YEAR EXPERIENCE AND LONG-TERM EFFECTS

Yoh MURAYAMA, Masashi YASUNAGA, Rumi TAKEUCHI, Hiromi OHBA, Kumiko NONAKA, Mariko NISHI, Yoshinori FUJIWARA, Shoji SHINKAI (*Research Teams for Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology, Japan*)

Introduction : In an aging society, it can increase the risk of social isolation and the loneliness among older people. Given these circumstances, this study, therefore, focuses on an intergenerational program's effects on older people's mental health. This study examines the long-term effect of an intergenerational program with Senior Volunteer Picture Book Readers "REPRINTS" on senior volunteers' depressive mood through the development of sense of coherence (SOC). Method : 56 volunteers and 86 controls, all aged 60+ years and over living in three area participated in a baseline health check-up in June 2005. After completion of 3-month training seminars, volunteers visited public elementary schools and kindergartens in groups of 6-10 persons for 33 months. They were assessed by annual follow-up health check-ups in March, 2006-2008. SOC was measured 4 times over 12-month interval by the 13 item of Index (SOC-13). Depressive mood was measured 1 time of 33 months by the 5 item of Index (GDS-15). Results : Repeated analysis of covariance revealed that intergenerational exchanges have positive effects on senior volunteer's meaningfulness (ME) (P<.05). Furthermore, the longitudinal trend of ME and the effect on GDS was analyzed by using a latent curve model (LGM). LGM fits the data well

($\chi^2(10) = 16.40$, $p = 0.09$; RMSEA = 0.08; CFI = 0.68). The results showed that initial ME wasn't associated with the subsequent ME increase. Intervention was significantly associated with a larger degree of ME increase. ICEPT and SLOPE were positive effect on. Conclusion : In order to promote old people's mental health, it is helpful to participate in the intergenerational program. Keywords : Intergenerational program, Sense of coherence, Depressive mood

PP25 S-242

SOCIAL ACTIVITY OF JAPANESE ELDERLY IS ASSOCIATED WITH PAID WORK ACTIVITY AND FAVORABLE PHYSICAL FUNCTIONING-RELATED QOL

Yoshitaka SHIBA¹, Saori ANZAI², Hiroshi HAGA³ (*1. School of Allied Health Sciences Department of Rehabilitation, Kitasato University, Japan; 2. Graduate school of Gerontology, J.F. Oberlin University, Japan; 3. Institute for Aging and Development, J.F. Oberlin University, Japan*)

Introduction : To identify factors affecting social activity of elderly people living in a rural area of Japan. Method : Of 381 elderly (≥ 75 years old) living in T village of Gunma Prefecture who participated in a session to discuss health examination results and responded to a questionnaire, 326 elderly (follow-up rate: 85.6%) who could be followed up 1 year later participated in this study. Interview and self-administered mail surveys were conducted in both the baseline and follow-up surveys. Survey items included age, gender, resident status, social activity, being house-bound, exercise habits, pain, working status, self-rated health, higher level functional capacity (instrumental activities of daily living, intellectual activity, social role), and health-related QOL (physical functioning, role physical, bodily pain, general health, vitality, social functioning, role emotional, mental health). To examine factors affecting variations in social activity, a multiple regression analysis was performed using one-year variations in social activity as a dependent variable. Results : The mean social activity score significantly decreased from 2.3 ± 1.95 at the baseline to 2.0 ± 1.88 at the follow-up ($p < 0.01$). One-year variations in social activity were significantly correlated with paid work activity including paid volunteer ($\beta = 0.164$) and role physical ($\beta = 0.189$). The adjusted R² of the model was 0.217. Conclusion : We identified factors affecting one-year variations in the social activity of 229 elderly subjects living in a rural area of Japan. The findings indicated that participation in paid work activity and maintaining a favorable physical functioning-related QOL are associated with engagement in social activity the following year in elderly residents. Keywords: Social activity, paid work activity, Japanese elderly

PP25 S-243

THE INFLUENCE OF MUSIC ON ACTIVE AGING IN JAPANESE COMMUNITY RESIDENTS: THE FOCUS ON LISTENING MUSIC AND MUSICAL ATTITUDE

Yuko TAKENAKA, Kaoru HOUNOKI, Shuichi OKADA, Makoto CHOGAHARA, Norihiko KONDO, Kouhei MASUMOTO (*Graduate School of Human Development, Kobe University, Japan*)

Introduction : The purpose of this study was to examine the relationship between musical activity/attitude and active aging level among adult population in Japan. Special attention has been paid to the differences of the relationship according to personal attributes including age. Method : The survey data were used 801 respondents from community-dwelling adults aged 20 and older. For the measurement of active aging level, three items; life satisfaction, self-assessment of health, and age consciousness, were used. Regarding the scale for musical activity/attitude, seven items were used respectively.

Results : A series of regression analyses indicated that the item of musical activity “listening to music while driving a car”, had impact on active aging levels. Also, the item of music attitude “I think age does not matter to enjoy music” had impact on active aging levels. Conclusion : It was cleared that listening to music while doing something is useful to active aging. It is considered that such musical activities can be enjoyed regardless age, so can make attitude “Age does not matter to enjoy music” and have an impact on active aging as well. Keywords : active aging, musical activity, musical attitude

PP25 S-244

GENDER DIFFERENCES IN THE DETERMINANTS OF VOLUNTEERING AMONG THOSE 65+ WHO ARE OUT OF THE LABOR FORCE

Barbara MCINTOSH¹, Nicholas DANIGELIS² (1. School of Business Administration, University of Vermont, USA; 2. Sociology Department, University of Vermont, USA)

Introduction : Human, social, and cultural capital resources are recognized as important determinants of volunteering (Wilson and Musick, 1997; Tang 2006), but does their relevance differ by gender among those 65+ who are out of the labor force? This paper examines how these resources differentially predict the likelihood of volunteering for older men and women. Method : “Yesterday” diary data from the combined 2003-2011 American Time Use Surveys (ATUS) were examined using odds ratios, logistic regression, and difference of slopes T-tests to identify significant gender differences in volunteering among those 65+ who are out of the labor force (male N = 5,602; female N = 10,164). Volunteering yesterday was dichotomized (yes/no); age beyond 65 was measured by three dummy variables; being female, being white, living with a partner, and participation in religious activity were all dichotomized (yes/no); and three dummy variables for education and two for household income were used. Results : Overall, volunteering was positively associated with being female and highly educated, having higher income, and participating in religious activities. Based on separate analyses by gender, however, unstandardized slopes T-test comparisons showed: Age and income were significantly more important for men, while education was significantly more important for women. Being white increased volunteering likelihood for women but not being white increased it for men, and the race difference was significant. Conclusion : These results are discussed in the context of human capital’s association with volunteering (McNamara & Gonzales, 2011; Choi, Burr, Mutchler & Caro, 2007) and gender roles in relationship to volunteering (Taniguchi, 2006; Chambre, 1984; Choi, 2003). Keywords : Volunteering, 65+, Gender

PP25 S-245

CHALLENGES AND OPPORTUNITIES FOR U-HEALTH AND SOCIAL SERVICES: COMPARING GERMANY AND KOREA

Peter ENSTE¹, Yeung Ja YANG² (1. Institute for Work and Technology, Westfaelische Hochschule, Germany; 2. Division of Social Welfare, Kyungnam University, Korea)

Introduction : Due to the demographic change, products and services that promote the preservation of the independence of older people in their own homes will become more important during the next few years, both in Germany and in Korea. In many cases products from the area of Ambient Assisted Living (AAL) are not well accepted, especially with the target group of older people: Typical obstacles and barriers are the lack of technical experience, exorbitant prices and lack of information about the needs of the target group on the side of the provider. Furthermore, the use of technology cannot substitute social

contacts, thus social services and technical innovations need to be implemented complementary. AAL offers good prospects and opportunities to develop marketable products in combination to develop services that help to improve the quality of life of older people. Method : Based on a literature research in both countries we identified strengths and weaknesses of implementing AAL. These findings were discussed at three workshops in Germany and Korea with experts in the field of AAL and social welfare. Results : In summary three main barriers can be identified: Aims of technical providers and social services are difficult to reconcile. Some products do not meet the real needs of older people. Another problem is the gap between the income of the elderly and the pricing of AAL products. Conclusion : In both countries AAL offers opportunities to improve the quality of life of older people if AAL is not intended to replace but rather to support social services. Keywords : AAL, Social services, U-Health

PP25 S-246

A CONCEPT FOR A SOCIALLY RESPONSIBLE SILVER ECONOMY IN GERMANY AND KOREA

Peter ENSTE¹, Yeung Ja YANG² (1. Institute for Work and Technology, Westfaelische Hochschule, Germany; 2. Division of Social Welfare, Kyungnam University, Korea)

Introduction : Germany has a tradition of over 10-years experience in the field of silver economy. A driving force is the comparably good income situation of elderly people because self-payment serves as a distinguishing characteristic of silver economy. But this situation will change in the coming years and there is a risk of age poverty for a part of the elderly population. To raise quality of life of all parts of the elderly this requires a further development of the concept of silver economy with a focus on social welfare. In Korea silver economy is still in its beginning. This proposal will describe a common way for both countries. Method : In-depth research of scientific reference literature, Comparing of the social welfare systems, Evaluation of income and expenditure data of elderly people. Results : It is necessary to find alternative ways of financing products and services for the elderly. The care insurance provides good opportunities to support products and services which raise quality of life and help elderly people to stay in their own home as long as possible. But until now there are no sustainable business models in both countries. Because a shrinking private income will lead to a disproportionate reduction of private health expenditure there must be a focus on the development of alternative forms of prevention and health promotion. Conclusion : Because of similar population developments and social welfare systems it is helpful for both countries to develop a common concept of socially responsible silver economy to prevent age poverty and social inequality. Keywords : Silver Economy, Social policies, Social Welfare

PP25 S-247

GENDER DIFFERENCES IN DRIVING CESSATION: ARE SUCCESSIVE COHORTS LESS LIKELY TO SHOW GENDER EFFECTS?

Melissa O'CONNOR¹, Michelle ACKERMAN², Jerri EDWARDS³, Christy HALEY³ (1. Department of Human Development and Family Science, North Dakota State University, USA; 2. Department of Psychology, University of Alabama at Birmingham, USA; 3. School of Aging Studies, University of South Florida, USA)

Introduction : Past cross-sectional and longitudinal studies have indicated that females are more likely to cease driving than males, although findings have been mixed. These gender differences may be

moderated by cohort effects, such that earlier birth cohorts may exhibit larger gender disparities than later cohorts. To investigate this possibility, data from the Maryland Older Drivers Project were used. Method : Participants (N=1,248) were drivers at baseline, and their driving status was assessed annually over 10 years. The sample was 47% female, with an age range of 55-92 (M=69.54). Participants were divided into 3 cohorts by birth year: <1920 (cohort 1), 1920-1929 (cohort 2), and ≥1930 (cohort 3). The proportions of males and females did not differ significantly between each cohort ($p<0.05$), and there were no significant baseline age differences between the males and females within each cohort ($p<0.05$). A total of 143 participants stopped driving. Cox proportional hazard models were used to examine the risk of driving cessation as a function of gender (reference group=females), cohort, and baseline age, as well as two-way and three-way interactions between predictors. Results : Main effects for gender (HR=0.85) and age (HR=1.11) were significant at $p<0.05$, as well as gender*cohort and age*gender interactions. When age was held constant at the sample mean, female gender was a significant risk factor for driving cessation in Cohort 1 (HR=0.05, $p<0.05$), but not in Cohorts 2 or 3. Conclusion : These findings support the idea that gender differences in driving cessation diminish in later cohorts of older adults, where females may have more driving experience. Keywords : driving cessation, gender differences, cohort effects

PP25 S-248

HOW TO COMPARE THE PERFORMANCE OF THREE EUROPEAN LONG TERM CARE SYSTEMS BY USING THE BALANCED SCORECARD FRAMEWORK

Samir HENNI¹, Bruno FANTINO², Christophe GERMAIN³, Olivier BEAUCHET² (1. Geriatry, Hospital Center Francis Robert and Aime Jallot, France; 2. Geriatry, Hospital University Center of Angers, France; 3. Vice Dean - Academic Director, Audencia school of management, France)

Introduction : The economic context is characterized by a decline in revenues of the state and an increase in deficits and debt. Even if this context has an impact on healthcare systems, it is not sufficient to limit the thinking to the economic dimension to evaluate healthcare systems performance. In fact, the only measure of the efficiency of financial indicators, leads to a management by the mirror. It is therefore necessary to adopt a more balanced and forward-looking. A tool for performance evaluation, called Balanced ScoreCard (BSC) seems appropriate mainly because it measures criteria for recognition and anticipation. Thus, the aim of our study was to compare systems of care for elderly in France, Germany and the UK using the BSC approach. Method : We aggregated values of each country for the four dimensions of BSC (financial, customer/user/patient, internal process and organizational learning). We select the best value among the three studied countries and we calculated the percentage difference between the value of each country and the reference value of each indicator. Results : We found that French system of care for elderly people is quite efficient compared to the resources allocated and results recorded. Furthermore, France system approaches evenly the four dimensions of BSC compared to the other countries. Limitations: the multidimensional nature of our comparison (three countries compared according four dimensions). Conclusion : The research shows that the theory and the concept of the BSC, initially designed for industries in the private sector may be applied in the context of healthcare systems to compare healthcare performance across organizations, sectors and countries. Keywords : European long term care, BSC Balanced Scorecard, efficiency health system

PP25 S-249

PARENTAL CARE AND FINANCIAL STATUS AMONG WOMEN

Yeonjung LEE, Fengyan TANG (School of Social Work, University of Pittsburgh, USA)

Introduction : This study examines the relationship between eldercare and financial status by investigating whether women's poor financial status is both a result and a cause of assuming a caregiver role for elderly parents. A vicious circle may exist between caregiving and financial well-being. Method : Data for women aged 51 or older with at least one living parent or parent-in-law were drawn from the Health and Retirement Survey 2006, 2008, and 2010 (N= 2,093). A cross-lagged panel design was applied with structural equation modeling to examine whether a reciprocal relationship existed between eldercare and financial status among women. Results : Female caregivers at earlier observation points were more likely than non-caregivers to be in poor financial status at later observation points. Women providing care to elderly parents in 2006 and 2008 had significantly lower household income than non-caregivers by .29 and .45 standard deviation in 2008 and 2010, respectively. On the other hand, women in poor financial status at earlier observations were more likely than women in better financial status to assume caregiving at later observation points. For one standard deviation increase in household income at earlier observations, the odds of assuming care for elderly parents at later observations decreased by 23% and 12%, respectively. Conclusion : This study suggests that there exists a vicious circle of eldercare and poor financial status among women. What appears particularly important is to watch for female caregivers' financial status when eldercare is assumed, and to reduce care burden when women's financial status becomes worse. Keywords : eldercare, financial status

PP25 S-250

THE MACROECONOMIC EFFECTS OF AGING IN IRAN

Kazem YAVARI¹, Mehdi BASAKHA², Hosein SADEGHI², Alireza NASERI² (1. Economics, Tarbiat Modares University, Iran; 2. Health Economics, Tarbiat Modares University, Iran)

Introduction : The recently emerged symptoms of population aging have raised serious concerns in some developed countries. A recent report by the United Nation indicates that aging in developing countries is even more serious and is more rapidly growing than in other countries. The report states that developing countries will confront the negative consequences of this phenomenon in a few decades. Method : The main purpose of the present study is to specify the economic aspects of the Iran's aging population. To this end, dynamic general equilibrium is used to calibrate the suitable Overlapping Generation Model for Iran's economy. Within this structure, not only can we explain the effects of demographic changes, but also we can forecast the variables path to a new steady state. Results : Simulation results show that Iranian population aging (increase in longevity and decrease in fertility) changes a wide range of economic variables, particularly the variables under investigation in this study. Population aging increases savings and capital accumulation. This in turn, decreases the interest and unemployment rates. In addition, an increase in elderly population influences the public spending for health and pension. Conclusion : The results of the study suggest that due to increased capital to labor ratio in Iran, the interest rates will decline, and this leads to capital flight. It is likely that the government expenditures will increase in the social dimensions, especially in health and pension. Therefore, the government should attempt to find funding sources for these two segments of the budget. Keywords : Aging, life cycle, General

Equilibrium

PP25 S-251

DEVELOPING AN OLDER ADULT VOLUNTEER PROGRAM IN A NEW YORK CHINESE COMMUNITY

Ada C. MUI¹, Huajuan CHEN², Juanjuan SUN³ (1. *Social Work, Columbia University, USA*; 2. *Social Work, Washington University, USA*; 3. *Institute of Gerontology, Renmin University of China, China*)

Introduction : This study reports the results of a pilot volunteer project for older Chinese-American immigrants, and documents the benefits of volunteering perceived by the participants. Using a social marketing approach, the older volunteer program was designed as a social model for greater acceptability among participants, with the goal of promoting better health among older Chinese immigrants in New York City. **Method :** The Phone Angel Program was developed using a quasi-experimental design. Systematic assessment of individual level outcomes between older volunteers and caregivers were conducted. We assessed the Phone Angel volunteers before the training and after their 6 months of service to determine the impact of the Phone Angel Program on older volunteers' physical, psychological, and social well-being. In the Program, 18 older Chinese immigrants were recruited to serve as volunteers, and were trained to provide friendly calls as a support service to informal caregivers of ill relatives in the Chinese community. A control group of 31 participants was used as a comparison. **Results :** Results show that volunteers reported a greater sense of well-being and satisfaction in life. Specifically, 100% of the volunteers in the program felt much empowered because of training and volunteering, 61% reported health benefits to themselves and more than 90% reported that the skills they learned improved their communication with their families. **Conclusion :** The findings suggest that utilizing a volunteer program model is an effective health promotion intervention for older Chinese immigrants. The results also confirm that low-income, low-educated volunteers are capable to meet the critical needs of their communities. **Keywords :** Older Chinese volunteers

PP25 S-252

A STUDY ON THE TREND OF CONSUMPTION EXPENDITURE INEQUALITY BETWEEN ELDERLY AND NON-ELDERLY HOUSEHOLDS

Hye In OH (*Korean Women's Development Institute (KWDI)/Seoul National University, Korea*)

Introduction : The purpose of this study is to analyse inequalities in expenditure between elderly and non-elderly household and to see internally contributing factors in such discrepancies. **Method :** To quantify inequalities in goods and services, each item in expenditure basket is studied using Gini decomposition method and national census in trends in households data acquired by National Statistics Office are used. **Results :** In non-elderly households, inequalities in expenditures in essential goods has been decreased with increase of inequalities in discretionary goods. In elderly households, opposite phenomenon occurred. Discretionary goods, including education, transportation, and other goods and services have lowered itself in the inequality scale. Rather, the essential goods, including housing, water and heating, and healthcare, increased its contribution to the inequality. After the financial crisis of 2008, discretionary goods have lessened in weight and in same time Gini coefficient has increased. Thus, it can be deduced that elderly households with low expenditures have forfeited their small 'discretionary goods' spendings to stabilize their homes. **Conclusion :** First, review is required in areas where expenditures have risen dramatically in recent years. This includes

housing, water and heating, and healthcare. Second, further evaluation is required in meeting with elderly household's needs in discretionary goods that was forfeited earlier to meet the ends. Third, it needs to be recognized that individual elderly household with different needs are not lumped together into one single group. As they have different needs and goals, the social support provided to such households needs to be individualized to each and every households. **Keywords :** elderly, inequalities in expenditure, Gini decomposition, discretionary goods, essential goods

PP25 S-253

EXPECTATIONS OF INDIVIDUALITY OF HEALTHCARE SERVICES WITHIN OLDER PERSONS LIVING AT HOME

Riitta SUHONEN, Paivi HAAPALAINEN, Minna STOLT (*Department of Nursing Science, University of Turku, Finland*)

Introduction : The increasing number of older persons pose challenges to care and service arrangements globally. Recognising the individuality of each person is a requirement for tailoring care and enabling better patient outcomes. Older persons' evaluations have been used in the development of healthcare services but their expectations have rarely been studied. The aim of this study was to explore the expectations of individuality in healthcare services within older persons living at home and to explore what it means for older persons to be cared for as an individual person. **Method :** This study employed a qualitative descriptive study design. Data were collected using open interviews amongst eleven older persons (over 70 years of old) living independently at home and were recruited from four senior clubs for pensioners. Data were analyzed using inductive content analysis. **Results :** Older persons' expectations of individuality were described in terms of attending of professionalism, cooperation between patient and nursing staff and as the rights of individuals. They expected accountability, knowledgeable and skilled professionals, quick access to care, the necessary assistance and guidance, and the possibility of being cared for in one place. Individuality as a right of the individual was seen as a person's activity and freedom. These are reflected in the person's own abilities and desires to participate and as an opportunity for independent decision-making. Individuality in care meant that the person's situation will be taken into account in care provided. **Conclusion :** The results can help in developing care and healthcare services to be patient-centered for older people. **Keywords :** expectations, individuality, older people

PP25 S-254

CUSTODIAL GRANDPARENTS: ADDRESSING UNPLANNED UNCERTAINTY IN LATER LIFE

Lynn MCDONALD¹, Raza MIRZA², Rebecca BLISS³, Michelle MAJEED⁴ (1. *Factor-Inwentash Faculty of Social Work, University of Toronto, Canada*; 2. *Faculty of Medicine, Institute for the Life Course and Aging, University of Toronto, Canada*; 3. *Faculty of Medicine, Factor-Inwentash Faculty of Social Work, Institute for the Life Course and Aging, University of Toronto, Canada*; 4. *Geography, Institute for the Life Course and Aging, University of Toronto, Canada*)

Introduction : Over the last decade the number of custodial grandparents has dramatically increased. For many custodial grandparents this new caregiving role is a result of their child's substance misuse, divorce or separation, mental and physical health issues, teen pregnancy, or through their death. The custodial grandparenting role often comes at a time that disrupts the intended life course and this subsequently has long lasting implications on retirement plans and financial situations. The purpose of this study is to explore and develop an understanding of the experiences of

custodial grandparents and their ongoing needs. Method : This study employed a qualitative research design and conducted in-depth interviews with participants (n=25). From these interviews, observations were made to address the variability within the participants' needs related to financial literacy. The coding scheme was based on issues and themes as they emerged from the data. Results : Our results indicate that custodial grandparents experienced high levels of financial stress due to the uncertain and unplanned nature of the circumstances that led them to be in custody of their grandchildren. Results also showed that participants felt that they were out of touch with current child rearing theories and guidelines and in need of support when navigating through the complexities of legal, tax and child protection systems. Conclusion : Our findings identify the diverse socioeconomic status of custodial grandparents and highlight the systematic policy gaps that currently exist. Keywords : Custodial Grandparents, Finances, Canada

PP25 S-255

CUSTODIAL GRANDPARENTS: ADDRESSING ECONOMIC UNCERTAINTY IN LATER LIFE

Lynn MCDONALD¹, Raza MIRZA², Rebecca BLISS³, Michelle MAJEED⁴ (1. *Factor-Inwentash Faculty of Social Work, University of Toronto, Canada*; 2. *Faculty of Medicine, Institute for the Life Course and Aging, University of Toronto, Canada*; 3. *Faculty of Medicine, Factor-Inwentash Faculty of Social Work, Institute for the Life Course and Aging, University of Toronto, Canada*; 4. *Geography, Institute for the Life Course and Aging, University of Toronto, Canada*)

Introduction : Over the last decade the number of custodial grandparents has dramatically increased. For many custodial grandparents this new caregiving role is a result of their child's substance misuse, divorce or separation, mental and physical health issues, teen pregnancy, or through their death. The custodial grandparenting role often comes at a time that disrupts the intended life course and this subsequently has long lasting implications on retirement plans and financial situations. The purpose of this study is to explore and develop an understanding of the financial literacy of custodial grandparents and their needs in relation to the aforementioned. Method : This study employed a qualitative research design and conducted in-depth interviews with participants (n=25). From these interviews, observations were made to address the variability within the participants' needs related to financial literacy. The coding scheme was based on issues and themes as they emerged from the data. Results : Our results indicate that custodial grandparents experience high levels of financial stress due to the uncertain and unplanned nature of the circumstances that led them to be in the custody of their grandchildren. Participants also identify several areas for which they require further support and information including navigating the legal and financial systems, more tailored financial resources, and greater support in understanding their custody agreements as well as government benefits and taxation. Conclusion : Our findings emphasize varying levels of financial literacy among custodial grandparents and the policy gaps that exist in the current system. Keywords : Custodial Grandparents, Financial Literacy , Canada

PP25 S-256

ADJUSTMENT TO AGING AND SUBJECTIVE AGE THROUGH THE EYES OF ROMANIAN AND PORTUGUESE OLDER ADULTS: A COMPARATIVE MULTIPLE CORRESPONDENCE ANALYSIS

Sofia VON HUMBOLDT, Isabel LEAL (*Research Unit in Psychology and Health, R&D, ISPA-Instituto Universitario, Portugal*)

Introduction : Purpose: To analyze the manifestations of adjustment to aging (AtA) and subjective age (SA) identified by older adults and to investigate the latent constructs that can work as major manifestations in AtA and SA in an older Portuguese and Romanian population. Method : Methods: Measures were completed, using a variety of culturally appropriate methods, including demographics and interviews. Complete data were available for 64 older adults aged between 72-99 years (M=80.1; SD = 5.8). Data was subjected to content analysis. Representation of the associations and latent constructs were analyzed by a Multiple Correspondence Analysis (MCA). Results : Results: The most prevalent response of the interviewed participants for AtA was 'Accomplishment, personal fulfillment, and future projects' (24.1%). 'With apprehension' (33.3%) was identified as the most frequent SA response. Findings showed a model for each nationality. AtA and SA for Portuguese elderly were explained by a three-factor model: 'conciliated', 'young-at-heart' and 'involved'. A three-dimension model formed by 'satisfied', 'attentive' and 'concerned' was indicated as a best-fit solution for Romanian elderly. Conclusion : Conclusions: AtA and SA are strongly explained by increased likelihood of specific constructs in its definition. AtA was differently related to SA in older adults in both samples. Keywords : Adjustment to Aging; Multiple Correspondence Analysis; Older Adults; Portuguese; Romanian

PP25 S-257

THE COMPREHENSIVE FRAILTY ASSESSMENT INSTRUMENT

Nico DE WITTE¹, Liesbeth DE DONDER², Robbert GOBBENS³, Jos SCHOLS⁴, Dominique VERTE⁵, Tine BUFFEL² (1. *Faculty of Education, Health and Social Work, University College Ghent/ Vrije Universiteit Brussel, Belgium*; 2. *Faculty of Psychology and Educational Sciences, Vrije Universiteit Brussel, Belgium*; 3. *University of Applied Sciences, Rotterdam University of Applied Sciences, Rotterdam, Netherlands*; 4. *Department of General Practice and Department of Health Services Research Caphri - School for Public, Maastricht University, Netherlands*; 5. *Faculty of Psychology and Educational Sciences, Vrije Universiteit Brussel, Belgium*)

Introduction : This contribution evaluates the psychometric properties of the Comprehensive Frailty Assessment Instrument (CFAI), a new self-report instrument including physical, psychological, social and environmental indicators. Population ageing forces governments to shift their policy towards ageing in place. Consequently, early detection of frail older persons is appropriate in order to avoid adverse outcomes. Several instruments to detect frailty exist. However, most instruments have a biomedical basis and none of them uses environmental indicators. Method : Scale validation study on data provided by the Belgian Ageing Studies, a cross-sectional survey conducted in 142 municipalities in the Dutch speaking part of Belgium. 33 629 community dwelling respondents aged 60 and over were included in this study. Exploratory factor analysis was performed on the subscales of the CFAI. Second-order confirmatory factor analysis was applied on the subscales and the whole scale. Step by step deletion of indicators was used in order to improve the overall model fit. Finally, internal consistency and explained variance of the CFAI and the subscales were assessed. Results : The analysis revealed a Cronbach's α of .812, explaining 63.6% of the variance and moderately large to large factor loadings and good model fit indices: RMSEA= .032, CFI= .974 en TLI= .970. Emotional aspects contributed more to frailty (.80) than psychological (.69) and physical aspects (.36) and environmental aspects also contributed to frailty. (.32). Conclusion : The CFAI is found to be valid and reliable, providing evidence for the multidimensionality of frailty and can be

easily used to detect community dwelling frail older people.
Keywords: frailty, elderly, community

PP25 S-258

ATTRACTING STUDENTS INTO THE FIELDS OF GERONTOLOGY AND GERIATRICS

Judith A. SUGAR (*Community Health Sciences, University of Nevada, Reno, USA*)

Introduction : The world's rapidly aging population is one of the most important challenges of the 21st century, and no nation exemplifies this challenge more than Korea, whose 65+ population is expected to rise from 10.5 percent to 38 percent by 2050. Method : In no country is there a workforce prepared to meet the interests and needs of its aging citizenry. One arena where this is especially evident is healthcare. In 2008, the National Academy of Sciences released a report on the preparedness of the American healthcare workforce for its burgeoning older population, concluding that "geriatric care has not attracted health care professionals in sufficient numbers in the United States." Rather than increasing, the number of practitioners and providers actually appears to be decreasing. Results : Our gerontology and geriatric communities have not been successful at recruiting adequate numbers of students into their fields. Conclusion : Clearly, a new multifaceted strategy is needed. Many organizations have called for increases in remuneration for their professionals. This approach has some merit, but will not by itself solve the problem. Negative stereotypes about aging, along with little or no contact with older adults, predispose young people to be disinterested in working with or for elders. Exceptions exist of course, but are wholly inadequate to make up for the incipient workforce shortages we face. Approaches to overcome the lack of interest in gerontology and geriatrics depend on addressing the deterrents, and we can begin in our own classrooms. Examples of what works, and what does not, will be discussed. Keywords : workforce, educators, students

PP25 S-259

REGIONAL CAPACITY OF HEALTHCARE RESOURCES AND NURSING HOME PLACEMENT: 10 YEARS OF THE PUBLIC LONG-TERM CARE INSURANCE PROGRAM IN JAPAN

Miharu NAKANISHI (*Research Department, Institute for Health Economics and Policy, Japan*)

Introduction : Japan introduced a national long-term care insurance (LTCI) program for the elderly in 2000 to help persons with aging in place. The present study performed a longitudinal small area analysis on the association between regional capacity of healthcare resources and LTCI nursing home placements in Japan. Method : Published annual data on regional capacity of hospital beds and clinics, use of LTCI home care, community-based care, and residential care services of 346 health regions were obtained from national statistics during a 10-years period from 2001 to 2010. A multilevel linear regression analysis was employed using a linear mixed model with a variance component structure and restricted maximum likelihood. The model included health region as a random effect to account for within-health region correlation. Results : The annual number of nursing home placements per 1000 elderly population was significantly greater among health regions that had a greater elderly population rate, a higher annual per capita expenditure on LTCI home and community-based care services, a larger number of annual residents of geriatric intermediate care facilities per 1000 elderly population, a smaller number of clinics per 100,000 population, and a greater number of hospital beds per 1000 population. The number of nursing home

placements was significantly increased over time. Conclusion : Our results suggest regional capacity of healthcare resources may cause supplier-induced needs for LTCI nursing home placements. Keywords: Japan, Nursing home placement, Small area variation

PP25 S-260

ASSESSING THE FUNCTIONS OF LOCAL GOVERNMENTS IN JAPAN'S NEWLY ESTABLISHED COMMUNITY-BASED INTEGRATED CARE SYSTEM: SURVEY INSTRUMENT DEVELOPMENT

Takako TSUTSUI¹, Sadanori HIGASHINO², Masaaki OTAGA³, Naoko MURAMATSU⁴ (*1. Department of Health and Social Services, National Institute of Public Health, Japan; 2. School of Management and Information, University of Shizuoka, Japan; 3. Department of Social Rehabilitation, Research Institute, National Rehabilitation Center for People with Disabilities, Japan; 4. Division of Community Health Sciences, School of Public Health, University of Illinois, USA*)

Introduction : Japan introduced the Community-Based Integrated Care System as part of the 2012 revisions of the Long Term Care Insurance (LTCI) System. Municipalities (LTCI insurers) are expected to play increasingly important roles for integrating medical and long-term care at the community level, but empirical research on their functions is scant. The goal of this study was to develop a survey instrument to assess municipalities' functions as LTCI insurers. Method : A mail survey was conducted to assess their functions as defined by the LTCI law, using 25 questions developed by experts. Of the 1,731 municipalities, 645 participated. Results : Exploratory and confirmatory factor analysis indicated that LTCI insurers' functions consist of four factors: 'Evaluating and supporting community-based integrated care centers', 'Assessing, guiding and auditing the LTCI activities', 'Supporting LTCI service providers and care managers', and 'Mid- and long-term needs assessment and planning'. We successfully developed a scale that involves 12 items grouped into 4 sub-scales. Results demonstrated the validity and internal consistency of the scale (GFI=0.966, AGFI=0.951, RMSEA=0.040; Cronbach's alpha above 0.7). Municipalities with larger populations and lower percentage of older populations had higher levels of functioning as LTCI insurers. Conclusion : This scale will allow local governments (municipalities) to assess their strengths and weaknesses as LTCI insurers and improve their functions and facilitate the development of an effective Community-Based Integrated Care System in Japan. Keywords : Long-term care insurance system, Community-based integrated care system, Functions of Insurers

PP25 S-261

FACTOR OF THE DIFFICULTIES BY ASSESSMENT INVESTIGATORS INVOLVED WITH ELDERLY DEMENTIA PEOPLE FOR LONG-TERM CARE INSURANCE IN JAPAN

Yoko YAMAZAKI¹, Yukimichi IMAI² (*1. Doctoral Program Graduate School of Social Welfare, Japan College of Social Work Graduate School, Japan; 2. Wako Hospital, Japan*)

Introduction : This study investigates the difficulties faced by long-term care needs assessment investigators of elderly dementia people who live with family members and those who live alone. The study also examines the kinds of skills that an investigator must possess. Method : As a preliminary study, we carried out a group discussion about "problems at the time of certification survey" with 43 care needs assessment investigators. Create an item based on the results, I conducted a questionnaire survey. Analysis, I have analyzed exploratory factor to capture the characteristics of the degree of the difficulties. Results : From a written questionnaire survey based on the

qualitative investigation, effective replies were obtained from 152 care needs assessment investigators. Factor analysis showed the following results. For elderly dementia people who live with family members, four factors were found: the burden of relationships, understanding of the investigation and lack of needs, investigator skills, and pride/privacy. For elderly dementia people who live alone, four factors were found: lack of information about living conditions, understanding of the investigation and lack of needs, investigator skills, and a shortage of basic information. Moreover, the analysis points to characteristic factors and common factors. Conclusion : As a conclusion of this study, the following were determined as desirable skills for long-term care needs assessment investigators: "information gathering that considers each relation," "cooperation with other professionals," and "knowledge for dementia people, and its practical use". Training methods to impart such skills to investigators must now be considered. Keywords : Investigator for long-term care need, People with dementia, Difficulty,

PP25 S-262

THE RELATION OF SOCIOECONOMIC STATUS AND GASTRIC CANCER SCREENING IN KOREAN ADULT POPULATION

Hyunsuk OH , Jung-Ae RHEE (*Department of Preventive Medicine, Chonnam National University Medical School, Korea*)

Introduction : Socioeconomic status plays an important role in health care and disease prevention. This study aimed to examine the association between socioeconomic status measured by educational levels and household income and cancer screening participation. Method : 21,220 community dwelling adults to aged 40 to 69 within a defined geographic area participated in community health survey in 2010. The survey was conducted by trained investigators who visit the subjects' households directly through developed questionnaire. Logistic regression analysis were used to determine a relationship between self-reported participation in gastric cancer screening and socioeconomic variables (education, house income). Results : The gastric cancer screening rates were 52.1% in aged 40 to 49 years, 63.7% in aged 50 to 59 years, and 67.3% in aged 60 to 69 years. In multivariate analysis, Higher educational and income levels were associated with higher screening rate of gastric cancer (for high school vs elementary school: odds ratio [OR], 1.41; 95 % confidence interval [CI], 1.26-1.58, for highest income quartile vs lowest income quartile: OR, 1.68; 95% CI, 1.45-1.94). The gradient between Income and screening rate was more pronounced in the aged 40 to 49 years population than in the other population. Conclusion : This study demonstrated that lower socioeconomic status is associated with decreased participation in gastric cancer screening. Our findings suggest that the screening program should be focused on low income and less educated population, especially in the younger adults to reduce health disparities. Keywords : Socioeconomic status, education, household income

PP25 S-263

THE IMPACT OF HEALTH CARE EXPENDITURES ON ECONOMIC STATUS AND HEALTH IN LATER LIFE

Jinhyun KIM, Jina HAN (*School of Social Work and Administrative Studies, Marywood University, USA*)

Introduction : Health care expenditures have been a significant financial burden, especially for the elderly poor. Older adults living in poverty spend a higher percentage of their income on health care expenses and are more likely to have poor overall health compared to their higher socioeconomic counterparts. This study aims to identify

longitudinal relationships between health care expenditures, economic status, and health among older population. Method : The panel data (2008 to 2009) from the Medical Expenditure Panel Survey (MEPS) was used to identify causal pathways between health care expenditures, economic status, and health. Among a total of 18,287 samples, those who are 65 years old and over (N=1,773) were selected. Latent growth curve modeling (LGM) was used to analyze health changes related to health care expenditures and economic status. Results : Health care expenditures significantly decreased the economic status of older adults. The economic status was significantly related to the initial health status, but it did not predict changes in health. Interestingly, health care expenditures had a greater negative impact on the economic status of elderly poor compared to their nonpoor counterparts. Finally, older adults whose economic status changed from middle- to low- income were more likely to suffer financial hardships due to health care expenditures. Conclusion : Health care expenditures might cause financial hardships, especially for the elderly poor, which in turn negatively affect their overall health. Financial support for out-of-pocket health care cost will be needed to reduce health disparities among older population. Keywords: health care expenditures, poverty, health

PP25 S-264

THE RELATIONSHIPS BETWEEN SMOKING AND PERSONAL & REGIONAL INCOME OF SILVER POPULATION IN KOREA

Junh-Ae RHEE (*Department of Preventive Medicine, Chonnam National University Medical School, Korea*)

Introduction : This study aimed to evaluate the impact of personal and regional incomes on smoking for adults after individual's various factors related with smoking are modified. Method : The total subjects over 60 were 68,803 and, 2,355 people without the information for smoking and income among them were excluded. 66,448 (male 28,056, female 38392) people were in the final-analysis. Multilevel logistic regression analysis was used to investigate the personal and regional incomes and smoking rates. Results : In male elder citizens, when adjust individual variables such as age, alcohol, and marital status, the highest individual income group shows low rates than the lowest individual income group in both city and rural areas. And when individual variable and personal incomes were revised, in case of male elderly, only in urban areas, the smoking rate of highest income area shows low value compared to the lowest income region. For elderly women, when individual variables such as age, alcohol, and marital status, only urban areas shows that the highest individual income area has low smoking rates than the lowest. On the other hand, when individual variables and personal incomes were corrected, only in rural areas, women shows higher smoking rate in the highest regional income areas than the lowest regions. The interaction of personal income and regional income has no significant meaning in both cases of male and female. Conclusion : This study shows that regional characteristics can have contextual impact on health behaviors in the individual level. Keywords : smoking, personal income, regional income

PP25 S-265

OLD GAY MEN: PATHWAYS TO FAMILY INTEGRITY

Liliana SOUSA, Filipa MARQUES (*Health Sciences, University of Aveiro, Portugal*)

Introduction : Current old gay men constitute a unique group as they represent individuals among the first cohorts to start living "out gay" lives. The family integrity approach offers an important framework for

the study of old persons and their families from a normative and developmental perspective. Therefore, this exploratory study examines old gay men specificities in the construction of family integrity (versus disconnection). Method : The sample comprises 11 participants (60 to 88 years old). Data were collected through a semi-structured interview that explores the construction of family integrity. Interviews were submitted to content analysis. Results : Main findings suggest three specificities in old gay men construction of family integrity: i) influence of homosexuality throughout life; ii) building a family of choice; iii) building a legacy associated to homosexuality. Conclusion: Results have implications to better understand old gay men family relationships. Keywords : old gay men; homosexuality; development; ageing; identity; family.

PP25 S-266
THE EFFECT OF MIDDLE AND ELDERLY WOMAN'S SKIN CARE ON HAPPINESS

Joung-Sook KIM (*Dept. of Beauty Care, Youngdong University, Korea*)

Introduction : The purpose of this study was to demonstrate effect of skin care for middle and elderly women in their sense of happiness, so that it could help respond proactively to ever-increasing demands of middle and elderly women for beauty care and also develop possible ways of silver industry. Method : In order to meet these goals, this study surveyed total 584 middle and elderly women who had ever been treated with skin care services. Results : First, the effect of middle and elderly women's skin care on the self-efficacy, self-esteem, and happiness showed that the skin care has a significant positive effect on the self-efficacy, self-esteem, and happiness. Second, the effect of middle and elderly women's self-efficacy and self-esteem on the happiness showed that the self-efficacy and self-esteem have a significant positive effect on the happiness. Third, an analysis of a mediating role of self-esteem in the relation between middle and elderly women's skin care and the happiness showed that an independent variable, skin care and a parameter self-esteem all have a significant effect in the three-stage, and a regression coefficient of parameter is sharply bigger than that of independent variable, which the self-esteem plays a mediating role. Conclusion : As a result, this study could demonstrate and conclude that middle and elderly women tend to feel confidence in their own choice and action owing to better sense of satisfaction with skin care, and confidence leads to improvement in their sense of self-efficacy and self-esteem, and better sense of happiness as well. Keywords : Middle and elderly women, Skin care, Happiness, Self-efficacy, Self-esteem

PP25 S-267
A STUDY ON USE BEHAVIOR AND SELECTION FACTOR OF SKIN CARE CENTER IN AGING WOMEN

Myungwoo KIM (*Dept. of Beauty Care, Youngdong Univ, Korea*)

Introduction : The purpose of this study was to be conducive to skin care of women in the aging period, and further to offer basic data necessary for operating skin care center, by examining the actual condition of skin care, the use behavior of skin care center, and the selection factor of skin care center in the aging women. Method : It made a survey on total 120 middle and elderly women living in some areas of Seoul in Korea to examine. Results : The following facts were clarified. Women in the aging period had high interest in skin care and did put the most emphasis on the facial region given the skin care. They used skin care center the most because of anxiety about aging and had high intention of using skin care center continuously. Also, women in the aging period preferred dermatologist's special clinic

more than general skin care center given the skin care, and recognized that the lack of professionalism is a problem, which needs to be improved most imminently. Conclusion : Given seeing these results, women in the aging period have a high desire for service of skin care center. middle and elderly women tend to feel confidence in their own choice and action owing to better sense of satisfaction with skin care. They used skin care center the most because of anxiety about aging and had high intention of using skin care center continuously. confidence leads to improvement in their sense of self-efficacy and self-esteem, and better sense of happiness as well. Keywords : Aging women, Skin care, Behavior of skin care

PP25 S-268
PRESENT SITUATION AND MEASURES FOR THE ELDERLY HAVING DIFFICULTY SHOPPING IN JAPAN

Hiroaki FUJII, Taizo ITO, Toshimi NAKATSUKASA (*Faculty of Wellbeing Science, Fukuyama Heisei University, Japan*)

Introduction : The purpose of this study is to clarify the present situation and measures for an increasing number of elderly people who have difficulty shopping in recent years in Japan. We can refine the elderly having difficulty shopping (hereinafter referred to as "EHDS") as the elderly who cannot buy daily necessities because there are no stores in their neighborhood. The livelihood of local residents in Japan has been ensured by such social resources as commercial facility, hospitals and public facility in good condition. For decades, however, Japanese commercial environment has changed greatly. The number of small stores and shopping streets which used to be many in Japanese local areas has decreased greatly because of the emergence of large suburban shopping malls or the successors problems in small stores. As a result many elderly people have come to have difficulty getting food and daily necessities. Method : 813 day service centers for elderly in Hiroshima prefecture were surveyed. We conducted a questionnaire survey to them. Results : 366 centers answered. 292 (79.8%) centers knew that there were "EHDS" among their users. 89(24.9%) centers conducted a support program for "EHDS". They worried about conducted such support programs. That is because public nursing care insurance system recognizes only the functional training as the program which allows "EHDS" to go out of the centers. Conclusion : We think effective measures should be taken for the support program for "EHDS" in every field including day service centers for the elderly. Keywords : the elderly, shopping, day service

PP25 S-269
CRISIS MAPPING OF SENIOR SERVICES AND SOCIAL MEDIA USE IN RESPONSE TO HURRICANE DISASTER

Wen DOMBROWSKI¹, Pete GIENCKE², Jimmy SHEN³, Leah M. VAUGHAN⁴ (*1. Health I.T., Social Media, and Aging Consultant, Resonate Health LLC, USA; 2. GIS Data Engineer, Crisis Response Team, Google.org, USA; 3. Data Analyst, Independent, USA; 4. Public Health Researcher, Director, The Health Policy Group, USA*)

Introduction : Hurricane Sandy disproportionately affected older adults. After the storm, there was chaos about how volunteers and professionals could help. Method : In response to this, various social media sites were used to receive and send updates about disaster relief. Additionally, a geriatrics physician technologist volunteer used social media to contact GoogleMaps, recruit technology volunteers, and partner with local senior centers to create a Senior Services Map of disaster-specific volunteer and donation needs of older adults, as well as create map of ongoing social and medical services for seniors(the help many older adults needed after the storm were meals, care

management, and services that senior organizations usually provide). Data for the map came from several sources: 510 locations in New York City from reformatting public directories, 101 locations from social media and crowdsourced submissions, and 108 locations from spreadsheets by a Long Island hospital that later partnered in this project. Results : Awareness of the Senior Services Map was spread by co-locating it with the highly publicized Google Gas Station Map and announcing it via email and social media. Community feedback was positive about the usefulness of geographically visualized local senior services. Regions beyond hurricane-affected areas requested similar maps as an ongoing resource and to prepare for future emergencies. Conclusion : Technology has enormous potential to help aging adults and their caregivers. Valuable I.T. tools can be created when stakeholders from different disciplines and organizations work together with aging experts. Furthermore, open data and crowdsourcing can enable large scale projects to be completed more quickly. Keywords : GIS mapping, interprofessional practice, information technology

PP25 S-270

ROLE OF SOCIAL WORKERS IN ELDERLY CARE FACILITIES -SELF-DETERMINATION AND COORDINATION BETWEEN MULTIPLE OCCUPATIONS-

Fujiwara YOSHIKO (*Jerontology, Yokohama National University, Japan*)

Introduction : The principle of respect for self-determination has been a central theme in the domain in social welfare work. However, various contradictions and problems to the principle have been pointed out and further research must be conducted to reorganize and understand the essence of the principle. There are people that can be self-determined and those that cannot (e.g. elderly people who have diminished decision-making abilities due to cognitive impairment). Therefore, it has been pointed out that providing support to develop self-determination has its limitations and restrictions. An empirical analysis was conducted on the role of social workers in collaboration with other types of workers when providing support for self-determination. Method : A semi-structured interview was conducted with five social workers that were providing support for the elderly with diminished decision-making abilities due to cognitive impairments. The continuous comparative analysis method was employed for the qualitative and inductive analysis interview contents. Characteristics of the coordination between social workers in the process of providing support for self-determination was collected and displayed as a figure. Results : This study identified five characteristics of coordination in elderly care facilities when providing support for self-determination: “listen (listen, inquire, empathize),” “connect,” “move forward,” “develop (spend time),” and “look (look, observe, assess, take care)”. Conclusion : The characteristics that were identified were reciprocally correlated. Social workers were better able to provide care that respected the intentions of the elderly, when they collaborated with different types of workers while making use of information from different work environments. Keywords : support for self-determination, role of social workers, coordination between multiple occupations

PP25 S-271

OLDER PEOPLE'S ATTITUDES TOWARDS SOCIAL WELFARE IN TAIWAN: DOES INTERGENERATIONAL SOLIDARITY MATTER?

Ju-Ping LIN, Chiu-Hua HUANG (*Human Development and Family Studies, National Taiwan Normal University, Taiwan*)

Introduction : In Taiwan, the increasing old-age dependency ratio puts states under rising financial pressure. Simultaneously, families with fewer children are faced with higher financial and caring responsibilities for their old-aged members. Do children and the elderly compete for restricted resources in families (and state)? It is important to notice that demographic trends can also influence intergenerational solidarity both privately in the family and publicly in society. Method : This study explored whether the experience of intergenerational solidarity within the family has an impact on older people's attitudes towards age related social welfare policy. Data were taken from the Taiwan Social Change Survey in 2011. Latent class analysis was used to develop types of older people's policy preferences. Results : Four types were found for older people's social welfare policy preferences: (a) Welfare state: government has responsibility for child and elderly care, (b) Government-oriented elderly care: elderly care was government's responsibility, (c) Cooperative: both family and government have responsibility to take care elderly, (d) Family centered: both child and elderly care were family's responsibility. Older people who have a stronger sense of family values, with higher levels of intergenerational exchange with adult children, are more likely to become the “family centered” type. Elderly's income is shown to have a pronounced effect, in that when elderly with lower income, the policy preferences are prone to be the “welfare state” type. Conclusion : The social welfare policy preferences of older people can be influenced by intergenerational relations with adult children and is not only subject to egocentric considerations. Keywords : Attitudes towards Social Welfare, Intergenerational Relations, Elderly

PP25 S-272

ASSOCIATIONS BETWEEN ORAL MUCOSAL IMMUNOCOMPETENCE OF INDEPENDENT AND FRAIL ELDERLY PERSONS AND SCREENING FOR PREVENTION OF NEEDED LONG-TERM CARE

Kimiko HIROTSU¹, Masayuki OKUDA² (*1. Faculty of Nursing and Human Nutrition, Yamaguchi Prefectural University, Japan; 2. Department of Environmental Medicine, Yamaguchi University Graduate School, Japan*)

Introduction : The relationships between secretory immunoglobulin A (SIgA) in the saliva of local elderly persons and the screening items for prevention of needed long-term care were studied. Method : The subjects were 25 independent females(primary prevention group) and 18 frail females(secondary prevention group), 65 years old or older, living in k town in Yamaguchi prefecture. The survey consisted of implementation of the care prevention medical examination basic checklist and investigation of subjects' life styles as well as measurement of anthropometry, care prevention physical performance tests and oral mucosa immunity (SIgA in saliva). Results : The secondary prevention group had high values in age (p=0.02). The primary prevention group indicated higher values of right grip strength (p=0.02) in physical performance tests. The secondary prevention group showed slower TUG values (p=0.04). The primary prevention group indicated faster rates of saliva secretion (p=0.04) and SIgA secretion (p=0.02). The secondary prevention group revealed more problems with the life-style questionnaire regarding questions such as “problems with one's meals” (p=0.04), “necessity in improving one's meals” (p=0.04), “difficulty in salivation” (p=0.03) and “living alone” (p=0.02). Conclusion : The secondary prevention group with decreased physical strength indicated slower rates of saliva and SIgA secretion. Saliva which moistens oral mucosa plays an important role in the maintenance of health of oral tissues, and people with oral disorders such as dysmasesis, dysphagia, lower denture retentive forces and dysgeusia increase as their amounts of saliva decreases.

This study suggests that prevention of “oral dryness” will result in the maintenance of oral mucosal immunocompetence. Keywords : Independento elderly person, Frail elderly person, SlgA

PP25 S-273

CURRENT STATUS AND CHALLENGES OF NURSING HOMES THAT EMPLOYED EPA LONG-TERM CARE WORKER CANDIDATES: FINDINGS FROM 57 NATIONWIDE INTERVIEW STUDIES

Noriko TSUKADA (*Graduate School of Business, Nihon University, Japan*)

Introduction : It has been four years since Japan officially opened its long-term care (LTC) labor market for foreign workers in August 2008, based on an Economic Partnership Agreement (EPA) with the Republic of Indonesia. The purpose of this study is to find out how senior personnel of the nursing homes, which employed EPA candidates would perceive their experience and what they would suggest to improve the current EPA scheme. Method : The structured-interview data, obtained from senior personnel of the 57 nursing homes between August 2010 and January February 2011, were qualitatively analyzed. Results : All respondents cited that EPA candidates work very hard with smiles and sincere attitude towards residents. Contrary to their original expectations, cultural differences were not a huge barrier. The respondents, however, found that EPA candidates had poor skills in writing the Japanese language. The respondents' biggest concern was the national qualification exam for a certified care worker where EPA candidates have once chance to take it. Most frequently cited suggestion was “to give them a second chance to take the exam”. Conclusion : Knowing that an Indonesian candidates' pass rate (37.9%) for the national exam in January, 2012 was lower than the Japanese counterparts (63.7%), it is suggested that the EPA scheme be modified to either accept candidates who already have minimal Japanese language skills at the time of their entry to Japan or by creating another visa status to allow migrants to work without a national qualification if they meet certain levels of Japanese language proficiencies. Keywords : Economic Partnership Agreement , Long-term care workers, Foreign workers

PP25 S-274

FEASIBILITY OF WORKING AS A PREVENTIVE CARE PROGRAM : THE CASE OF SHRC

Tomoaki ISHIBASHI¹, Mayumi HARIGANE², Masato OKA³, Hisao OSADA⁴, Yasunori KOMATSU⁵ (*1. Research Division, The Dia Foundation for Research on Ageing Societies, Japan; 2. Research and Consulting, Seed Planning, Inc., Japan; 3. International College of Arts and Sciences, Yokohama City University, Japan; 4. Graduate School of Gerontology, J. F. Oberlin University, Japan; 5. Managing Director, The Dia Foundation for Research on Ageing Societies, Japan*)

Introduction : Japan's Silver Human Resource Centers (SHRC) program provides temporary and short-time jobs for persons aged 60 or older.°°This study examined the feasibility that working at SHRC could be a preventive care program. Method : The subjects were 1,981 members at the age of 65 and over belonging to the SHRC of A City in Tokyo. They were divided into Risk (n=469) and No Risk (n=1,512) groups by the national government screening test for preventive care. One year later, we made a survey on monthly incomes, job contents and withdrawal from the SHRC over the year. Results : The proportion of working was 78.3% with the Risk Group and 82.7% with the No Risk Group (P=0.05). However, when their monthly income and the ratio of withdrawal (2.2%) were compared with the No Risk Group, it

was not statistically significant. The job contents for Risk Group were mostly cleaning up public parks and inspection of locking-up in case of men and sweeping in the facilities and packing in case of women. Conclusion : The reasons why the frail elderly were able to continue work could be explained by the following factors. First, the nature of jobs was easy, light and of low-risk. Second, those jobs were group work consisted of two to five persons, which may allow them to cope with problems collectively. The significantly low rate of withdrawal suggests that the work program at SHRC can be evaluated as a kind of preventive care program. Keywords : prevention, working

PP25 S-275

ACCEPTABILITY OF NASOGASTRIC FEEDING AMONG CAREGIVERS OF GERIATRIC IN-PATIENTS IN A MALAYSIAN

Nordiana NORDIN, Mau Pin TAN (*Geriatric Unit, Medical Department, University Malaya Medical Centre, Malaysia*)

Introduction : Dysphagia is a common condition among geriatric inpatients. Nasogastric feeding is often prescribed for such patients, which could lead to increased care-giver burden. We conducted a study to determine the acceptability of nasogastric tube feeding among caregivers of geriatric in-patients in Malaysia. Method : Face-to-face interviews were conducted with immediate caregivers of geriatric patients with and without NG feeding in our acute geriatric ward using an interviewer-administered questionnaire. Statistical analysis was performed with SPSS and Chi-squared test. Results : 70 care-givers were interviewed, 59(84%) were spouses or children. 57(81 %) carers felt they would have NG feeding in the future. 44(63%) of them felt ng feeding was an acceptable method of feeding during the terminal phase of life, while 19(27%) disagreed with NG feeding during the end-of-life. Reasons for disagreeing were, “it will not make a difference” (11/19(58%)) and “doctors should not interfere with the dying process” (5/11(26%)). There was a significant difference in acceptance of NG feeding with level of education [3/5(60%) no formal education, 4/9(44%) primary education, 23/28(82%) secondary education and 27/28(96%) tertiary education; p=0.003]. The acceptance of NG feeding during end-of-life care did not differ with education level or ethnic group. Conclusion : Majority of caregivers agreed with the use of NG feeding at the end-of-life. The acceptability of NG feeding differs with educational level. Future work needs to be conducted to evaluate the reasons behind the popularity of NG feeding in our setting and the benefits or harm related to NG feeding in our patient group. Keywords : Nasogastric/ perception

PP25 S-276

ASSOCIATION BETWEEN WISDOM AND CAREGIVER WELL-BEING: A NEW HORIZON?

Patrick NG¹, Vivian W.Q. LOU² (*1. University of Hong Kong, Hong Kong; 2. Social Work and Social Administration, University of Hong Kong, Hong Kong*)

Introduction : This cross-sectional study examined the relations between stress and coping predictors and psychological well-being among dementia family caregivers. Caregiving burden has a direct negative impact as stipulated in the infamous stress and coping model. Whether the caregivers would develop depressive symptoms depend on the amount of stress they have encountered, such as the severity of care recipients, level of caring demand, the availability of coping resources, and the ability of the carers to adjust. Although literature suggests caregiving afford benefits, these components have not been conceptualized as wisdom. The construct has never been incorporated into the model to entail caregiver resilience. Method : A cohort of 108

dementia family caregivers in Hong Kong completed questionnaires and interviews. Predictors for well-being included caregiving parameters, social support, coping strategies and wisdom. Results : Similar to previous empirical findings: caring people with dementia of more behavioural problems was related to more caregiving burden ($p<0.01$), and the caregivers were more depressed ($p<0.05$). Better perception of social support helps to reduce caregivers burden ($p<0.05$). Regression analyses indicated that after controlling for the effects of relevant caregiving demographic parameters, caregiver stress and coping resources, higher level of wisdom predicting better well-being ($\beta=-0.20$; $t=-2.15$; $p<0.05$). Wisdom was also associated with more use of problem-based coping strategy ($p<0.01$). Conclusion : Findings support interventions that aim to enhance the psychological well-being of dementia caregivers should concentrate on improving their wisdom, so that greater exposure to caregiving stress does not translate into greater distress. The moderating effect of wisdom to caregiver stress is yet to be investigated. Keywords : Dementia, caregivers, wisdom

PP25 S-277

DOES THE EFFECT OF CAREGIVING DEPEND ON THE NATURE OF THE RELATIONSHIP BETWEEN THE CAREGIVER AND CARE RECIPIENT? THE MODERATING EFFECT OF RACE

Eun Ha NAMKUNG¹, Jan GREENBERG¹, Jieun SONG², Marsha M. MAILICK¹ (1. *Social Work, University of Wisconsin - Madison, USA*; 2. *Waisman Center, University of Wisconsin - Madison, USA*)

Introduction : Relatively little known is whether the effects of caregiving differ depending on the nature of the role relationship between the caregiver and care recipient. This study examined: (1) whether caregiving has a differential effect on caregiver well-being depending on the caregiver's relationship with care recipients (i.e., spouse, parent, adult child or sibling), and (2) whether the effect of caregiving on well-being is moderated by the race of the caregiver. Method : Using data from the Midlife in the United States (MIDUS), this study analyzed 79 spouses, 67 parents, 272 adult children and 41 siblings who self-identified as caregivers, as well as 4,810 non-caregivers as a comparison group. Standard measures of physical and mental health were administered. The data were analyzed using multiple regression. Results : Caregiving had its greatest toll on parents caring for a child with disabilities. Compared to the non-caregiver group, these parents reported poorer mental and physical health, higher levels of depression, lower levels of life-satisfaction and less control over their lives. Non-white parent caregivers reported poorer mental health than their white counterparts caring for a child with disabilities. Spouse caregivers reported higher levels of depression and lower levels of life-satisfaction and less control over their lives, while sibling caregivers showed higher levels of depression and lower levels of life- and self-satisfaction. Adult child caregivers for their parents only differed from the non-caregivers with respect to higher levels of depression. Conclusion : Given the heterogeneity among family caregivers, this study gives implications for researchers and service providers to consider their differing needs. Keywords : family caregiving, race, mental health, physical health, parent caregiver

PP25 S-278

WHO RECEIVES INFORMAL AND FORMAL CARE IN ICELAND ?

Sigurveig H. SIGURDARDOTTIR¹, Ingemar KAREHOLT² (1. *Faculty of Social Work, University of Iceland, Iceland*; 2. *Institute of Gerontology, School of Health Sciences, Jonkoping University,*

Sweden)

Introduction : Even if older people in the Nordic countries living in their homes usually have good access to formal help, the family plays an important role. The aim of this study is to analyze the patterns of informal and formal IADL and PADL care of older people living at home in Iceland and to describe how help and care varies depending on the degree of limitations, the gender of the recipient and whether she/he is cohabitating or not. Method : A random nationally representative telephone survey (ICEOLD) among persons 65+ living in their homes in Iceland is used. N = 782, 441 woman and 341 men. The response rate was 66%. The participants were asked about their living standards and the help they received from formal and informal care givers. Results : The results show that cohabiting men are much likelier to receive informal IADL help and much less likely to receive formal help than men not cohabiting. The majority of the respondents with IADL or PADL limitations received either informal or formal help but not both, indicating substitution rather than complementation. More persons receive informal care than formal care, which shows the importance of the family. When the IADL limitations increase, the informal care increases for men but not for women. This indicates that the informal care steps in among men with increasing limitations. Conclusion : Informal care is an important factor in the total provision of care for older people. The results indicate that cohabitation is important for receiving informal care, especially for men. Keywords : informal care, formal care, cohabitation

PP25 S-279

FACTORS AND STRUCTURES OF HEALTH-RELATED QUALITY OF LIFE OF TURKISH AND POLISH MIGRANTS AND GERMANS -UNDER THE CONSIDERATION OF GENDER AND AGE

Johanna Maria BUCHCIK¹, Joachim WESTENHOEFER¹, Colin R. MARTIN² (1. *Health Sciences, Hamburg University of Applied Sciences, Germany*; 2. *Mental Health, School of Health, Nursing and Midwifery, University of the West of Scotland, United Kingdom*)

Introduction : The number of elderly migrants in Hamburg (Germany) will increase significantly in the coming years. Turkey and Poland represent the largest countries of origin (Statistics Office for Hamburg and Schleswig Holstein, 2010). The aim of the PhD-thesis is to examine and to analyze (comparatively) the factors and structures of the multidimensional and subjective (perceived) HRQOL of a total of 300 Turkish, Polish and German women men aged over 60 and living in Hamburg. Method : To satisfy the multidimensionality and the subjectivity of HRQOL a comprehensive questionnaire is being used. It includes questions dealing with their (perceived) health status, medical service from GP, HRQOL (SF-36), sport and physical activity, consumption of alcohol/tobacco, nutrition, self-efficacy, experience of discrimination in Germany, social networking/contacts, leisure activities and religion. Additionally, the socio-demographic and socio-economic data is being collected. The surveys are being conducted in selected districts in Hamburg in the appropriate mother tongue. These districts were chosen due to the high proportion of people with migration backgrounds living there (see Statistics Office for Hamburg and Schleswig Holstein, 2010) and allows a district-based comparison between the three target-groups. Results : The results will be analyzed using the statistics program SPSS 19. Possible group differences will be seen using t-test and ANOVA. Factor structures of HRQOL will be analyzed using Factor Analysis as well as structured linear models (using AMOS). Conclusion : Along with the demographic change, the importance of health promotion and prevention and health-related quality of life (HRQOL) are becoming

more and more important in research on older migrants Keywords : health-related quality of life, migration, age

PP25 S-280

MODEL OF SUPPORT FOR FAMILY CARERS AT HIGH WOMEN'S EMPLOYMENT RATE IN SLOVENIA

Ksenija RAMOVŠ, Joze RAMOVŠ (*Social Gerontology, Anton Trstenjak Institute for Gerontology and Intergenerational Relations, Slovenia*)

Introduction : Slovenia has among the EU countries two important features regarding political and technical assistance for elderly care at home: the population is one of the oldest, women's employment rate is among the highest. In the national survey of needs, abilities and attitudes of the population 50 + research was included also the care of the elderly, carried out by family members. Mostly it is provided by daughters (47.5%), majority of them full-time employed and having family, being under extreme pressure. The care of the sick and weakened they provide, having no training and rarely with public assistance, because Slovenia has very low proportion of home care in EU. Method : Based on their needs, National Institute of gerontology has developed an effective model for family carers' training and their self-organizing in local communities. Training consists of eight two-hour learning sessions once a week. It is going on in groups, attending by about 15 family carers, with an active method of social learning from own experience and expertise, a separate manual is provided. Results : Topics: communication with the old person - especially when socially unpleasant, dementia, care for carer's own health and fitness, the techniques and care (the local home care nurse and physiotherapist), and psychosocial situation management, when older person cannot be cared at home, death and mourning. Conclusion : During the course a group becomes closely linked. At the end of training is suggested to continue with the meetings once a month in the 'local relatives club' working on the principle of self-help group. Keywords : family carers, support

PP25 S-281

CURRENT STATE AND ISSUES REGARDING FAMILY SUPPORT PROVIDED BY NURSING HOME STAFF: COMPARISON OF SUPPORT CONTENT AMONG CARE-RELATED OCCUPATIONS

Masako OKAYASU-KIMURA¹, Mari KATAOKA², Masako HAYASHI², Mariko NISHIKAWA³, Kazumi TAWARA¹ (*1. Department of Nursing, The University of Shimane, Japan; 2. Department of Nursing, Kochi University, Japan; 3. Department of Nursing, Hiroshima International University, Japan*)

Introduction : It has been revealed that the emotional ties with the family affects the health of the elderly. Therefore, In cases where an elderly person has to be admitted to a nursing home due to physical and/or mental disability, cooperation between the nursing home and the family is an important issue that is directly linked to quality of life of the elderly patient. Method : To elucidate the current state and issues regarding family support provided by nursing home nurses, care workers and counselors. A 27-item questionnaire survey regarding family support was conducted on 1500 randomly selected staff at nursing homes across Japan. Results : A total of 199 valid responses were obtained (13.2%), including 54 nurses, 62 care workers, 77 lifestyle counselors and 6 blanks. Factor analysis of the 27 items identified 6 factors as family support. Comparison of scores for each factor among the three occupations revealed higher scores for counselors than care workers for factors 1 'constructing and adjusting interpersonal relationships' and 4 'role execution as a guardian'.

Conclusion : Despite superficial differences in support for families provided by different occupations, there were no marked differences in the details of support content. Welfare-related tasks appear to be undifferentiated. In order to achieve cooperation among different occupations, clear specification of expertise and task allocation are required. This study was supported by a grant Unvers Foundation. Keywords : nursing home, care-related occupations, family support

PP25 S-282

SOCIAL SUPPORT AND LIVING ARRANGEMENT OF THE ELDERLY IN TAIWAN

Miao Yu LIAO¹, Hui-Wen LIN², Chun-Chung LIAO³, Meng-Chih LEE⁴ (*1. Geriatric Department, Taichung Hospital and Institute of Medicine, Chung Shan Medical University, Taiwan; 2. Department of Family Medicine, Taichung Hospital and Institute of Medicine of Chung Shan Medical University, Taiwan; 3. Family Medicine Department, Taichung Armed Forces General Hospital and Institute of Medicine of Chung Shan Medical University, Taiwan; 4. Superintendent, Taichung Hospital and Institute of Medicine of Chung Shan Medical University, Taiwan*)

Introduction : The research on the advantages and disadvantages of different living arrangements of the elderly has not been available for many countries, we try to check the relationship of social support and living arrangement of the elderly in Taiwan. Method : Study population was from the source of Health and living status in Taiwan. Panel Study Of Longitudinal Design. Random samples from the year 1996 ,2003 and 2007, We use SAS 9.2 , Descriptive statistics Chi-square, test and Anova. Results : There are 1304 Male and 1267 Female. Emotional support will affect living arrangement. (OR:1.14 , P£0.001) ; especially those Live alone and live with spouse . Instrument support , age, disease numbers also will affect live alone and live with spouse . Conclusion : Social support has significant relationship with living arrangement, the trend of living arrangement for the elderly in Taiwan is changing now. The higher the social support, the more rate living with family. Keywords : social support . Living arrangement

PP25 S-283

THE CAREGIVING EXPERIENCES OF THE CAREGIVERS OF INDIVIDUALS WITH DEMENTIA

Tsui-Ying WANG¹, Ho-Chuan HUANG², Shih-Han HUANG¹ (*1. Department of Occupational Therapy, National Cheng Kung University, Taiwan; 2. Department of Information Management, National Kaohsiung University of Applied Sciences, Taiwan*)

Introduction : The purpose of this qualitative research is to investigate the daily experience for the family caregivers who took care of the individuals with dementia. Method : Six female caregivers who lived in south Taiwan were interviewed in person with questions regarding how the typical routines were like and how were their lives like when they managed the caring for their relatives living with dementia. Interviews were tape-recorded and transcribed verbatim for data analysis. Results : Using grounded theory method, there were six main themes emerged in this study. They are 'change of daily life structure', 'family or social support as a motivator', 'behavior and psychological symptoms as stressors', 'psychological and physical distress', 'aspiration for taking a break', and 'self-efficacy in managing the care duty'. The results showed that as the disease progressed, the caregiver experienced more restriction in their own lives, and the family support and social support from professional guidance and services would ease the stress. Otherwise, the sustained caring experience would have adverse effect for the health of the caregivers. Conclusion : This

research extends the knowledge in understanding the adaptation processes and factors related to caring for elderly with dementia. The findings also provide readers to recognize the care for the caregivers' needs to improve their health. Keywords : care-giver, dementia, experience

PP25 S-284

PERCEPTION OF ALZHEIMER'S DISEASE IN THE FRENCH POPULATION

Alice BREINING¹, Benoit LAVALLART², Stephanie PIN³, Christophe LEON³, Sophie MOULIAS⁴, Pierre ARWIDSON⁵, Francois BECK⁶, Claudine BERR⁷, Marc VERNY¹ (1. *Geriatrics, Pitie Salpetriere Hospital APHP - UPMC Paris 6, France*; 2. *Health, Ministry for Health, France*; 3. *Research, National Institute for Prevention and Health Education, France*; 4. *Geriatrics, Ambroise Pare Hospital APHP, France*; 5. *Director of research, National Institute for Prevention and Health Education, France*; 6. *Head director, National Institute for Prevention and Health Education, France*; 7. *INSERM U1061, La Colombiere Hospital INSERM, France*)

Introduction : To improve care taking of patients with Alzheimer's disease (AD), the French government decided to launch an action plan. The aim of this study was to investigate the perception, knowledge, opinions and beliefs about AD in the French population. Method : A telephone survey was performed in 2008. The respondents answered a questionnaire in which they were presented with a series of attitudinal statements about health in general and AD. Results : A total of 2013 persons, representative of the French population, were investigated. Main results are summarized as followed: (1) Respondents think that AD can be devastating for a family (93%). This calamity feeling is prevailing in elderly persons >75 years old and in people who know an AD patient. (2) General population does have a quite good knowledge about AD, but still lacks of knowledge on beginning stages: 95% of responders considered that difficulties to manage administrative papers are suggestive of early AD as difficulties to find their way back home. (3) An overwhelming majority of the population (91%) would like to know the diagnosis if they had AD. (4) Thirty eight per cent of the population know or have known at least one patient within their circle of acquaintances. People do think that the care of AD's patient can be better but they trust in the French government to improve it. Conclusion : Representation of AD is changing in a positive way and, even though AD is perceived as a real plague, people are confident that solutions will be found in the future. Keywords : Alzheimer's disease, perception, French population

PP25 S-285

PRESENT SITUATION OF TERMINAL CARE IN JAPAN: FINDINGS FROM A SURVEY ON HOME-VISITING NURSING SERVICES AND SPECIAL NURSING HOMES FOR THE ELDERLY

Harumi ARAKI¹, Takae IMAGAWA¹, Mariko NIKURA², Yasuko SUMITANI¹ (1. *Department of Nursing, Toyama College of Welfare Science, Japan*; 2. *Gerontological Nursing, Graduate School of Medicine and Pharmaceutical Sciences for Research, University of Toyama, Japan*)

Introduction : The place at which terminal care is provided has become important, with Japan's aging society. The home and special nursing homes for the elderly (henceforth facilities) have been recommended instead of hospitals as terminal care centers. This study identifies problems with terminal care by examining the present situation of home-visiting nursing services (henceforth services) and

facilities. Method : Anonymous questionnaire surveys were completed by users of services and facilities and their caregivers in prefecture A. The survey on services was conducted biennially, and the response rates were 69.5%, 64.7%, 69.5%, and 66.8% in 2005, 2007, 2009, and 2011, respectively. The survey on facilities was conducted in 2012 (46 facilities; response rate 68.7%). The results were simply totaled. The study was approved by the ethics committees of the organization the authors are affiliated to. Results : Mean age and sex distribution of user samples did not drastically change across surveys. The average age of caregivers was 65 years; 80% were the users' children and spouses. Among both the users and caregivers, 55% wished for terminal care to be provided at home (55%), 31% were not sure, and 1% desired to use a facility. Many patients in facilities died at night. Facilities had an average of 4.9 full-time nurses; nurses worked at night in one facility. Approximately 40% of the patients died in hospital. Conclusion : Elderly patients should be supported in expressing their desires regarding terminal care. A system must be established to encourage elderly patients to use facilities for terminal care. Keywords : terminal care, home-visiting nursing service, nursing home

PP25 S-286

BEING PERCEIVED AS A "VISITOR" IN THE NURSING STAFF'S WORKING ARENA-THE INVOLVEMENT OF RELATIVES IN DAILY CARING ACTIVITIES IN NURSING HOMES IN SWEDEN

Jessica HOLMGREN¹, Azita EMAMI², Lars E ERIKSSON¹, Henrik ERIKSSON³ (1. *Dept. of Neurobiology, Care Sciences and Society, Karolinska Institutet, Sweden*; 2. *College of Nursing, Seattle University, USA*; 3. *The Red Cross University College, Sweden*)

Introduction : It is both complex and difficult for relatives when a family member moves into a nursing home and many relatives are not prepared for the realities these new situations entail. Little attention has been paid to scrutinising the involvement of relatives in patient care, particularly in relation to the structures and routines of nursing homes or to the staff's reasoning concerning their involvement. The aim was to describe, from a gender perspective, how nursing staff's routines and reasoning act to condition the involvement of relatives in nursing homes. Method : Focused ethnographic fieldwork was conducted in three different nursing homes in Sweden. Results : The nursing staff assign a certain code of conduct to all relatives they perceived as "visitors" in their working arena. This code of conduct was related to the routines and subcultures existing among the nursing staff and stemmed from a division of labour; the underlying concept of "visitor" predetermined the potential for relatives' involvement. This involvement is explicitly related to the general gendered characteristics that exist in the nursing staff's perception of the relatives. Conclusion : It is essential to develop mechanisms that provide opportunities for nursing staff in elderly care to reflect upon the gendered power structures that exist in the nursing home culture. These issues have to be further explored to gain a deeper understanding regarding relatives and their involvement in nursing homes in order to facilitate the transition from informal caregiver to "visitor". Keywords : Nursing home staff, relatives, gender perspective

PP25 S-287

RESEARCH ON SUCCESSFUL AGING

Jiang BO (Department of Social Work, Kawasaki University of Medical Welfare, Japan)

Introduction : Introduction: This research aimed at clarifying the meaning of Successful Aging for the elderly people who reside in

urban areas of central China. Method : Method: The aim, method and ethical implications of the research were explained and participants signed consent forms. Thereafter, semi-structured interviews were conducted based on questions resulting from an in-depth literature review. The resulting data was analyzed using exploratory analysis to reveal qualitative factors. Results : Results: The following 6 components of successful aging were identified: the meaning of aging included conceptions of 'national stability', 'physical well-being', 'contentment', 'family ties', 'secure longevity', and 'productivity in society'. Most participants were satisfied with their present life to a certain extent and this was explained through a narrative of putting energy into keeping yourself healthy in old age. Moreover, other prevalent narratives were able to contribute to the state and prizing one's family relations. Conclusion : Conclusions: This study supports the findings of Rika et al, that elderly people who reside in urban areas of China were relatively satisfied with the present state, were anxious about health, attached importance to family relations and put their trust in social security provided by the state. Keywords : secure longevity °family ties °elderly people in China.

PP25 S-288

DILEMMA OF MOVING HOUSING FOR THE ELDERLY LIVING IN A HOUSING COMPLEX IN JAPAN: CARE PREFERENCES AND CARE CAPITAL OVER THEIR LIFE COURSE

Mai YAMAGUCHI¹, Mie MORIKAWA², Rie YAMANOI³, Akiko SAITO⁴, Shizuko NAGATA⁵, Harumi SASATANI⁶ (1. Department of Social Work, Japan Lutheran College, Japan; 2. Department of Social Services, National Institute of Public Health, Japan; 3. Department of Humanities, Meisei University, Japan; 4. Research Fellow, The Japan Society for The Promotion of Science, Japan; 5. Sapporo International Junior College, Sapporo International College, Japan; 6. Department of Education, Hokkaido University of Education, Japan)

Introduction : To promote comprehensive community care, housing and caring for the elderly is an emerging agenda especially after the 2012 Revision of the Long-term Care Insurance (LTCI) program in Japan. The objective of this study is to examine dilemma of moving housing for the elderly living in a housing complex, by analyzing their care preferences of combination pattern of formal and informal care. Method : The subjects were 429 elderly living at Housing complex B in City A in Tokyo. Home-visit structured interviews were completed for 196 elderly (response rate: 46.0%). We measure their preference for formal and/or informal care at the timing of widowhood, preferences of informal carers, and their preferences of living place at the timing when they need care (open-ended question). Results : 1) As for the preference for formal and/or informal care (IADL care), 36.7% of respondents preferred only formal care, while 52.1% preferred both formal and informal care and 11.2% preferred only informal care. 2) As for the preference for informal carers, daughters°°(48.2%)°°and sons (25.9%) were more preferred than daughters-in-law (3.5%). 3) Multivariate analysis of their preferences indicated that the availability of support from their children was significantly correlated to preference of formal care. Conclusion : Our findings suggest that there is a wide variety of care preferences depending on their care capital (care resources) over their life course and that most of them are facing dilemma of moving housing in spite of their preferences to live at the housing complex as long as possible. Keywords : care preferences, elderly, housing

PP25 S-289

CHARACTERISTICS OF ELDER-TO-ELDER CARE

Mariko NIIKURA¹, Rina TANAKA², Sayumi YOSHIOKA², Harumi

ARAKI³, Yasuko SUMITANI³ (1. Gerontological Nursing, University of Toyama, Japan; 2. Nursing, Kanazawa University Hospital, Japan; 3. Gerontological Nursing, Toyama College of Welfare Science, Japan)

Introduction : The rapid aging of Japan's population and associated increase in the elderly population have resulted in a corresponding increase in the number of elderly individuals requiring nursing care. The present study aimed to clarify the characteristics of elder-to-elder care(elderly nursing care provided by another elderly person) and investigate issues regarding continuing with home care. Method : In September 2011, an anonymous questionnaire survey was conducted on 1,099 family caregivers of patients using 31 home care agencies that consented to participate among the 37 home care agencies in X Prefecture. Of the 734 responses obtained (collection rate, 66.8%), those from 582 family caregivers over 40 years old caring for patients over 65 years old were analyzed. The study was approved by the ethics review board of the authors' affiliated institution. Results : Mean patient age was 82.9(SD 8.5) years while mean family caregiver age was 67.2(SD10.1) years [40-64 years, n=261 (44.8%); 65-74 years, n=164 (28.2%); over 75 years, n=157 (27.0%)]. The over 75 years group compared to the 40-64 years group had significantly higher mean scores for sense of caregiving burden, significantly more kinds of home care burden, significantly lower numbers of social activities and hobbies and a significantly higher proportion of individuals requesting health management for themselves from the visiting nurses. Conclusion : The present findings indicate the importance of increasing the use of nursing care services in order to alleviate the caregiving burden and of supporting the health management of family caregivers particularly in cases of elder-to-elder care by family caregivers over 75 years old. Keywords : elder-to-elder care, family caregivre, care burden, home care

PP25 S-290

A COMPARTIVE STUDY OF GENGDER ROLD IDENTITY BETWEEN KOREAN ELDERLY MAN AND WOMAN

Myungae Kim KIM¹, Sung Hee KOH², Eun-A. PARK³ (1. College of Nursing, Keimyung University, Korea; 2. Department of Nursing, Chonbuk National University, Korea; 3. Department of Nursing, Pukyong National University, Korea)

Introduction : The perception on gender role identity is subjective and varies across individual experiences and values of a social culture. Korean elderly adults are the generations who internalize the patriarchy and the distinctive perception between genders. The purpose of this study is to seek a desirable direction of an elderly care by comparing and culturally considering the difference in the gender role identity between Korean male and female elderly adults. Method : Q-methodology, a technique for extracting subjective opinions, was used. The Q sample has two categories: representing masculinity and femininity. Each category has 20 statements, resulting in 40 adjectives. P samples are 40 elderly men and 40 elderly women. Results : There are four factors in older male about the perception of gender role identity; 'caring-affectionate type' 'assertive-confident type,' and 'sensitive-affectionate type.' There are three factors in older female; 'powerful-confident' 'caring-affectionate' 'affectionate - leading' and 'sensitive-affectionate.' Both elderly men and elderly women are turned out to have two types in common: "Caring-affectionate type" who is generous, putting effort into understanding and sympathizing with others, and "sensitive-affectionate type" who is romantic, loving beautiful things, and who is compassionate having a sensitive character and comforting others. Conclusion : There is a deep perception of a traditional patriarchy, masculinity and femininity in

Korean elderly men and women. And they have specific characteristics in common in terms of gender role identity. Social-psychological adaptations of aging, and understanding family role performances between married couples will be promoted by understanding their features and differences in their types of gender role identity. Keywords : gender role identity

PP25 S-291

THE PERSPECTIVE DIVERSITY ON THE AGED BY UNIVERSITY STUDENTS IN DIFFERENT GENERATIONS

Shu Tzu CHENG¹, Yoko HOSOE², Ching-Sung LEE³ (1. *Family Studies and Child Development, Shih Chien University, Taiwan*; 2. *Living and Health Science Education, Joetsu University of Education, Japan*; 3. *Restaurant, Hotel and Institutional Management, Fu Jen Catholic University, Taiwan*)

Introduction : Demographic variables of university students have been examined for their influence on perspectives held about older people. The purpose of this study is to compare and analyze the perspective diversity on the aged by university students in different generations. Method : The studies were conducted both in 1997 and 2011 respectively, employing self-administered questionnaires based on a semantic differential scale. The samples consisted of 240 male students and 438 female ones from 14 universities in 1997; and 218 male and 271 female students from 9 universities in 2011 in Taiwan. Results : 1. There was a significant difference in perspective on the aged by university students in different generations. Comparatively, most students of young generation had an affirmative view, negative perspective only on items of °Πhard°π,°Πconservative°π,°Πsubjective°π,°Πstubborn°π,°Πemotional°πand°Πslow°π. 2. A factor analysis identified three semantic spheres. They were: °ΠActive°π,°ΠSocial°πand°ΠCoordination°π. °ΠSocial°π ranked the highest, °ΠCoordination°πthe second and °ΠActive°πthe third. It demonstrated clearly that university students held a negative view on °ΠActive°πof the aged. 3. There was no significant difference of perspective on the aged as to the variable of °Πexperience of living with grandparents°π. Conclusion : Comparatively, the perspective on the aged of young generation university students held an affirmative evaluation. Keywords : Perspective diversity on the aged, generation, experience of living with grandparents

PP25 S-292

NEEDS FOR TERMINAL CARE OF PERSONS WHO IDEALIZE 'DYING WITHOUT TROUBLING OTHERS' -A SURVEY IN A RURAL COMMUNITY IN JAPAN -

Tomoko ITO¹, Maki KATO¹, Ryosuke MOROOKA², Reiko AGAWA³, Hiroshi ASAMI³ (1. *School of Nursing, Shimane Prefectural University, Japan*; 2. *Faculty of Education, Shimane University, Japan*; 3. *School of Nursing, Ishikawa Prefectural Nursing University, Japan*)

Introduction : In the Japanese society, many people have collective conception on life and death, and idealize 'dying without troubling others'. The aim of the present study is to clarify their needs for terminal care. Method : A survey was conducted using self-reported questionnaire by post-mail for 800 persons from forties to seventies in a rural community in Japan. Results : Over 70% of the participants in every generation idealize 'dying without troubling others.' There were significant differences in 'residence with the spouse', concern about death with dignity' and 'need for continuation of medical treatments' between groups of those who idealize 'dying without troubling others' and those who don't. However, there were no significant differences in 'place for terminal medical treatment' between the two groups.

Comparison between these two groups about the conditions of 'realization of death at home' indicated significant differences in 'support of visitor nurses' and 'own will'. It was suggested that those who idealize dying without troubling others did not want to disturb their spouse, did not want the life prolonging treatment, and hoped for death with dignity. While these persons didn't want to trouble others, they thought that they could receive medical care at home by 'their own will' and 'support of visitor nurses'. Conclusion : Needs for terminal care of the persons who idealize 'dying without troubling others' were 'respect for their own will' and 'fullness of the social resources. Keywords : Conception on life and death, Dying without troubling others, Terminal care

PP25 S-293

MARITAL RELATIONSHIP AND CARING ATTITUDES OF AGED SPOUSAL CAREGIVERS

Yuko HARASAWA¹, Kiyomi YAMADA² (1. *School of Nursing and Health, Aichi Prefectural University, Japan*; 2. *School of Nursing, Nagoya City University, Japan*)

Introduction : This study aimed to describe the emotional aspect of aged Japanese spousal caregivers in terms of their marital relationship and to examine the effect of marital relationship on caring attitudes. Method : At first, data were collected by semi-structured interview, and were analyzed qualitatively and inductively. The participants were 16 spousal caregivers, aged over 65 years old. The findings indicated that marital relationship had 20 items of emotional aspects and 10 items of caring attitudes. Next, survey data from 205 spousal caregivers and 306 non-spousal caregivers, aged over 65 years old, were used. By using Exploratory factor analysis, the above 20 items were summarized into 13 items including 3 subordinate concepts. The 13 items were named Marital Relationship Balance Index (MRBI) and 3 subordinate concepts were named "mutual support", "one-way support" and "self-helping". MRBI ensured internal consistency as Cronbach's $\alpha = .902$. Results : Factors Related to MRBI were "mental health condition" and "prevalence of the disease". Multi-Regression Analysis explained following two things; spousal caregivers whose MRBI had high scored on "one-way support" tend to be high self-sacrificial, self-trapping or positive caring attitudes. Spousal caregivers whose MRBI had high scored on "mutual support" tend to depend on their fail spouse and think their fail. Conclusion : Marital Relationship of aged spousal caregivers were different from non-caring Aged couples. Caring Attitudes of Aged Japanese Spousal Caregivers were tend to be high self-sacrificial, self-trapping or positive caring attitudes. Keywords : Marital Relationship, Caregiver, elderly person

PP25 S-294

INTERGENERATIONAL LIVING ARRANGEMENTS AND PSYCHOLOGICAL WELL-BEING AMONG OLDER ADULTS IN SOUTH KOREA: COMPARISON BETWEEN THE YOUNG-OLD AND THE OLD-OLD

Bo Rin KIM¹, Lydia LI², Jersey LIANG¹ (1. *Health Management and Policy, University of Michigan, USA*; 2. *School of Social Work, University of Michigan, USA*)

Introduction : This study investigates the effects of intergenerational living arrangements on changes in life satisfaction and depression among Korean older adults, and how the effects differ between young-olds (age 60-69) and old-olds (age 70+). Method : Data were from the 2006 and 2008 waves of the Korean Longitudinal Study of Ageing (KLoSA) on individuals over the age of 60 years (N=4,476). Intergenerational living arrangements were classified into four categories: living away from children, living near children, living with

unmarried children, and living with married children. We conducted multivariate linear and logistic regressions to estimate the effects of intergenerational living arrangements at Wave 1 on life satisfaction and depression at Wave 2, controlling for Wave 1 scores of the dependent variables, health status, and socio-demographic characteristics. Results : We found cohort differences in the association between living arrangements and changes in psychological well-being. Among old-old adults, those living with married children, relative to all other arrangements, had improvement in life satisfaction and depression. Among young-old adults, however, living near children was associated with increase of life satisfaction compared to living with unmarried children, and living near children and living away from children were associated with decreased depressive symptoms. Conclusion : As living with children has been traditionally considered an ideal living arrangement for older parents in South Korea, it has been believed that this living arrangement is the most beneficial for psychological well-being of older parents. However, our results suggest that the effects of living arrangements on psychological well-being vary depending on age cohort and children's marital status. Keywords : intergenerational living arrangements, psychological well-being, age cohort differences

PP25 S-295

PROMOTING INTERGENERATIONAL RELATIONS IN FAMILIES AND IN COMMUNITY: A PROPOSED THEORY

Vera ROOS, Erica DE LANGE (*African Unit for Transdisciplinary Health Research, North-West University, South Africa*)

Introduction : Researchers' attempts to focus attention on the importance of relationships to explain intergenerational relations as well as to promote intergenerational solidarity, provide little insight to explain the relational nature of intergenerational relationships. The aims of this presentation are to describe intergenerational interactions and to propose a relational theory to explain and promote intergenerational relations in families and communities. Method : The systems theory as well as the interactional approach suggested by Beukes, Roos and Vorster (2012) will be applied to 5 case studies. Data in the case studies were obtained by applying the Mmogo-method® (Roos, 2008; 2012) as well as the Intergenerational Reflecting Group Technique (Roos, 2011) and analysed by using visual- as well as thematic analysis. Results : The older generation (people 60 years and older) define their relationships with the previous generation (including their ancestors) and with the younger generation (people 18 years and older) as complementary relationships. The relational definition is challenged by the younger generation who move towards more control in the relationship. A symmetrical struggle between the older and the younger generation emerges. Conclusion : The preferred style of interaction between the two generations that restrain effective intergenerational relationships will be discussed and illustrated with examples from the case studies. Recommendations for appropriate intergenerational interventions will be made as well as suggestions for the development of a relational theory. Keywords : intergenerational relations, families, community

PP25 S-296

INTERGENERATIONAL EXCHANGE AMONG THE OLDEST OLD IN SWEDEN

Marie ERNSTHBRAVELL¹, Magnus JEGERMALM¹, Stephen H. ZARIT², Eleonor FRANSSON³ (*1. Institute of Gerontology, Jonkoping University, School of Health Sciences, Sweden; 2. Department of Human Development and Family Studies, Penn State University, USA; 3. Department of Natural Science and Biomedicine, Jonkoping University, School of Health Sciences, Sweden*)

Introduction : Despite the comprehensive Swedish welfare system, civic participation among elderly is extensive. However, studies on the oldest old mainly analyse them as recipients, not as helpgivers. Aim: This study examines intergenerational exchanges of different types of support in a sample of the oldest old. Method : Data are from the OCTO2-study, a population-based sample of 171 women and 156 men, 75-90 years old. Using the Intergenerational Support Scale (ISS), participants rated how often they received and gave different kinds of support to family. Those who estimated a frequency of receiving and/or giving support more than once a month were considered as receivers and/or givers of support. Descriptive statistics and logistic regression analyses were performed. Results : Twenty percent of the sample received and 19% gave emotional support, 8% did both; 37% received and 32% gave practical support, 15% did both; <1% received and 16% gave financial support, <1% did both. Most exchanges were between the respondents and their children. Respondents received significantly more practical support from their sons and significantly more emotional support from their daughters. Respondents mainly gave, rather than received; financial support, significantly more to grandchildren, and emotional support, mostly to daughters and grandchildren. The regressions showed that younger age was associated with giving practical support and older age with receiving practical support. Lower quality of life was associated with receiving more practical and emotional support. Conclusion : The oldest old are an overlooked resource in society that likely are an important force in the creation of social capital. Keywords : Oldest-old, intergenerational, exchange

PP25 S-297

THE VARIATION AMONG REGIONAL DIFFERENCES IN THE INSTRUMENTAL ACTIVITIES OF DAILY LIVING

Seungwon JEONG¹, Katsunori KONDO², Kayo SUZUKI¹, Chiyoe MURATA¹, Tami SAITO¹, Takao SUZUKI¹ (*1. Center for Gerontology and Social Science, National Center for Geriatrics and Gerontology, Japan; 2. Center for Well-being and Society, Nihon Fukushi University, Japan*)

Introduction : We studied the regional differences and the variables associated with the occurrence of dementia as regards the defined limitation of instrumental activities of daily living (IADL). Method : We analyzed the data obtained from Japan Gerontological Evaluation Study (JAGES) conducted between August 2010 and May 2011 for 65,171 people who were not eligible for nursing care in 27 municipalities. In logistic regression models, the dependent variable was a dichotomized score on a scale of IADL. Maximal scores (5 points) were contrasted with all scores below (0-4 points) the maximum. After a much more thorough deliberation on the available data, the researchers had pointed out that the major independent variable was the municipality of residence. Other things considered were individual socio-economic variables, psychosocial variables, and indicators of social environment. Results : The percentage of lower IADL scores among the old-old (over 75 yrs old) varied more than double. For example, 20.6% of men in one municipality had lower IADL scores, while the comparable percentage in a different municipality was 46.4%. The same pattern was also seen among the young-old (65-74 yrs old). Indicators of the social environment were significantly associated with having low IADL scores, after adjustment for individual socio-economic variables, psychosocial variables, indicators of social activities, and regional variables, social network, and social capital. Municipalities with more people with high IADL scores also had better environments. Conclusion : Preventing dementia may require not only individual-level interventions but also a comprehensive approach that encompasses regional environments.

Keywords : IADL, regional environments, JAGES

PP25 S-298

RELATIONSHIP BETWEEN PROVIDING SOCIAL SUPPORT AND LONELINESS AMONG THE MIDDLE AGED AND THE ELDERLY

Aya TOYOSHIMA, Shinichi SATO (*Graduate School of Human Sciences, Osaka University, Japan*)

Introduction : It is thought that loneliness is not synonymous with an objective isolated state and is a psychological factor to become the background of the consequent isolated death of the elderly person. Social support is a factor to loneliness. Lack of social support does not directly contribute to loneliness, but social support can alleviate loneliness. A recent study on social support showed that the act of providing support had the same beneficial effect as that of receiving support. However, few studies on loneliness focus on the provision of social support on the part of the person experiencing loneliness. Hence, the present study investigated how receiving and providing support could reduce loneliness the elderly, and whether reciprocal altruism could adequately explain the above relationships. Method : In Study 1, questionnaires were administered to 326 people aged 50 years and above. We measured loneliness by using the UCLA Loneliness Scale Version 3, mental health, and social support. In Study 2, we intervened people aged 65 and above. Results : The results of Study 1 indicate relationship between loneliness on the one hand and receiving and providing emotional support on the other, even if we assumed inter correlations between receiving and providing emotional support. We plan to report the results of Study 2 in detail in a subsequent paper. Conclusion : These results indicate that the providing social support has an independent effect in reducing loneliness the elderly, apart from the effect mediated by reciprocal altruistic behavior, but also independent effect among the elderly. Keywords : Social support, UCLA Loneliness Scale version 3, Mental health

PP25 S-299

DOES SOCIAL CAPITAL ENHANCE HEALTH RELATED ACTIVITY IN JAPAN?

Daisuke WATANABE (*Center for Asian and Pacific Studies, Seikei University, Japan*)

Introduction : The purpose of this study was to examine the association between individual-level social capital and health related activities (HRA). Method : Data were collected in a cross-sectional survey in 50 municipalities, Japan, in 2012. A systematic sampling approach was used to randomly select 3,000 residents (40-79 years old). A total 1,466 questionnaires were returned (response rate: 49.6%). 870 complete cases were only used for analyzing. HRA were assessed by 10 items about health maintenance and improvement. Individual-level social capital were assessed by 3 items inquiring about general trust of others in society (cognitive social capital), social participations in 4 different groups, which further distinguished between bonding and bridging social capital (bonding and bridging social capital), and position generator and 3 social support networks (network dimension of bridging social capital). Multiple linear regressions was used to determine the relationship between HRA as outcome variables, individual-level social capital as explanatory variables, and other variables (i.e. sex, age, years of education, equivalent household income, marriage, and work) as control variables. Results : Among total participants, average of number of HRA was 5.90 ± 2.38 . Higher general trust and emotional support network were associated with a significantly positive coefficient of HRA. Position generator and bridging social capital of social

participation to local community group have interaction effects between sex and the variables on HRA. Conclusion : Cognitive social capital and emotional support network have positive effect on HRA. Effect of bridging social capital on HRA varied according to sex. However, bonding social capital was not associated with HRA. Keywords : social capital, health related activity (HRA), social participation

PP25 S-300

SOCIAL NETWORKS AND WELL-BEING AMONG OLDER JAPANESE: AGE AND GENDER VARIATIONS

Erika KOBAYASHI¹, Taro FUKAYA¹, Yoko SUGIHARA², Hiroko AKIYAMA³, Jersey LIANG⁴ (*1. Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology, Japan; 2. Human Care Research Team, Tokyo Metropolitan Institute of Gerontology, Japan; 3. Institute of Gerontology, University of Tokyo, Japan; 4. School of Public Health, University of Michigan, USA*)

Introduction : This research examines the relative importance of four types of social networks (i.e., spouse, contact with children, contact with friends and neighbors, and social participation/volunteer activities) on psychological well-being (WB), and how these linkages vary across age and gender. Method : Data came from a national sample of older adults in Japan (N=3,482) in 1999. WB was measured by life satisfaction and depressive symptoms. Structural equation models were used to evaluate the effects of social networks on each WB in conjunction with those of employment, financial status, and health conditions. In addition, similarities and differences between young-old (63-74 years old) and old-old (75+ years old) men and women were assessed. Results : The association between being married and both WB was stronger among the young-old than the old-old, whereas the effect of contacts with children was greater among the old-old. Among the young-old, the effects of being married and social participation on life satisfaction were greater for male than female, but contacts with friends and neighbors were more important for female than male. Conclusion : The effects of social networks on WB vary across age and gender. Further research is needed to ascertain whether age differences result from aging and/or cohort variations. Keywords : life satisfaction, informal network, social participation

PP25 S-301

AGEING IN FEAR: THE CHALLENGE OF SECURITY IN LATER LIFE

Gary PRITCHARD, Katie BRITAIN (*Institute of Health and Society, Newcastle University, United Kingdom*)

Introduction : Many older people are incredibly worried about being a victim of crime and this paper offers a sociologically grounded critique of currently available crime prevention technology designed specifically for this age group. In particular, we question their effectiveness both at reducing crime and fear of it, which we regard as a greater social ill than crime itself. We further suggest that these devices often work to harm the wellbeing of older individuals by being overly invasive and exacerbating a sense of social isolation. Method : Extensive literature review, interviews (n=10) and focus groups (n=5). Results : Taking into account the sources of older people's fear of crime, we propose a research agenda that develops solutions that are less responsive-driven and instead work to improve information flows, foster social capital and encourage community engagement. Conclusion : Technology alone cannot be the answer to the problem of older people's fear of crime. On occasions, the very opposite can be true. Rather than responding directly to the fear as it is propagated by the media and consumer security technologies, we have argued that it

is better to tackle the causes of this fear and through this understanding have tentatively put forward three challenges for HCI and design research. These suggestions do not directly tackle crime and instead work to alleviate other social harms; like media disproportionality, low levels of social interaction and ageist assumptions. In tackling these issues, we reason that overall fear of crime and the associated social ills that accompany it. Keywords : Crime; Fear; Technology

PP25 S-302

THE COMMUNITY RELATIONSHIPS BEYOND HOUSEHOLDS BASED ON TEA PRODUCTION IN MOUNTAIN VILLAGES IN CENTRAL JAPAN

Hiroko SATO (*School of Human Science and Environment, University of Hyogo, Japan*)

Introduction : Many of Japanese villages in mountainous areas are facing depopulation, aging of the local farmers and lack of successors. Method : Three panel studies were conducted in 1982, 1993 and 2005 to clarify the change in the family structure of mountain villages. Also, a case study in 2012 was carried out on 22 females aged 65 or older in two of the villages previously studied. Results : In the 1982 survey, 72.3% of the households were extended families-either three-generation or four-generation households-, and husband and wife only households made up only a mere 2.4%. In contrast, however, in 2005 three-generation households made up less than 50% of the total, and the rate of husband-wife only households rapidly increased to 18.2%. The villages have the production of the best green tea in Japan. The elder farmers of these villages produce green tea with the “same goal to produce green tea of best quality”. They also share “the awareness of the competition of tea quality” and “the spirit of the best tea producers”. Conclusion : The villages have the function of “giving aids on farm work” and there is a tea making factory that is operated by the qualified farmers. When an elderly grows tea alone because his/her partner is too ill or old to work, the farmer does not have to provide workforce to the tea making factory. This system plays an important role in supporting the households lacking “sufficient workforce”. However, this system cannot fully function without sufficient number of successors. Keywords : community relationships, mountain village, Japane

PP25 S-303

THE POTENTIAL AND ISSUES WITH PREVENTING ISOLATION AMONG ELDERLY PEOPLE IN URBAN AREAS USING ICT: EXPLORATORY ANALYSIS OF INTERVIEW DATA THROUGH TEXT MINING

Hikomichi ARAI¹, Takako SODEI², Shino SAWAOKA³, Yasuko MORI⁴, Akio SUZUKI⁵ (*1. Dept. of Sciology, Komazawa University, Japan; 2. Dept. of Life Sciences, Ochanomizu University, Japan; 3. Dept. of Research, The Dia Foundation for Research on Ageing Societies, Japan; 4. Graduate School of Humanities and Sciences, Ochanomizu University, Japan; 5. Dept. of Research, Japan Association for Age-free Society, Japan*)

Introduction : A major issue facing Japanese society is the increasing number of elderly people living alone in urban areas. Elderly people who live alone are at the risk of losing their purpose in life, feeling insecurity in life, and dying alone. In recent years, ICT has drawn attention as a tool for elderly people to actively build and maintain social relationships. Given that it facilitates the obtainment, transmission, and sharing of information, ICT has the potential to empower elderly people and to strengthen community ties. This research, then, aims to shed light on the potential for preventing isolation among elderly people in urban areas using ICT and the issues

that this might entail. Method : This study consisted of “participatory action research.” The ICT terminal used in this study consisted of a touch panel-type PC equipped with “VoViT,” a communication support system aimed for elderly people. The verbatim records were obtained from in-depth interviews and group interviews that were subjected to exploratory analysis by using the text mining method. Results : The research results made it possible to visualize the potential for preventing isolation among elderly people in urban areas using ICT and the issues that this might entail. Conclusion : By using ICT, it has the potential to create protective networks through liberal ties and to strengthen protective networks through supporters. In addition, the future use of this might entail the following issues: (1) having to deal with the diverse characteristics of users and (2) having to provide training to supporters. Keywords : ICT, preventing isolation, text mining

PP25 S-304

THE RISK OF SUICIDAL IDEATION IN ELDERLY WHO USE 24H SUICIDE PREVENTION HOTLINE IN TAIWAN

Jui-Yun TSAI¹, Meng-Tzu HOU² (*1 Department of Medical Sociology and Social Work, Kaohsiung Medical University / Department of social services, Shin Kong Wu Ho-Su Memorial Hospital, Taiwan; 2 Exercise and Health Scicence Research Center, Nation Yang-Ming University, Taiwan*)

Introduction : The rapid growth rate of elderly population, on the surface appears to be a symbol of social progress, and it's to be proud of the achievements. But it also reflects the urgency and necessary for elderly issues, especially that highest suicide rates among elderly in almost every country now. However, everyone will grow old, but not every elderly in the risk. This research will focus on the risk of suicidal ideation in elderly. Method : The study used secondary data analysis from Taiwan. In 2011, we choose age over 60 as the subjects who used 24h prevention hotline and recorded that included base-line characteristics: gender, marital status, education level, mental health status, substance abuse, medical treatment way, violence situations, source of income etc., and the main problem they complained: marital, family, physical ailments, debt, economic difficulties, living alone, question of retirement etc., then took down the information whether they had suicidal ideation. Results : There were 495 subjects (male: 211, female: 284) and 68 had suicidal ideation. Using multiple logistic regression models, then control the demographic variables, the independent factors for suicidal ideation were listed as follows: education level: senior high(OR: 0.170, 95% CI: 0.031-0.550), living state: live with others(OR: 0.190, 95% CI: 0.067-0.539), mental condition: normal(OR: 0.249, 95% CI: 0.087-0.711), economic difficult (OR: 6.305, 95% CI: 1.127-35.273). Conclusion : Our findings point toward the elderly who has suicidal ideation, the main problem of risk factor was economic problem. We hope the finding can remind the government that resources should be focused on the most vulnerable groups, and not only to build social networks, offer social support of the elderly, more necessary is to construct the social welfare, to give the basic quality of life for the elderly. Sustained efforts by many sectors of society are often necessary to gain political assistance to tackle the economic problem. Keywords : Suicidal ideation, Suicide Prevention Hotline, Economic problem

PP25 S-305

THE INFLUENCE OF WORKER IDENTITY ON LIFE SATISFACTION: THE MODERATING EFFECT OF WORKER CENTRALITY

Jun NAKAHARA (*Graduate School of Human Sciences, Osaka*)

University, Japan)

Introduction : A previous study found support for the following hypothesis, guided by the activity theory (AT) of aging and symbolic interaction theory (SIT): The activities of elderly people at Japan's Silver Human Resource Centers had a positive impact on their life satisfaction, by developing positive worker identity and high self-esteem. However, this model did not examine the potentially moderating effect of worker centrality. Thus, we propose a model for examining the moderating effect of worker centrality on the relationships between worker identity and self-esteem or life satisfaction. **Method :** For this purpose, a survey was administered to 279 elderly people from the Silver Human Resource Center of I city. To test our hypothesis, we estimated two regression models for self-esteem and life satisfaction, using the interaction effect between worker centrality and worker identity as an independent variable. **Results :** Although we found that worker identity had a significant positive association with self-esteem, there was no effect of the interaction between worker centrality and worker identity on self-esteem. However, this interaction was significantly related to life satisfaction. **Conclusion :** These results suggested that life satisfaction is positively affected by worker identity when elderly people have a self-concept centering on their role as a worker. On the other hand, their self-esteem can be influenced regardless of whether they have high worker centrality. **Keywords :** worker identity, worker centrality, life satisfaction

PP25 S-306

THE RELATIONSHIP BETWEEN SOCIAL CAPITAL AND RESIDENCY LENGTHS OF ELDERLY PEOPLE INHABITING ISLANDS

Kaori KINOSHITA, Sachiko KOJO (*Nursing, Niimi College, Japan*)

Introduction : The objective of this research is to reveal the relationship between social capital and residency length of elderly people inhabiting islands. **Method :** The population of Town B in Island A in western Japan is 2,327 people in which aged people account for 39.8%. A questionnaire was conducted targeting 751 inhabitants over the age of 65 about their attributes, residency lengths and six points regarding social capital. **Results :** Of the 423 respondents, the average age was 75.9, 42.1% was males and 85.3% had maintained their residency over 31 years. Those who had been living in the town for less than 30 years showed significantly less affection and general trust ($p=0.010, 0.001$). Also, those who had maintained their residency in the island for their entire life showed significantly more affection toward the region compared with people who had either lived outside the island or moved in following their marriage ($p=0.002$). There was no significant difference in structural social capital, including the depth and number of social relationships. **Conclusion :** The research revealed that living in islands with high percentage of aged population for a long time increases elderly people's cognitive social capital. **Keywords :** Social Capital, Residency Lengths, Inhabiting Islands

PP25 S-307

ELDERLY IN JAPAN; IMPACT OF DOG WALKING, COMMUNICATION AND COMMUNITY ACTIVITIES

Kazumi KIKUCHI (*Dept. of Occupational Therapy, Faculty of Medical Health and Science, Teikyo Heisei University, Japan*)

Introduction : Recently, elderly Japanese seem isolated within the community. Pet ownership leads to interaction with others. Therefore, we wanted to compare the differences between community interaction

when people are "dog walking" and "not dog walking". **Method :** By using an internet survey in March 2012, we targeted a specific group of retired dog owners, and gathered information using a questionnaire. We focused on demographics as well as friendships in dog related activities. We also inquired about their reaction to various other people while "dog walking" and "not dog walking". **Results :** 380 mostly male dog owners throughout Japan answered all questions. Around 80% of them walked their dog daily in the community. Using SPSS Statistics for Survey 17.0, we found categorical differences ($p<0.05^*$, $p<0.01^{**}$) between "dog walking" and "not dog walking". "Dog walking" created the opportunity for dog owners to interact with others**, even strangers**. When dog owners were not walking their dogs, they avoided interaction with people*, even acquaintances*. **Conclusion :** Dog walking is persuading owners to be more extroverted, and participate in relationships with others. Through dog walking, people have a better chance to get to know someone in the community compared with non-dog walking activities. It is suggested that activities related to "dog walking" provide more social opportunities and longer lasting relationships for the elderly in the community. For Japanese, especially the elderly, the social structure is somewhat introverted, so dog walking activities overcome these obstacles and act as an effective communication tool. **Keywords :** community, activity, Dog Walking

PP25 S-308

PSYCHOLOGICAL, HEALTH AND SOCIAL PREDICTORS OF SOCIAL AND EMOTIONAL LONELINESS IN OLDER PEOPLE

Lena DAHLBERG¹, Kevin J. MCKEE² (*1. School of Health and Social Studies, Dalarna University, & Aging Research Center, Karolinska Institutet/Stockholm University, Sweden; 2. School of Health and Social Studies, Dalarna University, Sweden*)

Introduction : Loneliness in old age has been shown to have negative outcomes such as mortality, physical and mental health problems, and reduced activity levels. To reduce loneliness in older people, factors associated with loneliness and open to intervention must be identified. **Method :** Older people (aged 65+, N=1255) from the United Kingdom received a questionnaire-based interview (response rate: 66.0%). The questionnaire covered items on demographic, psychological, health and social characteristics. It also contained the de Jong-Gierveld Loneliness Scale (de Jong-Gierveld & Kamphuis, 1985), measuring Emotional and Social Loneliness. **Results :** Eight percent of the respondents were found to be severely or very severely lonely, while another 38% were moderately lonely. Being female, widowed, low well-being, low self-esteem, high activity restriction, and high concern about personal finances were significant predictors of Emotional Loneliness ($F(17, 976)=25.59, R^2=.31, p<.001$). Being female, widowed, low well-being, low self-esteem, high concern about personal finances, low contact with family, low contact with friends, low engagement, and low perceived community integration were significant predictors of Social Loneliness ($F(17, 982)=19.63, R^2=.25, p<.001$). **Conclusion :** This study provides empirical evidence for conceptual separation of emotional and social loneliness. Consequently, different targets for intervention are required in order to reduce emotional and social loneliness respectively, although psychological intervention has the potential to reduce both. **Keywords :** Loneliness

PP25 S-309

RESEARCH REGARDING THE USE OF ELDERLY MONITORING SENSORS AS A SUPPORT TOOL FOR THOSE LIVING ALONE: ATTEMPT TO DEVELOP A MONTHLY

REPORT SERVICE FOR THE COMMUNITY CARE CENTRES

Masami HASEBE¹, Kumiko NONAKA¹, Takashi KOIKE¹, Tarou FUKAYA¹, Reiko WATANABE², Shouzoh UEKI³, Hiroto YOSHIDA³, Naoko ARAYAMA³, Shuichiro WATANABE⁴, Tomoko KAMEI², Masumi MATSUMOTO⁵, Chiaki TANAKA⁶, Takayuki HOSOI⁷, Yoshinori FUJIWARA¹ (1. Research Team for Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology, Japan; 2. St. Luke's College of Nursing, Japan; 3. Faculty of Medical Science & Welfare, Tohoku Bunka Gakuen University, Japan; 4. Graduate School of Gerontology, J. F. Oberlin University, Japan; 5. Department of Architecture and Building Engineering, Tokyo Metropolitan University, Japan; 6. Division of Integrated Sciences, J. F. Oberlin University, Japan; 7. Department of Clinical Research and Gerontology, National Center for Geriatrics and Gerontology, Japan)

Introduction : The number of elderly living alone in Japan has been rising dramatically in recent years. Additionally, elderly isolation has become an increasingly important social issue. The monitoring sensor is one variety of 'Smart home' (monitoring system using information communication technology) and does not require active correspondence to the elderly. We developed a monthly report on the monitoring sensor. The monthly reports, which form the basis for the analysis in this paper, are reports compiled of data gathered on a monthly basis regarding the elderly's activity. These reports can be sent to community care centres or the elderly's family. The aim of the reports, through analysis of activity levels and lifestyle rhythms, allows for early detection of diminished mental or physical function or illness, and the provision of necessary support. Method : The contents of the monthly reports are analysed. Also included are interviews with community care centre staff in relation to the current status and conditions of the monthly reports. Results : Interviews with staff showed that information about approximate sleeping and waking times and when the elderly left the house was useful. Also, monthly reports, in some cases it was possible to infer the cause of illness. Conclusion : The monthly reports, if linked with daily support, are a useful tool for elderly support. In the future, revision of the format and content is important to make it easier for community care centres to practically apply the information. Keywords : monitoring sensor, elderly living alone, monthly report service

PP25 S-310

SOCIAL SUPPORT AND INTENTION TO CONTINUE TO LIVE IN THE COMMUNITY: A STUDY IN THE DEPOPULATED AREA IN JAPAN

Masami NAKATA¹, Tomoo NAKATA² (1. Graduate School of Human-Environment Studies, Kyusyu University, Japan; 2. Department of Social Policy, Hokusei Gakuen University, Japan)

Introduction : The aim of this study is to examine the relationship between social support and their intention to continue to live their community among Japanese elderly people living in the depopulated areas. Method : This study employed the data collected in 2012 in A Town in Hokkaido prefecture, Japan. Respondent were men and women who was living alone and aged 65-years-old and older (N=51). The dependent variable was whether respondent want to continue to live the community they are living at the survey was conducted. And social support, age, gender and their education level were used as independent variables. Respondents were asked six items concerning social support for/from others. In this study, the authors tried to reveal the effect of amount of social support, and the offering and receiving targets of social support. Results : The results using multinomial logit models are as follow; 1) bringing up the concerns foster the intention

to continue to live, on the other side, looking after in bad condition, asking advise, and asking around the house decrease that. 2) Person who listens to the other residents' concern does not want to live further. 3) Delivering and receiving social support from friends reduce the wishes to continue to live the community. Conclusion : More data from different respondent in this town will be collected next year and impact of characteristic of community would be examined in the future. Keywords : Social Support , The Depopulated Area

PP25 S-311

RURAL ISOLATION AND BEFRIENDING ACTIVITIES IN A RURAL MOUNTAINOUS AREA OF JAPAN

Masashige SAITO¹, Kinya FUJITA², Takayuki HIRANO¹ (1. Social Welfare, Nihon Fukushi University, Japan; 2. Social Services Policy Evaluation Center, Nihon Fukushi University, Japan)

Introduction : To evaluate the process and outcomes of home visiting and befriending activities among the aged living in a rural mountainous area, we performed dyad data analysis and ecological analysis of Hidaka Village, Kochi Prefecture, Japan. Method : Information on 355 and 513 dyadic relationships in 2011 and 2012, respectively, was obtained from the data management system developed by Nihon Fukushi University. We gathered additional information using a mail survey in 2009 and 2012 about all older people who lived alone (n=167) and from some participants who befriended these older people (n=109). Results : Major findings included: 1) visiting and befriending activities were expanded in this area and the number of participants who befriended older people who lived alone increased from 1.96 in 2011 to 2.58 in 2012; 2) dyad data revealed that friendships were not limited to same-gender pairs (p=.416), and there was no significant correlation with age (r=.029); and 3) in the neighborhood where many people participated in these befriending activities, the proportion of older people whose frequency of intimate contact was less than once a week was low, and the number of extremely isolated older people was also low. Conclusion : The results seem to indicate that neighborhood home visiting and befriending activities were performed without regard to gender or age for aged persons. Our results suggest that promotion of befriending activities within the neighborhood contributes to the reduction of socially isolated older people. Keywords : social isolation, befriending activity, dyad data

PP25 S-312

COMPARISON OF ANTONOVSKY'S SOC SCALE AND BALTES'S SOC SCALE

Ryoko OKAMI¹, Mariko NIIKURA², Tomiko TAKEUCHI² (1. Nursing Department, The University of Tokyo Hospital, Japan; 2. Gerontological Nursing, Graduate School of Medicine and Pharmaceutical Sciences for Research, University of Toyama, Japan)

Introduction : Antonovsky originally proposed that sense of coherence (Antonovsky's SOC) referred to an ability to cope with stress and maintain mental health. However, Baltes proposed a model of adaptive development, the model of selection, optimization, and compensation (Baltes's SOC). Once the differences between these scales are clarified, both scales can be used to evaluate the adaptation of the elderly. Method : Elderly people over the age of 60 who were members of clubs for the elderly in X prefecture, Japan, were sent a self-administered anonymous questionnaire between May and August 2011. Among the 575 responses received (response rate, 57.5%), 477 complete responses were subjected to analysis. The protocol of this study was approved by the ethics committee of Toyama University. Results : No correlation was observed between Baltes's SOC scale

total scores and Antonovsky's SOC scale total scores. However, a weak correlation ($r = 0.372$) was observed between Baltes's SOC scale total scores and Antonovsky's SOC subscale scores of "meaningfulness". Both scales were found to be related to physical health, exercise, balanced nutrition, participation in social events, and participation in hobbies. In addition, Antonovsky's SOC scale was associated with smoking and drinking. Conclusion : Antonovsky's SOC scale was more closely related to health behaviors than Baltes's SOC scale. On the other hand, the power to live positively and participate in hobbies and social activities could be measured accurately by both scales. Although these two scales differ to a certain extent, they are both effective in helping to maintain mental health in the elderly. Keywords : SOC, scale, elderly

PP25 S-313

SOCIAL SUPPORT PROVIDED BY FAMILY: CASE STUDY OF THE ELDERLY WHO HAVE A BAD RELATIONSHIP WITH THEIR FAMILY

Sachiko TAKASE (*Japan Society for the Promotion of Science, Japan*)

Introduction : The purpose of this paper is to examine provided support by family for the elderly who have a bad relationship with their family. Method : Case study was selected as a qualitative research method. Twenty-two cases of the elderly living alone in Tokyo were explored from 2008 to 2009. All of them were clients of comprehensive community support centers. Data was collected by document analysis for case records taken by social workers and interviews with social workers and the clients. Results : Among 22 cases, 14 cases had some kind of trouble with their family. In seven cases the elderly clients had a good family relationship but felt lonely, because their family seldom contacted the clients. In another seven cases, the elderly clients had a bad relationship with their family. Analyzing the 7 cases in detail, the clients were provided more than a little support by their family despite a bad family relationship. Most of the support was instrumental support. Conclusion : It is said that the elderly prefer formal support in instrumental support and informal support in emotional support. In case of the elderly in a bad family relationship, however, it seems that instrumental support is easier to provide than emotional support. This fact represents the specialty of family relationship. When a relationship breaks down, other informal support resources, such as friends and neighborhood, never provide emotional support as well as instrumental support. Family provide support even though the relationship become worse. Keywords : social support, a bad family relationship, case study

PP25 S-314

THE INFLUENCE OF SOCIAL SUPPORT ON THE RELATIONSHIP BETWEEN PERSONALITY AND DEPRESSION IN ELDER HEMODIALYSIS PATIENTS

Shu-Chuan Jennifer YEH¹, Kuo-Hsu YUAN², Ying-Ying LO³, Shih-Hua Sarah CHEN⁴ (*1. Department of Business Management & Institute of Health Care Management, National Sun Yat-sen University, Taiwan; 2. Department of Business Management, National Sun Yat-sen University, Taiwan; 3. Department of Healthcare Administration, I-Shou University, Taiwan; 4. College of LAS, University of Illinois at Urbana-Champaign, USA*)

Introduction : Under enormous restrictions and changes from end-of-stage diseases and aging, elder patients are prone to feel depressed. The purpose of this study was to examine the possible effects of social support on the relationship between personality and depression for elderly patients with hemodialysis. Method : A total of 811

hemodialysis patients at the age of 60 and older were interviewed. Big Five Inventory, Social Provision Scale, and Beck Depression Inventory were measured. We used BDI scores ≥ 9 as a cutoff level to classify the participants into depressed and non-depressed groups. Descriptive analyses and hierarchical multiple regression were performed. Results : Comparing with non-depressed group ($n=314$), the patients in the depressed group ($n=497$) perceived less social support and were less extraverted, agreeable, conscientious, open to experience, and more neurotic. When social support is high, the severity of depressive symptoms would be mitigated among high neurotic patients ($\beta = -.122, p = .007$). We further found that social support could mediate the association between agreeableness and conscientiousness and depression after controlling for demographic and health-related variables. The indirect paths of agreeableness and conscientiousness did exert significant effects (Sobel $t = -5.829, p < .001$; Sobel $t = -5.590, p < .001$, respectively). Conclusion : Social support was a moderator to buffer the relationship between neurosis and depression, while it played a mediating effect when patients high in agreeableness or high in conscientiousness. Health care providers should understand patients' personality traits and focus on strategies that can improve how patients perceive social support. Keywords : personality, depression, social support

PP25 S-315

SOCIAL SUPPORT, COPING BEHAVIORS, AND HEALTH STATUS IN OLDER PERSONS WITH KNEE OSTEOARTHRITIS

Somma VANAVANANT¹, Suparb AREE-UE² (*1. Ramathibodi School of Nursing, Faculty of Medicine Ramathibodi, Mahidol University, Thailand; 2. Ramathibodi School of Nursing, Mahidol University, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Thailand*)

Introduction : The aims of this descriptive study were to describe social support, coping behaviors, and health status among older Thais with knee osteoarthritis and to examine the relationship between social support, coping behaviors, and health status among those persons. Method : Participants were recruited from catchment areas of Ramathibodi Hospital, Bangkok, Thailand. The sample consisted of 112 persons with the mean age of 60.63 (SD = 9.18 years). The data were collected by using questionnaires. Statistical analysis was performed using descriptive statistics and Pearson's product moment correlation coefficient. Results : Findings revealed that the highest mean score of social support was positive social interaction subscale followed by affectionate support. Regarding coping behaviors, participants rated the highest mean score on the rest subscale followed by the active and information seeking subscale, but the lowest mean score was found in avoidant subscale. The participants perceived moderate level of health status. In relation to an association among study variables, social support had a positive relationship to social dimension of perceived health status ($r = .35; p < .01$), and to coping behaviors ($r = .41; p < .01$). A positive relationship was also found between coping behaviors and perceived health status ($r = .21; p < .05$). Conclusion : We demonstrate a positive correlation between social support and coping behaviors and between coping behaviors and perceived health status. The intervention aims at promoting coping behavior appropriately and encouraging social support by means of support group may increase health status in persons with knee osteoarthritis. Keywords : social support; coping behaviors; knee osteoarthritis

PP25 S-316

THE INFLUENCE OF TECHNOLOGICAL PROGRESS ON

ELDER'S DAILY LIFE

Sonia Amps FUENTES¹, Maria Ligia PAGENOTTO², Flaminia LUDOVICI², Elisabeth F. MERCADANTE², Ceneide Oliveira CERVENY¹ (1. *Clinical Psychology, Pontificia Universidade Catolica de Sao Paulo, Brazil*; 2. *Gerontology, Pontificia Universidade Catolica de Sao Paulo, Brazil*)

Introduction : The last decade was marked by a boom in Information and Communication Technologies (ICT), exposing the elder community (60 years +) to new technologies. However, the elderly are commonly depicted as technophobic. This characterization of the elderly might be related to the fact that the elderly are the age group with the lowest ratio of computer and Internet usage, also to preconception or a stereotype. To empower elderly people's usage of ICT we need to look at their patterns of ICT usage, and perceived benefits. Method : This study, explores the influence that technological progress can have on elders. More specifically it investigates whether 1) the use of computers and the recent interactive portable apparatus contribute to the physical wellbeing of the elderly, 2) the incorporation of these devices to their daily life reduces their feelings deprivation and/or belonging, and 3) ICT is just another stress factor in their life. To address this we conducted semi-open interviews with 10 elders in Sao Paulo, Brazil and asked: 1) "What is the influence (negative or positive) of ICT in your daily life? Results : 70% of the respondents indicated that CTI positively influences their lives, by facilitating their daily activities, especially those related to the field of written and oral communication. Negative influences of CTI were also highlighted, 20% of elders indicated that the use of CTI makes them feel incapacitated and intimidated, and 10% neutral. Conclusion : In general elders, recognize some of the issues they have using CTI and are curious about their potential advantages. Keywords : technological progress, impact , elder's daily life

PP25 S-317

EXPLORING OLDER PEOPLE'S SUPPORT NETWORKS: OPPORTUNITIES FOR HEALTH CARE

Suzanne BYERS (*Palliative and Supportive Services, Flinders University, Australia*)

Introduction : The positive effect of strong social networks on older people's health, especially their psychological health, has been much evinced and discussed. However, while extensive research has focused on exploring the relationships between people most at risk of poorer health and reduced mortality by the 'type' of networks they belong to, efforts in using a network typology to provide the most appropriate services and tailor interventions across a diverse older population has been more limited. Method : A comprehensive search of the literature was undertaken focusing on studies that were specific to or included aspects of support networks or network typology in older people. The literature search utilised (i) electronic databases including AgeLine, Cambridge Journals Online, ProQuest Central, Expanded Academic ASAP (Gale), SAGE Journals Online, Journals@Ovid, Oxford University Press Journals, Infomit Search and Google Scholar (ii) broad handsearch back forty years to catch seminal papers and published works. Results : Compelling outcomes for both clients and service providers exist when network typing has been applied in a practice setting. The benefits to the gerontological practitioner are highlighted. Conclusion : Network typology shows significant potential for health service planning and service provision. The extent to which this can be utilised in differing populations has yet to be explored. This analysis of the research literature offers key avenues for research to examine the utility of a network typology in Australian rural populations. This literature analysis is the first component of my

current research. Keywords : Older people, Network Typology, Support networks

PP25 S-318

PREVENTING SOCIAL ISOLATION OF THE ELDERLY BY USING ICT

Takako SODEI¹, Yasuko MORI², Hiromichi ARAI³, Shino SAWAOKA⁴, Akio SUZUKI⁵ (1. *Dept. of Life Sciences, Ochanomizu University, Japan*; 2. *Graduate School of Humanities and Sciences, Ochanomizu University, Japan*; 3. *Dept. of Sociology, Komazawa University, Japan*; 4. *Dept. of Research, the Dia Foundation for Research on Ageing Societies, Japan*; 5. *Dept. of Research, Japan Association for Age-free Society, Japan*)

Introduction : Recently more and more older people are living alone and often isolated. sometimes they are found dead after several weeks or months without being noticed by their neighbors. ICT can be used to prevent social isolation of the elderly. Method : A simple ICT machine which is specially designed for those who have difficulty in using a mouse and keyboard was provided to each house of 9 monitors (5males and 4females in their 60s~80s) in Tokyo and they were asked to try email and skype for three months. Five technical supporters helped to solve technical problems and two communication supporters encouraged the elderly not to drop out. In order to find out the effects and problems of this social experimnt, all of them were interviewed several times. Results : 1. ICT contacts easily changed to face-to-face contact especially among females. 2. Based on our findings, we have developed a hypothetical model to prevent social isolation of the elderly by using ICT which can be applicable to other communities. 3. Technical supporters as well as communication supporters are quite important for the elderly to keep using ICT. We started a program to train supporters who acquire both abilities. Conclusion : ICT seems to be quite promising to expand and strengthen the social network of the elderly living alone who have few friends in their community and also the frail elderly who have difficulty in going out. Keywords : social isolation, social network, ICT

PP25 S-319

SUPPORT ACTIVITIES FOR THE ELDERLY BY RESIDENTS IN AGED HOUSING COMPLEXES

Takashi KOIKE¹, Toshiki NISHIMORI², Kyoko HORI³, Yoshiko FUJIWARA², Kyeongah LEE², Takatoshi ANDO³ (1. *Research Team for Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology, Japan*; 2. *Graduate School of Enviroment and Information Sciences, Yokohama National University, Japan*; 3. *College of Education and Human Sciences, Yokohama National University, Japan*)

Introduction : During the period of rapid economic growth in Japan (1950s -1970s), many workers from the countryside moved to urban areas. Due to this, there was a lack of residential homes for such workers. In order to tackle this issue, many housing complexes were built. Today, after 40 to 60 years many of their residents have become elderly. In many of these housing complexes, the proportion of elderly residents is higher than the national average, reflective of the future of Japanese society. Recently, many residents in housing complexes have started to actively support elderly residents. Method : In this study interviews were conducted with residents that are providing support for the elderly in nine housing complexes. We asked them about the circumstances and motives for their activities. The housing complexes in which the interviews were conducted, all had an aging population rate of over 30%. Results : The interviews revealed that in many cases,

members of resident councils that were already active in community service were motivated to help the elderly as a result of external encouragement, or from strong feeling for the hardships that the elderly encounter, which may result in solitary deaths. Conclusion : There are many lessons that we can learn from studying how elderly support activities started and how they have developed in housing complexes with aging populations. Results indicated that to promote elderly support activities in residents, the government would need to provide support and appeal for a community-based support system. Keywords : Aged Housing Complex, Support Activity

PP25 S-320

PREDICTORS OF LONELINESS AMONG ELDERLY MEN AND WOMEN IN JAPAN: RESULTS FROM THE JAPANESE LONGITUDINAL STUDY ON HEALTH IN AN AGED SOCIETY (J-LOHAS)

Tami SAITO-KOKUSHO¹, Tomoko WAKUI², Ichiro KAI³
(1. Department of Social Science, National Center for Geriatrics and Gerontology, Japan; 2. Population, Family and Reproductive Health, Johns Hopkins Bloomberg School of Public Health, USA; 3. Emeritus Professor, The University of Tokyo, Japan)

Introduction : This study aimed to clarify the effects of social relationships, health, and other factors on loneliness in the elderly in Japan by using longitudinal data, examining how these effects differ between elderly men and women. Method : Data were obtained from a two-year self-administered follow-up survey completed by 2,571 people 65 years old or above living in a prefecture located in northern central Japan. Loneliness was assessed with the AOK (Ando, Osada, and Kodama) Loneliness Scale. Social-relationship factors assessed were marital status, cohabitation, social network, social support, participation in social activities, and perceived trust in one's neighbors. Health, socioeconomic variables, age, etc., were also investigated. Generalized linear modeling was conducted to examine the effects of these variables on loneliness scores at the follow-up survey, adjusting for scores at the initial survey. All analyses were conducted for men and women separately. Results : The results showed that AOK scores increased significantly for both men and women during the follow-up period, which indicated that loneliness increased in the two years. In men, loneliness was significantly associated with not living with one's children, no contact with friends, and low perceived trust in neighbors. In women, loneliness was significantly associated with poor economic status, no contact with friends, no instrumental support, and no participation in social activities. Conclusion : The results suggest that the predictors of loneliness should be examined considering the differences in social relationships between men and women. Keywords : loneliness, Japanese elderly people, longitudinal study

PP25 S-321

THE TRAJECTORY OF DISENGAGEMENT AMONG JAPANESE ELDERLY PEOPLE: USING GROUP-BASED TRAJECTORY MODELS

Tomoo NAKATA (Department of Social Policy, Hokusei Gakuin University, Japan)

Introduction : The aim of this study is to examine the differences in the disengagement trajectories and its factors among elderly Japanese people. The word 'disengagement' is used to mean withdrawing from society like 'disengagement theory'. Though every people in their later life are said to disengage, actual figure of the disengagement and its factor have not known yet. In this study, it will be revealed applying latent class growth models using panel data. Method : This study

employed the National Survey of the Japanese Elderly, from wave I (1987) to wave IV (1996) , which was conducted by Michigan University and Tokyo Metropolitan Institute of Gerontology. A number of friends, which is operational definition of the disengagement, was used as a dependent variables and age was independent variables. Education and gender were used as time-stable covariates and occupational and marital status and self-rated health were used as time-dependent covariates. Results : The results of this analysis are as follow; 1) Dividing into four groups was adequate. 2) Those groups showed quite different trajectories. The first group showed almost no friend consistently, the second one decreased step by step, the third one increased with age in dribs, and the fourth one showed a trajectory with sharp decrease. 3) the second group was consisted of female and the second and fourth group were consisted of the highly educated. Conclusion : This results clear up that the processes separate interpopulationally, but the characteristics of the respondents except occupational status do not demonstrate the type of the process. Keywords : Disengagement, Group-Based Trajectory Models

PP25 S-322

CONTACTS WITH OTHERS AND ELDERLY'S HAPPINESS

Yoshiaki TAKAHASHI (JICA Research Institute, Japan International Cooperation Agency, Japan)

Introduction : Human relationship makes us happy. On the other hand, elders now live separately from younger generation in modern society. Younger generation is busy for their own life. Therefore, face-to-face contact is much more difficult for elders. According to a happiness study in Japan, they felt lonely and unhappy more than other age groups. In this circumstance, indirect contact through email and other means may be more important as means of contact. However, in terms of happiness level, does indirect contacts through email and other means make difference from face-to-face contacts? Method : The Quality of Life Survey conducted by the Economic and Social Research Institute of Japan in 2012 included the questions about frequency of direct and indirect contact with spouses, children, brothers and sisters, other relatives and friends. By using its micro-data, the author analyzed if indirect contact makes a difference. Results : As a result, more frequent indirect contact with children and friends, much happier. However, indirect contact with brother and sister and other relatives was not statistically correlated with happiness. This result implies that indirect contact only with children and friends may complement direct contact. Conclusion : Technology and mechanism to promote indirect contact with children and friends easily may make elderly happier. Keywords : contact, happiness, elders

PP25 S-323

CHANGE OF COMMUNITY PEOPLE GATHERING IN TWO YEARS IN A MARGINAL COMMUNITY

Yuichi WATANABE (Social Welfare, Musashino University, Japan)

Introduction : A marginal community is defined as a community in which over 50% of the population are over 65 years old and face difficulty maintaining adequate function of the residents' daily lives. A marginal community lacks the human resources necessary to maintain a healthy standard of living, and people gathering in the community play an important role in maintaining that mutual support. The circumstances surrounding this situation vary year by year. This research aims to reveal changes over time in the gathering of people between 2009 and 2011 in a marginal community. Method : Cross sectional research was conducted repeatedly in 2009 and 2011 through

a questionnaire. The questionnaire was administered to people over 20 years old in a marginal community through visiting all the houses in that community. The data analyzed with a chi-square test focused on the change of community dwellers between 2009 and 2011. Results : "Participating in a tea party with neighbors" for all subjects decreased significantly. Participation in a "Senior citizens' club" in subjects over 65 and "Disaster prevention practice" in all subjects also declined. Conclusion : Although opportunities to gather in the community are needed to maintain mutual support in marginal community, a weakening trend was observed which may lead to a loss of connections among community dwellers. Approaches aiming to reconnect long-standing connections and develop new ones are needed. Keywords : community people gathering, a marginal community

PP25 S-324

THE INFLUENCE OF SOCIAL NETWORKS AND SUPPORTS ON HEALTH: DIFFERENTIAL PATHWAYS FOR OLDER KOREAN AMERICANS AND NON-HISPANIC CAUCASIANS

Haesang JEON, James LUBBEN (*School of Social Work, Boston College, USA*)

Introduction : The purpose of this study is to examine the pathways for different formations of social networks (kin vs. non-kin) and social supports (emotional vs. instrumental), which affect health status (perceived general health & depression symptoms) among older Korean Americans. More specifically, this study explores whether these processes differ by race/ethnicity. Method : Data comes from the Korean-American Elderly: Social Support and Long Term Care Survey. The study includes community-dwelling 221 older Korean Americans and 201 non-Hispanic Caucasians, 65 years and older from Southern California. Path analysis (Structural Equation Modeling) is used for the analysis. Results : Influence of social networks and social supports on health varies depending on group's race/ethnicity. For instance, non-kin network plays a significant role on perceived general health among Korean Americans, while kin-network appears to be a significant predictor for non-Hispanic Caucasians. Emotional support is only a significant predictor for depression symptoms among Korean Americans. Conclusion : This study highlights that the influence of social integration on health varies based on a person's race/ethnicity. Future research should take into account these inherent differences, especially when developing interventions to promote an individual's health. Keywords : cross-cultural study, social network, social support

PP25 S-325

UNDERSTANDING THE RELATIONSHIP OF TYPE D PERSONALITY AND PERCEIVED SOCIAL SUPPORT TO BLOOD PRESSURE, LIPEMIA IN ELDERLY PATIENTS WITH DIABETES

Yixin HU¹, Li FAN¹, Ping MENG¹, Shuangshuang DU², Yanjun LIU³ (*1. Health Care Department, PLA General Hospital, China; 2. Health Care Department, PLA 306 Hospital, China; 3. Endocrine Department, PLA 306 Hospital, China*)

Introduction : We examined the psychometric properties of the Danish version of the Type D Scale (DS14) and the impact of Type D and perceived social support on blood pressure, lipemia in elderly patients with diabetes. Method : Diabetes patients (n=178, age 58.95±13.16 years) completed the DS14 and PSSS Questionnaire. The blood pressure, blood components, blood lipids and glucose was measured. Results : 1. 24.0% of 42/178 patients have Type D personality. Type D personality was present higher women than that in men (29.17% vs 20.39%, P<0.05). Women got higher NA score as

compared with men (r=0.162, p<0.05). Both of SI score and NA score were negatively correlated with age (r=-0.155, p<0.05; r=-0.230, p<0.01). 2. Compared with those with none type D personality, Patients with type D personality have a lower level of systolic pressure blood pressure (123.68±18.43mmHg vs 129.30±15.58mmHg, p<0.05), higher level of total cholesterol (5.14±1.89 vs 4.67±1.04, p<0.05), higher level of C-reactive protein (6.23±2.74 vs 1.83±2.50, p<0.05). 3. NA score was found positively correlated with high blood pressure in diabetes patients (r=0.190, p<0.05). 4. Covariance analysis showed that neither Type D personality nor perceived social support independently influence the systolic pressure. But their synergistic reaction significantly affect the level of systolic pressure (F=2.049, p<0.05). Conclusion : Type D personality and perceived social support were related to blood pressure and lipemia changes in patients with diabetes, which suggests both behavioral and biological vulnerability for development of cardiovascular disorders and diabetes. Keywords : type D personality; diabetes

PP26 S-326

THE PREVALENCE AND CHARACTERISTICS OF SOCIAL ISOLATION

Mariko NISHI, Taro FUKAYA, Takashi KOIKE, Hiroyuki SUZUKI, Kumiko NONAKA, Hiroshi MURAYAMA, Erika KOBAYASHI, Shouji SHINKAI, Yoshinori FUJIWARA (*Reserch Team for Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology, Japan*)

Introduction : Purpose of this study was to determine the prevalence and characteristics of social isolation among community-dwelling elderly (over 65) who live alone and who live with others. Method : A survey was conducted in Wako-city, Saitama-prefecture in 2012. Data were obtained from 8,304 elderly (response rate 74.3%). Frequencies of contacts with other people (non-resident children, relatives, friends, and neighbors) were used to define the state of social isolation; contact less than 2-3 times a month defined as "isolated" and contact more than once a week defined as "non-isolated". Results : The major findings were as follows. 1) The prevalence of "isolated" were 23.0% in elderly living alone and 30.0% in elderly living with others, and was higher in men than in women with either household composition. 2) Within elderly living with others, the prevalence of "isolated" increased as 5-year age-group raised. On the contrary, prevalence reduced as 5-year age-group raised within elderly living alone. 3) Compared with "non-isolated" group, "isolated" group tend to have low/poor state in many aspects (such as one's estate, mental health status, evaluation toward one's neighborhood) for both household composition. 4) Some exceptions were seen. For example, the result of physical health status and anxiety about future differed between household composition: low/poor state in "isolated" group in those living with others, and differences not salient between isolated-state in those living alone. Conclusion : The prevalence and characteristics of socially isolated elderly were not completely consistent between household composition. These findings would be useful when considering an efficient way of supporting isolated elderly. Keywords : social isolation, prevalence, characteristics, community-dwelling elderly, health

PP25 S-327

LONELINESS AND DEPRESSION AMONG THE ELDERLY IN FELDA: MEDIATING EFFECTS OF SOCIAL SUPPORT

Wan Mohd Azam WAN MOHD YUNUS¹, Normah CHE DIN¹, Mahadir AHMAD¹, Shazli Ezzat GHAZALI¹, Norhayati IBRAHIM¹, Zaini SAID¹, Ahmad Rohi GHAZALI², Suzana SHAHAR³, Rosdinom RAZALI⁴, Maniam THAMBU⁴ (*1. Health Psychology Programme,*

Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Malaysia; 2. Biomedical Science Programme, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Malaysia; 3. Dietetic and Nutrition Programme, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Malaysia; 4. Department of Psychiatry, Faculty of Medicine, Universiti Kebangsaan Malaysia, Malaysia)

Introduction : Loneliness has long been known to have strong association with depression. The relationship between loneliness and depression, however, has been associated with other risk factors including social support. To what extent social support plays a role in the association between loneliness and depression was not known. Method : Cross-sectional study examined the mediating effects of social support among 161 community-based elderly in FELDA settlement of a rural area in Sungai Tinggi, Malaysia. Subjects were investigated with De Jong Gierveld Loneliness Scale, Geriatric Depression Scale (GDS) and Medical Outcome Survey (MOS) Social Support Survey. Data were analysed using Pearson correlation, and linear and hierarchical regression. Results : Results indicated that social support partially mediated the relationship between loneliness and depression. Conclusion : This suggests that social support affects the linear association between loneliness and depression in the elderly in FELDA. Keywords : loneliness, depression, social support

PP25 S-328

DEFINING AND MEASURING ELDER ABUSE IN CANADA: TOWARD A NATIONAL PREVALENCE STUDY

Lynn MCDONALD¹, Anthony LOMBARDO², Marie BEAULIEU³, Simon BIGGS⁴, Gloria GUTMAN⁵, Sandra HIRST⁶, Ariela LOWENSTEIN⁷, Cynthia THOMAS⁸ (1. Factor-Inwentash Faculty of Social Work, University of Toronto; National Initiative for the Care of the Elderly, Canada; 2. National Survey on the Mistreatment of Older Adults in Canada, National Initiative for the Care of the Elderly, Canada; 3. Ecole de Travail Social, Faculte des Lettres et Sciences Humaines, Universite de Sherbrooke, Canada; 4. School of Social and Political Sciences, Faculty of Arts, University of Melbourne, Australia; 5. Gerontology Research Centre, Simon Fraser University, Canada; 6. Faculty of Nursing, University of Calgary, Canada; 7. Center for Research & Study of Aging, University of Haifa, Israel; 8. Westat, USA)

Introduction : More recent estimates of the prevalence of elder abuse in Canada are needed, and the National Initiative for the Care of the Elderly (NICE) has been working towards a prevalence study for the country. NICE began with a project to provide definitions of mistreatment and to develop and validate a measurement instrument. Method : The initial project included a literature review of prevalence studies and theoretical frameworks; development of definitions; and development and validation of an instrument to measure elder abuse. To test the instrument, telephone interviews were conducted with 267 older adults living in communities across Canada. Responses were subject to a "known groups" validation process. An evaluative coding process was used to investigate cases where participants indicated they experienced abuse but did not feel abused. Results : The validation process showed a statistically significant difference in the number of items that were answered positively by "known abused" and "known not abused" groups, suggesting that 20 of the most important abuse items distinguished between the two groups. The percentage of respondents experiencing abuse differed from respondents' reports of feeling abused, indicating that current research may be over- or under-estimating prevalence rates in certain abuse categories. Conclusion : NICE will soon launch a new national prevalence study based on this preparatory work. The study will survey a representative sample of

5,000 adults, aged 55 years and older, living in private dwellings in Canada on numerous forms of abuse and neglect. Evaluative coding will again be used to provide more sensitive prevalence rates. Keywords : elder abuse and neglect / mistreatment, Canada, prevalence

PP25 S-329

THE FEMINIZATION OF ELDERLY ABUSE AND THE POLICE STATIONS

Guíta Grin DEBERT, Amanda Marques OLIVEIRA (IFCH - Institute of philosophy and humanities, UNICAMP - University of Campinas, Brazil)

Introduction : Elder abuse is a violation of human rights, and Brazil has been engaged in ensuring the rights of older people. Method : Building on the dilemmas involved in Brazilian initiatives to address abuse, the article analyzes the way in which the elderly are treated at the police stations and at the special precincts for elderly protection. Results : The text highlights the disconnection between the images police officers constructed on old age and those over 60 years of age that comes to the police asking for their help. The main argument is that this disconnection leads to an invisibilization of elderly neglect and exploitation; to a feminization of old age; and to the consideration that crimes are the result of a moral deficit in family relationship. Conclusion : The dynamic aspect of the functioning of the police stations turns it into instances focused on the judicialization of family relations. Instead of being a subject of rights, the elderly becomes the object of family violence. Keywords : old age, elder abuse, special police stations.

PP25 S-330

COMPARISON OF REPORTED CASES OF ELDER ABUSE IN SOUTH KOREA AND JAPAN

Kenji KURODA¹, Tsuzuru MIZUGAMI², Yunjeong JANG³, Koeun KIM⁴ (1. Faculty of Health and Well-being, Kansai University, Japan; 2. Faculty of Rehabilitation, Kobegakuin University, Japan; 3. Division of Social Welfare, Gyeongnam University, Korea; 4. Woman and Family Policy Research Center, Gyeongnam Development Institute, Korea)

Introduction : Starting in South Korea with the amendment of the Welfare Law for the Aged in 2004, and in Japan with the introduction of the Elder Abuse Prevention Act in 2006, a legislative response to the issue of elder abuse has been introduced. The present study aimed to identify the distinctive features and examine the background to elder abuse in the two countries. Method : Statistical data on reported cases of elder abuse in South Korea and Japan were compared. The data used were, for South Korea, a report on elder abuse (Health and Welfare Department, 2006-2011); and, for Japan, the results of a survey of the status of response to the Elder Abuse Prevention Law (Ministry of Health, Labour and Welfare, 2006-2010). Results : In the two countries the number of cases judged as elder abuses was 5.7 for every 10,000 of the elderly population in South Korea and 5.8 in Japan (2010). Physical abuse and mental abuse were frequent, and in both countries the victim was female in 70% of cases where the perpetrator of the abuse was the victim's son accounted for 48% of the total in South Korea and 43% in Japan. Conclusion : A likely background factor is that the marriage rate in both countries has declined so that the number of sons looking after their mothers has increased. Also, the increase in unemployment and casual forms of employment has created a challenging environment. An effective strategy to deal with this scenario of abuse needs to be considered. Keywords : elder abuse, reported cases, comparison of Korea and Japan

PP25 S-331

HOW TO PREVENT THE ELDER ABUSE IN THE GROUP LIVING FOR PEOPLE WITH DEMENTIA

Nozomi MATSUMOTO (*Social and behavioral sciences, Japan college of social work, Japan*)

Introduction : In Japan, the group-living for people with dementia are pointed out the risk about occurrence and latency of elder abuse. However, there is only a little literature about the abuse, and it does not have enough evidence. Purpose of this study is to identify factor structure of preventive measure, and consider about those effects to prevent the abuse from prior studies. **Method :** First, questionnaire survey of caregiver's recognition to find the factor structure of preventive measure of the abuse, were distributed among 1,000 caregivers, and the number of valid responses was 421. Second, used factor analysis, and identified factors. Third, compared with factors which have been pointed out the needs or effect of prevent the abuse in prior studies. **Results :** The results of factor analysis, 4 factors were identified. These factors were seen in the prior studies, and some of these studies^o have pointed out the effect of reducing risk of abuse. Also, these factors were similar to measures which have been indicated as decreasing risk of stress, burnout or staff's turnover. **Conclusion :** We find the four factors to prevent the abuse by experimental study, and we showed the evidence of past studies by clarifying the similarity of the factors which were pointed out in past literature. We need more studies to disclose the relationship between each risk and prevention factors, and its effect. **Keywords :** elder-abuse, group-living, dementia

PP25 S-332

RECOGNIZING AND ASSESSING ABUSE IN THE ELDERLY BY HOSPITAL OUTPATIENT NURSE

Reiko TSUJI (*Faculty of Health Sciences, Department of Nursing, Saitama Prefectural University, Japan*)

Introduction : The purpose of this research was to identify how the outpatient nurses in a Japanese hospital recognized and assessed signs of abuse in the elderly. **Method :** The data were collected in August 2011 through interviews with outpatient nurses at a hospital consisting of >200 floors. The interviews were based on the observations of situations, signs, symptoms of elderly and formulation of solutions for those identified as abused. I analyzed the findings both qualitatively and inductively. **Results :** All 5 participants were female, with an average of 16.4 years of nursing experience. When outpatient nurses observed elderly people, they used all their senses to detect any "atmosphere different from normal". Information was gathered from elderly individuals and risk assessment was performed. Low-risk abuse in the elderly were well coped. With regard to high-risk individuals, the following three points were elucidated. : 1. The nurse assigned only one person to the diagnosis and treatment department doesn't have the person with it can consult at once. Therefore, the nurse was embarrassed with the correspondence of high-risk abuse in the elderly. 2. It is difficult for the nurses to correspond with outpatients to obtain their cooperation and details about their occupations. 3. The outpatient nurse cannot consult with other organizations operating outside the hospital. **Conclusion :** Outpatient nurses could recognize the signs of elderly abuse and were able to perform risk assessments. Further research on this issue and correspondence with outpatients are necessary for evaluating the severity of risk of elderly abuse. **Keywords :** Elder Abuse , Outpatient Nursing, function of nursing personnel

PP25 S-333

COMPARISON OF PROGRAMS FOR PREVENTING ELDER ABUSE IN SOUTH KOREA AND JAPAN

Tsuzuru MIZUGAMI¹, Yunjeong JANG², Koeun KIM³, Kenji KURODA⁴ (*1. Faculty of Rehabilitation, Kobegakuin University, Japan; 2. Division of Social Welfare, Gyeongnam University, Korea; 3. Woman and Family Policy Research Center, Gyeongnam Development Institute, Korea; 4. Faculty of Health and Well-being, Kansai University, Japan*)

Introduction : Elder abuse as reported in South Korea and Japan shows a similar pattern with, for example, many cases of elder abuse are caused by the elder's son. Both countries belong to the east Asian cultural sphere and have similar problems such as population aging, increasing difference in income levels, and a rising percentage of unmarried people. The purpose of this study is to examine useful programs in Japan and South Korea by comparing programs for preventing elder abuse. **Method :** We reviewed the programs for preventing elder abuse provided by the following laws. (1) Welfare Law for the Aged (South Korea and Japan), (2) Long-Term Care Insurance Law (South Korea and Japan), (3) Elder Abuse Prevention Law (Japan)/Law on Special Cases Concerning the Punishment, etc., of Crimes of Domestic Violence (South Korea). **Results :** Three main differences between the two countries were found in the programs. (1) The role of the central government is clearer in South Korea. In that it has established the Korean Elder Protection Agency. (2) In South Korea, provinces bear responsibility for elder abuse, whereas in Japan, municipalities do. (3) In South Korea, special agencies react to elder abuse, whereas in Japan, comprehensive support centers do. **Conclusion :** These results suggest the necessity for establishing a central agency in Japan similar to the Korean Elder Protection Agency and enhancing municipalities' functions in the comprehensive support of the elderly, including functions relating to elder abuse in South Korea. MEXT/JSPS KAKENHI GRANT Number 24730495. **Keywords :** Elder abuse, Korea and Japan, program

PP25 S-334

SEEKING EUTHANASIA

Ai Diem LE (*School of Social Sciences and Psychology, Victoria University, Australia*)

Introduction : The prolonged ethical debate of legalising euthanasia, while representing the moral dilemmas inherent to end of life decisions, continues to limit pro-death options for the terminal and chronically ill. Euthanasia is not an encouraged motion nor is it an acceptable disposition for most of the jurisdictions around the world. Medical bioethics contained within the Hippocratic oath remains hesitant; while legal ethics representing the consensus view is constrained by the underlying Christian values that form the basis of the Western judiciary system. Conservative laws fail to address the advocacy for human rights, consequentially denying the people's autonomy by diminishing their civil rights. In Australia, inconsistent and fickle legislation has forced despaired sick individuals to resort to alternative arrangements for a peaceful death. **Method :** Through Literature Review and Media Reporting this presentation wishes to address the ethical, social and political concerns of those who have independently procured euthanasia. **Results :** This retaliative suicidal movement only reflects the inadequacies of the Australian health care system. End-of-life decisions are ineffectual unless respected and fulfilled. Therefore, without the governmental support the local health care system fails to deliver critical end-of-life decisions. Compelled to retain autonomy over their lives, these people pursue their own deaths. **Conclusion :** This social phenomenon is an alarming call for a deeper investigatory discourse on issues concerning gerontological mental

health. Lawful or not, people are not waiting for the law to reform. The issue here is that while the government hesitates to legalise euthanasia, people are taking suicide into their own hands. Keywords : Euthanasia, Ageing Mental Health, Civil Rights

PP25 S-335

RELIABILITY AND VALIDITY OF THE KNOWLEDGE AND ATTITUDE SCALE OF ADVANCE DIRECTIVE (AD) FOR JAPANESE

Hamayoshi MIHO, Kono AYUMI (*Nursing, Osaka City University Graduate School of Nursing, Japan*)

Introduction : The present study aimed to examine the reliability and validity of the AD Knowledge Test and the AD Attitude Survey measure which were developed by Catherine, P (2000), were translated into Japanese. Method : Subjects were 102 elderly members of community elderly association in A city, Japan. Questionnaires included the AD Knowledge Test and an AD Attitude Survey. The statistical analyses were conducted by I-T correlation analysis and examined the internal consistency by Cronbach's alpha. The correlation items of AD creation intention by preceding study and related the scale were checked using a t-test. Results : As a result of the I-T correlation check, AD Knowledge Test and AD attitude survey were delete 2 items of 0.3 or less items. And that of Cronbach alpha of AD Knowledge Test was $r = .67$, and that of AD Attitude Survey was $r = .83$. The correlation with the AD creation intention that 'suffering serious disease and operations or not 'were survivors had high scores in AD Knowledge Test, $r = .02$, and 'never heard about AD who answered was 'No' had a high score in AD Attitude Survey of $r = .01$. and 'suffering serious disease and operations or not 'were survivors had high scores in Attitude Survey of $r = .01$. Conclusion : These results suggested that the reliability of AD Attitude Survey has been examined. However, Cronbach's alpha of the AD Knowledge Test was less than 0.8. Further investigation with another large numbers of subjects should be conducted to confirm this scale. Keywords : Advance directive elderly

PP25 S-336

SELF-REPORTED VIOLENCE IN LOW INCOME AND LOW EDUCATED ELDERLY IN RIO DE JANEIRO, BRAZIL

Adriana SANTOS¹, Juliana ROSAS¹, Fernanda BORGES², Marisa SANTOS³, Luiz Mauricio PLOTKOWSKI³, Jerson LAKS³ (*1. Social Service, Centro de Estudo e Pesquisa do Envelhecimento, Brazil; 2. Nutrition, Centro de Estudo e Pesquisa do Envelhecimento, Brazil; 3. Medicine, Centro de Estudo e Pesquisa do Envelhecimento, Brazil*)

Introduction : There are scarce data on violence against the elderly in Brazil. This cross-sectional study aims to delineate the profile of an outpatient low income and low educated elderly sample who suffer abuse. Method : We screened 300 elderly people referred by a primary care center from April to December 2012. They were assessed with a multidimensional structured questionnaire. Typology was characterized according to WHO classification (2002). They were mainly female (59%), mean age = 70 years (± 7); 42% lower educated, 82% from D/E economic class. Results : In our study 14% of this group of 300 elders didn't have any kind of social or family support. From the 9% (n=27) who reported some kind of violence, 37% are married, (88%) female abused against (18%) compose by male old people. About the social profile of this sample who suffers any kind of violence, we had (85%) assets for social security. Most abusers (90%) were the partners, followed by their sons/daughters. Verbal violence occurred more frequently (52%) followed by physical violence (33%), split by psychology abuse (11%); sexual (7%) and financial abuse

(7%). Use of alcohol and drugs were present in 22% of families. Conclusion : Domestic violence shows the same typology as described in other countries. Relatives were the main aggressors and verbal violence the most common type of violence. Keywords : Violence, Elderly, Low income

PP25 S-337

ROLE OF CIVIL SOCIETIES TO PROTECT THE RIGHTS OF OLDER PERSONS

Dola GUPTA¹, Indrani CHAKRAVARTY², Samar Kumar CHAKRAVARTY³, Jayanta Kumar ROY⁴ (*1. Electronics and Gerontology, Narula Institute of Technology, India; 2. Gerontology, CMIG, India; 3. Electronics and gerontology, CMIG, Calcutta Metropolitan Institute of Gerontology, India; 4. Electronics and Instrumentation, Narula Institute of Technology, India*)

Introduction : Asia is the fastest ageing region in the world. Presently half of the world's older people live in Asia, and in the coming fifty years two-thirds of the world's older population will be residing here. Asia has experienced various development processes, political and economic upheavals, disparities amongst various segments in the society that have had a multidimensional impact upon ageing in the region. Method : This paper deals with the role of civil to promote the awareness towards the protection of rights of the older persons . The study is made in the contemporary Indian society by the researchers in the Calcutta Metropolitan Institute of Gerontology (CMIG) in Kolkata metropolis of India. Respondents are selected by standard sampling technique. Results : In the present socioeconomic format, it is not possible to protect the rights of the older persons as appreciated in UN principle such as dignity, fairness, respect, equality, autonomy and all. Surely the rights for the elderly as said in the various international charters is a huge task and action plan to be aggregated through coherent activities in steps world over by all stake holders of the society. Conclusion : In course of this study some key areas are identified for creating awareness of rights as well as capacity building. Keywords : Ageing, Rights, UN principals, Civil Society, Dignity, Fairness, Equality, Autonomy

PP25 S-338

PHYSICAL HEALTH, SELF-PERCEPTION OF AGING, AND DEPRESSIVE SYMPTOMS AMONG OLDER PEOPLE: SELF-PERCEPTION OF AGING AS A MEDIATOR AND AGE SCHEMA AS A MODERATOR

Jina HAN, Jinhyun KIM (*School of Social Work and Administrative Studies, Marywood University, USA*)

Introduction : This research is intended to examine how ageism might be related to interdependent processes between physical health and depressive symptoms over time. The first goal is to examine the extent to which self-perception of aging mediates the relationship between prior physical health and later depressive symptoms. The second is to explore whether the cognitive schema of old age (age stereotypes) affect these processes in particular by enhancing the influence of physical health on older peoples' self-perception of aging. Method : Data from the Health and Retirement Study (2004-2010) were used for analyses. Structural equation models were employed to analyze the effects of age stereotypes on interdependent processes between physical health and depressive symptoms. Results : The mediating effect of self-perception of aging in the relationship between prior physical health and later depressive symptoms was significant. Although the moderating effect of age schema was not statistically supported, older individuals who had age schema were likely to report negative self-perception of aging four years later when their physical health status had worsened, while physical health was not significantly

related to self-perception of aging among older individuals without age schema. Conclusion : Self-perception of aging is another mechanism that explains the effects of physical health on depressive symptoms among older people, and older individuals might have more negative self-perception of aging when they have age schema and worsening physical health. Keywords : Self-Perception of Aging, Age Schema, Health

PP25 S-339

HOW DO THEY SEE THE ELDER? THE ELDER IMAGE ANALYSIS IN THE MEDIA

Ming Chih HSU, Ya Hui LEE (*Department of Adult and Continuing Education, National Chung Cheng University, Taiwan*)

Introduction : Media greatly affect the social education. All kinds of images presented by the mass media in the daily lives affect the surrounding people, things, the views and feelings of the matter in a subtle. Thus, the media has played an important role in cognition and decision-making and can be regarded as an effective tool to promote health aging image. Method : This study adopts the qualitative content analysis to investigate the newspaper report 2006-2011 to provide for the elderly related topics. Results : The preliminary study could be summarized as follow: (1) the proportion of news coverage for the elder has increased over the years; (2) the proportion of positive reports on the elder has increased year by year and leads to successful aging image; (3) news coverage for the elderly category tend to be varied; (4) elderly commercial possibilities has been increased over the years. Conclusion : This study can provide a reference for designing educational programs for the elder.

Keywords : elder image , media

PP25 S-340

PRESENTATION OF THE ELDERLY WITH DEMENTIA AND THEIR PROBLEMS IN THE NHK TV PROGRAMS IN THE FIRST HALF OF 1980S

Akiko TAJIMA¹, Takashi IGUCHI² (*1. Faculty of Rehabilitation, Seirei Christopher University, Japan; 2. Faculty of Human Life and Environment, Nara Womans University, Japan*)

Introduction : The elderly with dementia appeared in the rehabilitation and political TV discourses in the latter half of 1980s in Japan. This study aimed to elucidate what kinds of NHK TV programs had been broadcast, how the elderly with dementia had been presented, and what problems had been raised until the first half of 1980s. Method : Subjects: Of the TV programs on the elderly with dementia constructed until 1985, three programs that were considered to be suitable for the aims of this study based on the title were watched and texts changed from sounds were subjected to analysis. Results : In the first program, the elderly nursing home that was dedicated for the first time in Japan exclusively for the elderly with dementia was recorded with their speech and activities in 1981. In the second one, experts commented on the images of the first one and a challenge of "how to provide nursing care" was raised. In the third one, an effort with music therapy was introduced as the method that focused on the brain mechanism. Conclusion : Discussion and Summary: These movements of mass media drew attention of the people and accelerated the discourses about the policy and rehabilitation in the latter half of 1980s. Keywords : problems in the NHK TV programs, Presentation of the elderly with dementia

PP25 S-341

HOW HAVE PEOPLE WITH DEMENTIA BEEN REPRESENTED IN TV DOCUMENTARY PROGRAMMES IN

JAPAN?

Takashi IGUCHI¹, Akiko TAJIMA² (*1. Faculty of Human Life and Environment, Nara Womens University, Japan; 2. School of Rehabilitation Sciences, Seirei Christopher University, Japan*)

Introduction : In Japan, a new image of people with dementia (PWD) has been promoted through policies and narratives of caregivers from the late 1990s to the twenty-first century. Especially since the Alzheimer's Disease International (ADI) conference in Kyoto in 2004, the trend has been for Japanese PWD to speak about their thought and will in public. This presentation will focus on the era before that trend. I explore patterns of how PWD and their thought and will were described in NHK TV documentary programmes produced between 1982 and 2003 by analyzing and comparing some of these programmes. Method : By searching through the database and watching many TV programmes at the NHK Archives Center, I chose some distinctive programmes. I analysed each selected programme, focusing on how it describes thought and will of PWD in institutional care settings. Results : Two patterns of describing thought and will of PDW emerged. The first pattern is that their thought and will descriptions relate to problematic behaviours for caregivers. Caregivers need to understand this pattern to treat these problematic behaviours. The second pattern is that PWD's thought and will are important in and of themselves, and therefore sometimes conflict with caregivers' convenience. Conclusion : Finding two patterns indicates the possibility of potential conflict in person-centered care, and necessitates investigation of how the thought and will of PWD are described in TV programmes after 2004. Keywords : mass media, image

PP25 S-342

IMAGE OF THE ELDERLY HELD BY UNIVERSITY STUDENTS -A CROSS-CULTURAL STUDY IN JAPAN, SOUTH KOREA AND TAIWAN-

Yoko HOSOE¹, Ju-hyun KIM², Shu-Tzu CHENG³, Ching-Sung LEE⁴ (*1. Department of Living and Health Sciences Education, Joetsu University of Education, Japan; 2. The Institute for Social Development and Policy Research, Seoul National University, Korea; 3. Department of Family Studies and Child Development, Shih Chien University, Taiwan; 4. Department of Restaurant, Hotel, and Institutional Management, Fu-Jen Catholic University, Taiwan*)

Introduction : The purpose of this study was to compare and analyze the image of the elderly held by university students in Japan, South Korea and Taiwan. Despite sharing traditions based in Confucianism, the three countries have quite different social norms and cultural values concerning the elderly. And although three have enjoyed a rapid growth of economy, Japan being a super-aged society and others aging societies also merits comparison. Method : The study was conducted in Japan in 2009, South Korea in 2011 and Taiwan in 2011 employing self-administered questionnaires based on a semantic differential scale using 50 adjective pairs. The sample consisted of 320 university students in Japan, 384 students in South Korea and 489 in Taiwan. Results : The outcome was as follows: (1) A factor analysis identified four semantic spheres in Japan, five in South Korea, and three in Taiwan. "Capable" and "Cooperative" were common to both countries, Japan and South Korea. "Active" and "Social" were distinctive to Japan and Taiwan; "Noble and intelligent," "Happy," and "Intimate" to South Korea. (2) In the "Active" sphere, students in Japan had a more positive image than those in South Korea. In "Cooperative," students in both countries had a positive image. (3) "Concern for the elderly or the problems of the elderly," "Experience in activity with the elderly," and "Satisfaction for the family" were

important factors in shaping the respondents' image. Conclusion : The study suggested that in post-industrial societies, personal factors such as experience with and concern for the elderly became stronger determiners of the resulting image. Keywords : Semantic differential scale, Factor analysis, Semantic spheres

PP25 S-343

A COMPARATIVE STUDY BASED ON YEARS OF NURSING EXPERIENCE AND TYPES OF BEHAVIORAL AND PSYCHOLOGICAL SYMPTOMS OF DEMENTIA (BPSD) THAT NURSES FIND DIFFICULT TO CARE

Hiroshi YOSHIMURA¹, Mizue SUZUKI², Tomomi TAKAGI³
(1. Department of Nurse, Seirei Mikatahara General Hospital, Japan; 2. Faculty of Nursing, Hamamatsu University School of Medicine, Japan; 3. Department of Nursing, Seirei Mikatahara General Hospital, Japan)

Introduction : Nurses in acute care hospitals are facing difficulties in caring Behavioral and Psychological Symptoms of Dementia (BPSD). The purpose of this study is to clarify the various types of BPSD that nurses feel difficult and burdensome to care, and nurse's perceptions of this issue based on their years of nursing experience. Method : The questionnaire survey has been conducted between October and December in 2012 which target floor nurses at the hospital. The questionnaire included the following contents: years of nursing experience, severity of BPSD that nurses find difficult to care, nursing care for the elderly patients with BPSD. Results : The questionnaires were given to four hundred thirty-four ward nurses. Thirty percent (130 subjects) of the questionnaires were returned. In terms of BPSD, 90% of nurses found some risk behaviors difficult to care, such as "waking up during midnight". The following symptoms were perceived as being difficult to care, most significantly among nurses with less than three years of experience: "not showing interest in things", and so on. The following nursing care methods were reported to be difficult to provide, particularly among nurses with less than three years of experience; "assigning nurses to patients with whom they are familiar with" so the patient can experience more comfort. Conclusion : It was suggested that educational specialized training for the elderly patients with dementia and effective systems to provide good nursing care without physical restraints are required for nurses with less than three years of experience. Keywords : Acute hospital, Patients with dementia, Nurses, Difficulties

PP25 S-344

A COMPARATIVE STUDY OF FACTORS RELATED TO COGNITIVE FUNCTIONING IN LATER LIFE: FINDINGS FROM THE HEALTH AND RETIREMENT STUDY & KOREAN LONGITUDINAL STUDY OF AGEING

Jiyoung LYU, Chae Man LEE, Elizabeth DUGAN (Gerontology, UMass Boston, USA)

Introduction : Cognitive functioning in later life has been a growing concern worldwide. Many studies have sought to identify risk factors for cognitive problems, but little research has sought to make cross-national comparisons. The purpose of this study was to compare the factors related to cognitive functioning in later life in a U.S. and Korean sample. Method : The study sample was comprised of subjects from the Health and Retirement Study (HRS) and the Korean Longitudinal Study of Ageing (KLoSA). Separate multivariate regression models were employed to examine the impacts of socio-demographic factors, health factors, and health behaviors on cognitive functioning among individuals aged 65 and over. Results : Multivariate regression analysis showed that age, gender, IADL

impairment, and poor eyesight were negatively associated with cognitive functioning, while higher education, higher income, better self-rated health, and regular exercise were positively associated with cognitive functioning in both countries. However, net worth and depression were significantly associated with cognition only in U.S., while poor hearing was a significant factor only in Korea. In addition, gender-specific models suggested several socio-economic and health factors had significantly different effects by gender in both countries. Conclusion : Cross-national comparative research identified similar risk factors, suggesting robust associations. Unique factors related to cognitive functioning in U.S. and Korean older adults highlight the important role of cultural influences on outcomes. Keywords : cognition, cross-cultural comparison, U.S., Korea

PP25 S-345

BRIDGING THE DIGITAL GAP? INTERNET DIFFUSION AMONG OLDER PEOPLE IN GERMANY 2002 TO 2012

Michael DOH, Hans-Werner WAHL (Department of Psychological Ageing Research, Institute of Psychology, Heidelberg University, Germany)

Introduction : Internet is a key media of the mediatisation with more than 50 million users in Germany. Diffusion research replicates a tremendous development in the last decade, but also strong inequalities of diffusion by social-structural factors e.g. age, education, gender, income and region (Doh, 2009). These results are confirmed by theories such as diffusion process (Rogers, 2005), generation and social differences (Docampo Rama et al., 2001). But little is known about the dynamics of the predictors of the internet diffusion. With this presentation we will analyse over a period from 2002 to 2012: 1) The development of internet adoption by age and cohort groups. 2) The process of a digital gap by social-structural factors. 3) The dynamics of social-structural factors in the age group 60plus. Method : Data was drawn from the (N)Onliner-Atlas, the greatest national internet study, comprising 11 annual surveys (2002-2012, N=413.655 totally, aged 14-99). Logistic regression models were computed to examine the impact of socio-structural, age and cohort factors on internet diffusion. Results : Between 2002 and 2012 the internet diffusion increased especially in the age groups of 50-59 years and 60-69 years. Further analyses suggest a substantial effect of cohort, dominating the age effect. The 'Digital-Divide-Index' demonstrates a decline, however cohort is still a dominating factor of inequality. In addition within older persons the socio-structural factors "level of income" and "level of education" are unaltered strong predictors of internet adoption. Conclusion : The digital gap between young and old are getting closer, but not between older persons. Keywords : internet diffusion Germany

PP25 S-346

PHYSICAL, EMOTIONAL HEALTH LEVEL & RELATED FACTORS OF EMPLOYEES IN NURSING HOMES FOR ELDERLY

Bo-Sung KIM¹, Jung A. KIM² (1. Graduate School of Information in Clinical Nursing, Hanyang University, Seoul SeoBu Senior Care Center, Korea; 2. Division of Nursing, Hanyang University, Korea)

Introduction : Elderly care center employees provide physically-dependent elderly people with daily life activity services. They experience various physical and emotional symptoms and stress due to the hard work. This study aimed to identify the physical, and emotional health of elderly care center employees and to examine the relation between these variables. Method : This was a descriptive correlational study. A total of 121 employees were recruited from 8 elderly care centers in Seoul and a self-reported questionnaire survey

was performed from November 1st to November 14th 2011. Collected data were analyzed using SPSS WIN 19.0. Results : More than half of the elderly care center employees were care worker (56.2%), followed by nurse (19.8%). The contract/temporary employees were 47.9%. For the quality of elderly care, 52.1% reported that their service was 'excellent', and 41.3% reported 'poor'. Overall physical health score of the subjects was 64.95±16.20 and overall emotional health score was 18.22±3.22. Physical health of subjects significantly differed by types of working. Particularly, 12-hour shift employees had significantly poorer health. Emotional health significantly differed by how they recognize the quality of the care they provide, and the lower the quality of care they provide, the emotional burden was heavier. There was a significant positive correlation between physical and emotional ($r = -.172, p = .030$). Conclusion : To improve the quality of care that the employees recognize, education focused on practical care service should be provided, and to provide advanced care technique, continuous communication and educational exchange between workers of different elderly care centers. Keywords : Elderly care center employee, Physical health, Emotional health

PP25 S-347

A STUDY OF CENTENARIANS IN PUERTO RICO FROM A SOCIOLOGICAL PERSPECTIVE

Julita ORTIZ-MARIN, Angeles J. ALMENAS-VELASCO (*Puerto Rico, Sociedad de Gerontologia de Puerto Rico, Puerto Rico*)

Introduction : The study points out the life style, kind of social relationships and demographic profile of the centenarians living now in Puerto Rico and compares to the findings of the characteristics of other centenarians studied in the world. It includes data in regard to diet, health practices, relationships networks and their quality and their personal views to explain their longevity. Method : After screening the subjects with a Mini Mental, those were selected who could answer questions to be recorded by the researcher. This was followed by an interview with open end questions that allowed the subjects to clarify or add. Results : Most of the subjects were raised in a rural environment with close family ties. Their diet was rich in vegetables and fruit with some meat. They had large families and worked in a variety of jobs. Although some live alone most live with another member of their close parental family. Their interactions are frequent with children and siblings seeing other family members at family gatherings such as baptisms, weddings and funerals. Close family members are expected to take care of them when in financial need, illness and hospital stays although other institutions may substitute them. There exists trust in their doctor and expectancy of friendliness from the brethren in the church. Their outlook on life has been positive, Most have a cheerful dispositions. Conclusion : Centenarians in Puerto Rico resemble other centenarians studied in other parts of the world in regard to overall habits of diet and health. They yearn for close emotional relationships. Keywords : Centenarians, Puerto Rico, Relationship

PP25 S-348

NEVER TOO LATE TO LEARN: ELDERLY WOMEN'S CLUB Svetlana ASLANYAN (*Elderly Women's League, Center for the Development of Civil Society, Armenia*)

Introduction : In the introduction I intend to make a short overview on the situation of elderly women in soviet and post-soviet Armenia based on the research, which reveals the incredibly vulnerable situation in which elderly women found them appeared after downfall of Soviet Union, it also revealed totally social exclusion of target group. Method : Methodology: I will present the project its goal, objectives and results and refer to case studies. The long term goal of the project is: to

protect elderly rights, to promote their participation in public life, to improve their social status, to find their own place in changed social and economical environment, to increase public awareness on elderly issues, to change the attitude of the society to older person. The objectives are: to help elderly women to stay active persons, to increase their active participation in the social/civic life, to help them learn healthy and constructive ways to spend their leisure time, to assist them to share their life and professional experience with younger generation. Results : Elderly women club will be established and operate. Conclusion : Conclusion: Today in our country the older generations are in danger of being left out of the society. It is necessary to evaluate elderly women's role in society and to facilitate and encourage their participation in public life. In this regards establishment of club where women could meet, exchange views, discuss an interesting topic pertaining to issues of concern such as health or social relations topics and share the knowledge and experience they have accumulated. Keywords : elderly, exclusion, participation

PP25 S-349

IMPACT OF SPIRITUALITY ON LIFE COURSE OF AN INDIVIDUAL: AN EXPERIENCE FROM INDIA

Gaurav AGGARWAL (*Public Health Consultant, International Academy for Public Health Management, India*)

Introduction : Rajyoga being observed by brahma kumaris at world spiritual university is a unique spiritual education which facilitates the individual to realize true potential of uplifting ones self identity or awareness. It also helps in experiencing the true and deeper qualities which manifests and vibrates in a natural. Method : Elderly population ($n=200$) from across the country was taken as study subjects. A prior verbal consent was taken from them. Amongst this elderly population 100 were recruited into one group consisting of those who practices raj yoga and other group of 100 consisted of population who doesn't follow raj yoga. A convenient sampling method was used. A pretested questionnaire was used. Results : Total of 200 subjects were taken into consideration out of which 100 were Raj Yogis and 100 were those who were not practicing spirituality in any form. The subjects who were recruited in this study belongs to age group of 60 to 95. Mean age of the subjects was 68 with SD 6.5, variance of 42.3 and range of 35. These three perspectives have been measured in two dimensions of gerotranscendence: 1. Cosmic Gerotranscendence, which is connected with changes in perception of time, space, life, and death; and 2. Ego gerotranscendence, which is connected. Conclusion : Tornstam defined gerotranscendence as 'a shift in the meta-perspective from material and rational vision to a more cosmic and transcendent one, normally followed by increased life satisfaction. According to Tornstam (1999) many elderly people look at their body with disgust, regarding it an indication of overall decline. Keywords : Spirituality, Transcendence

PP25 S-350

KNOWLEDGE AND ATTITUDE TOWARD INFORMED CONSENT FOR SUSTAINING TREATMENT INTERRUPTION AMONG CLINICAL NURSES

Sun Ok OH¹, Boon Han KIM², Min Su KIM³ (*1. Graduate School of Information in Clinical Nursing, Hanyang University, Seoul Veterans Hospital, Korea; 2. Division of Nursing, Hanyang University, Korea; 3. Graduated School of Information in Clinical Nursing, Hanyang University, Korea*)

Introduction : The purpose of this study was to identify the knowledge and attitude toward sustaining treatment interruption (STI) among

clinical nurses. Method : Study subjects were 294 clinical nurses in a general hospital in Gyeonggi-do, Korea. A self-reported questionnaire survey was carried out from Apr. 26th to May 5th in 2010. Three instruments were used in collection data: 1) Scale of Knowledge of STI, 2) Scale of Attitude toward informed consent for STI of their own and their family member, 3) selected demographic data. Collected data were analyzed on SPSS/WIN 17.0. Results : The knowledge of STI scored 54.75 out of 100.00. For attitude toward informed consent for STI of their own, 95.9% subject agreed with administering a painkiller for pain control, 82.7% agreed with supplying nutrition using an intravenous injection. Only 6.1% agreed with doing CPR. For attitude toward informed consent for STI of their family member, 95.2% agreed with administering a painkiller for pain control, 91.5% agreed with supplying nutrition using an intravenous injection, and 18.7% agreed with doing a CPR. Conclusion : The findings of this study showed that clinical nurses could have a harder time making a decision on the informed consent for STI of their family member than their own. This may result from their past experience in clinical nursing practice, and it is possible that they would not come to a decision easily if their family need to decide on the STI. Keywords : Resuscitation Orders, Informed Consent, Decision Making

PP25 S-351

LIFE OF THE ELDERLY LOW-INCOME WOMEN WHO LIVE ALONE

Soon Won KANG¹, Boon Han KIM², Joon Ah CHO³ (1. Graduated School of Information in Clinical Nursing, Hanyang University, Seoul Medical Center, Korea; 2. Division of Nursing, Hanyang University, Korea; 3. Graduated School of Information in Clinical Nursing, Hanyang University, Korea)

Introduction : According to the data from Statistics Korea in 2010, the elderly population, aged 65 or older, comprised 11.3% and the ratio has been steadily increasing. Especially, the acceleration of increase of elderly woman who live alone has been proved to be a kind of social problems by previous studies. Those women are suffered from limitation of physiological function, poverty and loneliness. The purpose of this study was to figure out what was the life of the elderly low-income women who live alone, then to explore a nursing intervention to help the elderly women. Method : This study is a qualitative study using phenomenological approach to explore the life of the elderly low-income women who live alone. Six participants were recruited and data collected from March to May 2012, and the meetings were done through a total of 11 deep interviews. Results : In this study, the life of the elderly low-income women who live alone were classified into 7 categories as follows; 'ambivalence toward families', 'relatedness with others', 'physical pain', 'life dedicated to religion', 'anxiety about death', 'economic poverty', and 'role loss'. Conclusion : The findings of this study showed that the life of the elderly low-income women who live alone had negative emotions like guilt, remorse, solitude, grudge, and loneliness due to living difficulty, inherited poverty and severance of the relation with sons and daughters, and at the same time they firmly led a life with positive emotions like expectation of a new life with meeting their daughters. Keywords : Aged, Qualitative research, Life change event

PP25 S-352

TRADITIONAL MEDICINE THERAPY A PARADIGM SHIFT IN PROMOTION OF GERONTOLOGICAL SEXUAL MEDICINE IN SUB-SAHARAN AFRICAN COUNTRIES

King ODOR¹, Ngozi IWUJI², Rose OPARA³ (1. Health Promotion, University of Ibadan/Navitas Australia, Nigeria; 2. Sexual and Reproductive Health, Sure Health Organization, Nigeria; 3. Aged

Care, Gertrude Abbot Nursing Home, Australia)

Introduction : Traditional Medicine (TM) has responded to healthcare-delivery needs of Africans for decades. However TM means different-things-to-different people. Equally, TM as sexual remedy has received limited attention. Therefore, this study examined TM as paradigm shift in promotion of sexual medicine in sub-Saharan Africa. Method : The study adopted quantitative/qualitative data collection methods, and was descriptive and cross-sectional in design comprising 800 respondents. The FGDs and questionnaires data were analysed thematically and statistically respectively. Results : A total of 20.5% of participants under herbal addiction used TM to prevent infection during sex. Few (3.0%) used herbs and concoction (6.3%) to increase sexual performance. Moreover, (1.5%) suggested that herbal concoction could improve sexual health. Most (60.3%) postulated visiting traditional healers herbal use (10.3%) and drug-taken (17.3%) would provide prevention/treatment against STDs. FGD participants unanimously believed in TM efficacy than contraceptive-use. Hence Magun could prevent diseases while Ale enhances ejaculation and sperm-production Aseje boost sexual-performance. Most African people used traditional herbs to enhance sexual performance. Conclusion : There is need to support clinical investigation of TM especially the claims in relation to sexual health improvement. Keywords : sexual performance, health, traditional herbs

PP25 S-353

DOES DEMENTIA ADD TO HOSPITAL RESOURCE UTILIZATION COMPARED TO ELDERLY PATIENTS WITHOUT DEMENTIA?

Jun TANG¹, Marissa TRESTER¹, Rachel NG², Leslie WILSON³ (1. Clinical Pharmacy, University of California, USA; 2. Internal Medicine, San Francisco Medical Center, USA; 3. Clinical Pharmacy and Medicine, University of California, USA)

Introduction : Dementia patients are at risk for more hospital utilization than those without dementia . We explore associations of time to first and second hospitalization, death and last health care service and compared length of hospital stay(LOS) between dementia and nondementia groups. Method : We used administrative claims from 2000-2008 from an integrated managed-care system. Patients with any dementia diagnosis claim were selected. From the remainder a matched patient group without dementia were selected. Analysis was bivariate and multivariate Cox proportional hazards models and mixed linear regression models controlling for demographics and socioeconomic characteristics and Charlson co-morbidities. Results : There were 108,622 patients; 61,770 with dementia. The dementia group was older(80.42 vs 74.44, p<0.0001), had longer LOS(8.08 vs 6.95, p<0.0001) and more hospitalizations(1.57 vs 1.43, p<0.0001) than non-dementia patients. Kaplan-Meier curves showed dementia patients had a significantly shorter time to hospitalizations and longer time to last healthcare service. Dementia patients had a 49.5%(p<.0001) higher risk to first hospitalization. Increasing age by 1 year increased relative risk (RR) of hospitalizations by 3%. Female gender decreased hospitalization RR by 10%. CHF, Behavioral problems, COPD, hypertension and diabetes increase hospitalization RR by 107.2%, 88.1%, 44.2%, 39.1%, and 25.6% respectively. Mixed models showed dementia patients had 0.9846 days longer LOS than non-dementia patients. Conclusion : Presence of dementia adds to healthcare utilization even when compared to a matched elderly non-dementia group. Disease management focus should include dementia patients with selected co-morbidities. Keywords : Dementia, healthcare utilization, hospitalization

PP25 S-354

XEROSTOMIA, MOOD STATES AND ORAL HEALTH RELATED QUALITY OF LIFE AMONG THE ELDERLY OUTPATIENTS

Young Mi GO¹, Jung A. KIM² (1. The Graduate School of Information in Clinical Nursing, Hanyang University, Asan Medical Center, Korea; 2. Division of Nursing, Hanyang University, Korea)

Introduction : Xerostomia in the elderly is a physical problem in the aging process, which occurs in approximately 30% of people aged 65 or older. It causes psychological discomfort such as depression, and moreover negatively affects the quality of life. This study aimed to identify the xerostomia, mood states and oral health-related quality of life(OHQoL) of elderly outpatients and the relationship among the variables. **Method :** This is a descriptive correlational study which included 189 outpatients aged 65 or older in a tertiary hospital located in Seoul, Korea, from September 1st to the 28th, 2012. A self-reported questionnaire including three instruments (Xerostomia evaluation tool, Korean-version Profile of Mood states-Brief (K-POMS-B), Oral Health Impact Profile-14 (OHIP-14)) were used to collect data. Collected data were analyzed on SPSS WIN 18.0. **Results :** Mean score of Xerostomia was 18.15±15.66, total mood disturbance(TMD) was 29.08±24.97, and OHQoL was 17.19±14.95. Among 6 subscales of K-POMS-B, 'tension' showed the highest mean score (7.27±5.27) and 'vigor' showed the lowest one (3.93±3.63). For OHQoL subscales, the mean score of 'oral disability' was highest (3.06±2.80) and 'psychological discomfort' was lowest (2.12±2.19). There was a positive correlation between xerostomia and mood states, especially tension, depression, anger, fatigue and confusion. Xerostomia had a positive correlation with the oral health-related quality of life. **Conclusion :** In this study, elderly patients' xerostomia was found to be associated with mood states and OHQoL. It would be important for nurse to understand the xerostomia of elderly and essential to explore a nursing intervention for reducing Xerostomia of elderly patient. **Keywords :** Xerostomia, Affect, Elderly

PP25 S-355

EFFECT OF A SENIOR SIMULATION EXPERIENCE ON NEW NURSES' ATTITUDE AND NURSING PRACTICE TOWARD THE ELDERLY

Jae Myoung YANG¹, Jung A. KIM² (1. Graduat School of Information in Clinical Nursing, Hanyang University, The Catholic University of Korea Uijeongbu St. Mary's Hospital, Korea; 2. Division of Nursing, Hanyang University, Korea)

Introduction : A positive attitude of the new nurses with less than 1-year clinical experience and who start caring for elderly patients is a very important factor that can affect the quality of nursing services for the elderly in the future. This study aimed to verify the effect of senior simulation experience (SSE) on new nurses' attitude toward care for the elderly (ACE) and nursing practice for the elderly (ANPE). **Method :** The subjects of this study were the 50 nurses (25 experimental group(Exp) and 25 control group(Con) by random assign) in a university hospital. SSE procedure was to do activities only subject of Exp for daily living for 45 minutes wearing aging simulation suit. Survey was conducted two times to ask the nurses' ACE and ANPE from February 1st to 29th, 2012. Tow instruments, Aging Semantic Differential Scale and Empathy and Attitude toward Caring for the Elderly, were used to collect data. The collected data were analyzed using SPSS/WIN 14.0. **Results :** Before SSE, there were no significant differences in AEC (t=1.161, p=.252) and ANPE (t=1.682, p=.099) between Exp and Con. After SSE, AEC (t=-3.978, p<.001) and ANPE (t=-3.788, p<.001) of Exp were significantly

higher than two variables of Con. **Conclusion :** The findings of this study suggest that SSE is useful and meaningful method for enhancing AEC and ANPE of new nurse and various healthcare professionals who support elderly. It is desirable to be highly applied in the nursing education field or nursing student and continuing education system of nurse practitioner. **Keywords :** Aged, Nursing care, Attitude of health personnel

PP25 S-356

PERCEPTIONS ON AGEING AND RETIREMENT

Cynthia Grace VALDEZ (Research and Development, Quirino State University, Philippines)

Introduction : This research was conducted to find out the various thoughts on aging and retirement, preparation and the prospective activities that the government employees of selected agencies in Quirino Province, Philippines would like to do when they retire. **Method :** Descriptive method of research was done. Data collected through the use of instruments like questionnaire were analyzed through frequency counts, percentages and chi-square test. **Results :** The mean age of future retirees is 56.30 years old, females and married, but only few have graduate degrees. Respondents have started thinking about retirement already but have not prepared for it yet since their finances at present is intended for the education of their children. Their concepts about retirement are: being able to enjoy life, time to do the things they like and having time to pursue their hobbies. Preferred activities after retirement are: establish a business and take care of themselves; work for pay after retirement from their current job. Among the disliked aspects of retirement are: missing the camaraderie of their co-workers and having health problems. Significant relationship between the respondents' nature of work and their willingness to engage in paid work after retirement exists. Marital status of the respondents and their educational attainment has a significant relationship with the most disliked aspect of retirement. **Conclusion :** With these findings, the researcher recommends that future retirees must prepare for retirement to avoid the crisis associated with it. Pre-retirement planning is very important. **Keywords :** Retirement, Aging, Pre-Retirement Planning

PP25 S-357

ASSOCIATION BETWEEN MUSCULOSKELETAL PAIN AND PHYSICAL FITNESS IN COMMUNITY-DWELLING ELDERLY

Saori ANZAI¹, Hiroshi HAGA¹, Haruhiko HONDA², Shouzoh UEKI³ (1. Graduate School of Gerontology, J.F. Oberlin University, Japan; 2. Center for General Education, Tohoku Institute of Technology, Japan; 3. Faculty of Medical Science & Welfare, Tohoku Bunka Gakuen University, Japan)

Introduction : Purpose: To investigate whether musculoskeletal pain correlates to physical fitness according to site of pain in a community elderly dwelling in Japan. **Method :** Participants: 228 men and 950 women, 65 years and over, who are living in the community took part in this survey. Measurements: age, sex, economic, education, history of hospitalization in past years, pain (shoulder, knee, low-back), self-rated health, depression, Instrumental Activities of Daily Living(IADL), Motor Fitness Scale(MFS), time needed to Stand Up from a Long Sitting position on the floor (SULS). **Analysis:** To examine association between musculoskeletal pain and physical fitness, multiple linear regression analysis of which the dependent variable physical fitness (MFS, SULF) was used. And, Factors associated dependent variable at 5% significant level in univariable analysis entered into multiple linear regression analysis as independent

variables. In that regards musculoskeletal pain were categorized as “knee pain”, “low-back pain”, “shoulder pain”, “knee and low-back pain” and “shoulder, knee and low-back pain”, by site of pain. Results : MFS was significantly related to “knee pain (beta=-.129)”, “low-back pain (beta=-.157)”, “knee and low-back pain (beta=-.200)”, and “shoulder, knee and low-back pain (beta=-.062)”. SULF was significantly associated with “knee and low-back pain (beta=.133)”. Conclusion : It was suggested that the presence of shoulder pain does not affect physical fitness in community-dwelling elderly in Japan. Then it was also suggested that the presence of knee pain, low-back pain, and in particular duplicative pain of knee and low-back pain had an impact on physical fitness. Keywords : pain, physical fitness

PP25 S-358
IMPROVING SEXUALITY IN PERU TO HAVE AN ACTIVE AGING

Jaime LAMA VALDIVIA (*Geriatrics and Gerontology, Universidad Nacional Federico Villarreal, Peru*)

Introduction : Latin America and the Caribbean is a region consisting of 41 countries where 570 million people live. The aging of our population is progressive. In Peru, 9 % of the population is over 60 years old. Sexual health is considered as part of universal human rights. There are few studies about sexuality of latin american elders.

Method : Review of current medical and social literature in this region with emphasis in data of Peru. Results : Sexual behavior in this age depends on many factors, including health state, the availability of a partner, personality, social and cultural factors, education level, prior practices and satisfaction with life. At this age, most people find sex pleasurable, although many do not have privacy to practice it, because they are institutionalized or living with relatives. Most of them have not received information about sex. In our country, aging is accompanied in many cases by poverty, lack of job opportunities and social security, isolation and discrimination at the level of society and within families, with negative effects on sexual life. Conclusion : A new policy of public health and educational projects are necessary to enable the elderly to know the characteristics of human development and thus enjoy their sexuality as a strategy to achieving active aging. Keywords : Active Ageing Sexuality Elders

PP25 S-359
WHAT IS THE REALITY OF ACTIVE AGING PROGRAMS IN PANAMA REPUBLIC?

Cecilia Donderis LOUISON (*Geriatric Medicine, Panama University, Panama*)

Introduction : Latin America and the Caribbean is a region consisting of 41 countries where 570 million people live. The aging of our population is progressive. In Peru, 9 % of the population is over 60 years old. Sexual health is considered as part of universal human rights. There are few studies about sexuality of latin american elders.

Method : Review of current medical and social literature in this region with emphasis in data of Peru. Results : Sexual behavior in this age depends on many factors, including health state, the availability of a partner, personality, social and cultural factors, education level, prior practices and satisfaction with life. At this age, most people find sex pleasurable, although many do not have privacy to practice it, because they are institutionalized or living with relatives. Most of them have not received information about sex. In our country, aging is accompanied in many cases by poverty, lack of job opportunities and social security, isolation and discrimination at the level of society and within families, with negative effects on sexual life. Conclusion : A new policy of public health and educational projects are necessary to

enable the elderly to know the characteristics of human development and thus enjoy their sexuality as a strategy to achieving active aging. Keywords : Active Ageing Sexuality Elders

PP25 S-360
THE RELATED FACTORS OF SUICIDE ATTEMPT AMONG KOREAN ELDERLY

Hyunkyung LEE (*Dept. of Mental Health Research, Seoul National Hospital, Korea*)

Introduction : This study was conducted to investigate the related factors of suicide attempt among Korean elderly. For this purpose, this study was conducted to examine the relation of health, mental health, and socioeconomic status on suicide attempt among Korean elderly.

Method : This study was analyzed using raw data of the Korea National Health & Nutrition Examination Survey conducted in 2009. Collected data were analyzed by frequency, X2 test, and logistic regression. Results : First, sex, age, income, education level, marital status, economic status, drinking, smoking, stress, and depress were significantly associated with suicide attempt. Second, stress, depress, age, and education level have an impact on suicide attempt. Conclusion : The findings have reinforced the need for developing a mental health disease prevention program in Korea elderly with a more practical focus on suicide and mental health status. Keywords : elderly, mental health, suicide

PP25 S-361
ANALYZING ENERGY USE OF THE ELDERLY HOUSEHOLDS ASSOCIATED WITH HOME LIVING PATTERNS

Myoung Won OH, Mi Jeong KIM (*Department of Housing and Interior Design, Kyung Hee University, Korea*)

Introduction : With the shift to an ageing society, the number of the elderly households has been increased, thus fundamental studies on the elderly households are much needed for understanding and supporting them appropriately. The elderly’s cognitive and physical capabilities are getting reduced, accordingly their physiological conditions and sensory functions are getting weaken. Method : Given these situations, more pleasant and appropriate residential environments for the elderly are needed however many elderly have not got such residential environment due to insufficient information and economic conditions. Thus, it is essential to provide the elderly with a guideline for using the household energy effectively because the energy use is one of the critical factors affecting the residential environment. Results : The elderly’s households can be divided into several groups according to economical, physical and social levels, accordingly, home living patterns of each group might show different characteristics from those of other groups. Further, the range of the pleasant residential environments would be different according to the home living patterns. Thus, we expect that home living patterns might affect the energy use in the elderly households because the energy consumption in households would be changed according to the living factors of the inhabitants in their homes. Conclusion : This research classifies home living patterns in elderly households and investigates their energy use in households in each home living pattern group. This empirical research could be a basis for the guideline of the energy use in elderly households. Keywords : Energy use, Healthy home living

PP25 S-362
EXPLORING INFORMATION APPLIANCES, INTELLIGENT HOUSEHOLD OBJECTS AND AUGMENTED FURNITURE SUPPORTING THE ELDERLY’S HEALTHY LIVING

Mi Jeong KIM, Myung Eun CHO, Myoung Won OH (Department of Housing and Interior Design, Kyung Hee University, Korea)

Introduction : In the era of information technology, homes we live in have been transformed into computing environments to support daily living of the inhabitants. The potential of the smart home technologies could further be emphasized for enabling the elderly's autonomous living in their own residence. The elderly's cognitive and physical abilities are declined, thus more systematic assistances are needed through the technology mediated supports. **Method :** This research focuses on information appliances, intelligent household objects and augmented furniture, which provide supports to the elderly's quality of home living. For example, the elderly's memory loss could be tempered by a reminding display creating a context for remembering. Further, we can add new communication capabilities to household notice board or layering interactive functions onto existing appliances for supporting the elderly's healthy living. This research aims to explore the potential of technological infrastructure of the domestic settings for the health smart home. **Results :** There has been a large quantity of research efforts and inventions in health smart home for elderly. It is necessary to have a comprehensive and thorough review of the recent significant works in this area. Further, to identify promising research areas and future direction for the development of the health smart homes, we explore new types of interaction, new areas of application and new forms of devices being capable of implanting such intelligences into our home settings. **Conclusion :** The computational residential environment could be aware of contexts of themselves and its inhabitants thus provide more appropriate services which satisfy the elderly's needs and desires. **Keywords :** smart home, healthy home living

PP25 S-363

RESIDENTIAL ENVIRONMENTS, HEALTH AND SATISFACTION THAT CONCERN THE ELDERLY

Myung Eun CHO, Mi Jeong KIM (Department of Housing and Interior Design, Kyung Hee University, Korea)

Introduction : As the period in which people live as being aged over 65 has increased, much research on the elderly have been carried out in various areas from multiple perspectives. However, most of research in the architecture domain has focused on housing settings for the elderly that are pleasant and safe environments to support the declined capabilities of the elderly in the process of aging. There is a lack of research dealing with the elderly's psychological aspects other than physical factors. Further, age is often used as the major determinant being the causal variable of health, behavior and competence. **Method :** However, there is a growing emphasis on the idea that environmental factors account for variation in the way people are getting older. This research aims to identify the effect of such psychological characteristics as well as environmental factors on the elderly's satisfaction of their own housings. **Results :** It is noted that environmental factors such as socio-recreational aids, community accessibility, and social climate could influence personal factors such as health, memory and depression etc. among the elderly's living in residential settings. Further, socio-demographic factors such educational and income levels are also associated with the elderly's health. **Conclusion :** Based on the initial study, this research developed a customized questionnaire and conducted an empirical study using it. The result is being analyzed using SPSS and will be presented to clarify the influencing variables for the elderly's satisfaction of their living in their residence. **Keywords :** satisfaction, psychological factor

PP25 S-364

PREVALENCE AND ASSOCIATED FACTORS OF FUNCTIONAL DISABILITY IN A RURAL ELDERLY CHINESE COHORT

Ming YANG, Li LUO, Birong DONG (Department of Geriatrics, West China Hospital of Sichuan University, China)

Introduction : The prevalence of functional disability increases with advancing age. However, it is under-diagnosed and under-treated in China. The prevalence of functional disability in the elderly is unclear in rural China. **Method :** We conducted a cross-sectional, epidemiological study, including people older than 60 years. The study population was obtained from the total of cases aged 60 years and older registered in a census in Suining, China (n = 2,689), taking a randomized sample of 550 participants. From September 2011 to January 2012, a questionnaire was performed with face-to-face interviews, including the following variables: sociodemographic variables, clinical factors, functional disability (assessed using Barthel and Lawton indices), cognition (assessed using Mini Mental States Examination) and depression (assessed using Geriatric Depression Scale). **Results :** 550 older persons (76.3 years of age, 43.7% male) were included in the study. The prevalence of disability in activities of daily life (ADL) was 10.9%, and in instrumental activities of daily life (IADL) of 23.7%. Logistic regression analysis indicated that age (OR=2.07), female sex (OR=1.11), number of chronic diseases (OR=3.42), previous history of stroke (OR=3.88), previous history of fracture (OR=2.78), and cognition impairment (OR=2.64) were associated with ADL disability. In addition, age (OR=1.87), number of diseases (OR=1.38), previous history of stroke (OR=2.45), depression (OR=1.35) and cognition impairment (OR=2.83) were the correlators to IADL disability. **Conclusion :** ADL and IADL disability are common in rural elderly Chinese. These data showed key risk factors for functional disability in this population. More attention should be paid to this special population. **Keywords :** functional disability, elderly

PP25 S-365

CLINICAL NURSES' AGING ANXIETY AND ATTITUDE TOWARD THE ELDERLY

Mikyung JEON¹, Jung A KIM² (1. Graduat School of Information in Clinical Nursing, Hanyang University, Seoul Medical Center, Korea; 2. Division of Nursing, Hanyang University, Korea)

Introduction : This descriptive correlational study aimed to identify the clinical nurses to orrelation U (AA) and attitude towards the elderly (AE) and to examine the relationship between two variables. **Method :** Study subjects were 170 nurses working at S hospital in Seoul. Data was collected from October 17, 2012 to October 23, 2012 by using structured survey. Anxiety about Aging Scale (AAS) and Aging Semantic Differential Scale (ASDS) were used to collect data. Collected data were analyzed on SPSS/WIN 18.0. **Results :** The mean score of AA was 59.93ean s. In sub-categories, mean score of 'fear of loss' was highest (15.78st (o)). The mean score of AE was 84.19e mean, positive questions were 2 questions (wise, reliable) and negative questions were 7 (conservative, sick, dependant, inactive, unproductive, unattractive, grouchy). There was positive correlation between AA and AE. **Conclusion :** The findings of this study showed that the higher AA was, the more negative AE. It is essential to develop an educational program for reducing AA which is originated from distorted comprehension of aging, and to provide quality nursing to the elderly with positive attitude. The education and geriatric nursing practice reinforcement regarding aging and geriatric nursing is required since role of nurse for the elderly patients is expanding at the aging society. **Keywords :** Aged, Aging Anxiety, Attitude toward

elderly

PP25 S-366

DETERMINANT FACTORS OF AGING DISABILITY IN JAKARTA INDONESIA

Charles SURJADI¹, Regina Satya WIRAHARDJA² (1. *Public Health and Preventive Medicine, Atmajaya University Faculty of Medicine Jakarta, Indonesia*; 2. *Public Health and Preventive Medicine, Atmajaya Catholic University Faculty of Medicine, Indonesia*)

Introduction : As part of effort to maintain healthy and active aging in Jakarta we analyzed the determinant factors of aging disability at Jakarta. Method : A total of 1671 older persons were selected at random as respondents. The respondents were asked of their age character, sex, number of household members, socio-economic status, and disability status using questionnaire of disability (WHO ICF, 2003). Univariate analysis and bivariate analysis using chi square test with $P < 0.05$ was performed to know factors significantly related to disability among aging. Multivariate analysis using logistic regression was performed to the variables significantly related in the bivariate analysis to look for ultimate model to explain determinant factors of disability among aging. Results : Multivariate analysis with logistic regression gave the result that elder person with disease related to paralyze and injury OR 2.1 (1.04-4.38), had mental health problems OR 6.4 (2.7-15.1) ($p = 0.000$), with low socio-economic 6.8 (2.1-22.2) and did not do regular physical activities daily OR = 5.1 (1.2 - 20.4), were more likely disabled. Conclusion : The result indicated the important of some diseases prevention program, physical, activities regularly, attention to socio-economic status, single or lonely elder person to prevent disability among elder persons. And effort to facilitate activities to have healthy aging community in Jakarta. Keywords : disability aging

PP25 S-367

INTER-GENERATIONAL COMMUNICATION BREAKDOWN: AGE-RELATED DIFFERENCES IN PROCESSING OF EMOTIONS IN SPEECH

Boaz M. BEN-DAVID¹, Namita MULTANI², Vered SHAKOOF³, Pascal H.H M. VAN LIESHOUT⁴ (1. *Psychology, Speech-Language Pathology, Interdisciplinary Center (IDC) Herzliya University of Toronto, Israel*; 2. *Graduate Department of Rehabilitation Studies, University of Toronto, Canada*; 3. *Psychology, Interdisciplinary Center (IDC) Herzliya, Israel*; 4. *Speech-Language Pathology, University of Toronto, Canada*)

Introduction : The identification of emotions in spoken language is an important part of social interaction. When the sentence "I hate you so much!" is spoken in a happy tone, would this be interpreted as angry or happy? This demonstrates the complex interaction between lexical content and prosody (tone of voice) in spoken language. When interpreting emotions, one may rely either on the lexical content, the prosody or both. Previous studies suggest that young adults may focus on the prosody of the spoken utterance, but would older adults react in the same fashion? Method : Stimuli: 50 recorded sentences made up of 10 lexical sentences in each of the following five semantic categories: Anger, Fear, Happiness, Sadness and neutral. These were recorded in 5 different prosodies (Anger, Fear, Happiness, Sadness and neutral), such that each lexical category was represented twice in each of the tested prosodies, generating a 5X5 matrix. Method: 24 younger adults and 24 older adults were asked to rate the emotions presented in these sentences in different experimental blocks. Results : While for young adults, the prosody is the main source for rating emotions in speech, older adults rely on a more equal combination of lexical content and

prosody. For example, younger adults rated a lexically-angry sentence spoken in a happy prosody as exclusively happy, whereas older adults rated it as equally happy and angry. Conclusion : Older adults may utilize different strategies in communication than younger adults. Our results suggest the need to adapt spoken communication with older adults to generate a senior-friendly environment. Keywords : Speech, communication, language

PP25 S-368

IMPACT OF FACTOR ANALYSIS TO INVESTIGATE THE LONG-TERM CARE INSTITUTIONS

Hailun CHAO¹, Su-Feng TSENG², Ming-Lun HSIEH³, Chien-Hung LIN⁴ (1. *Department of Health Care Administration, Chung Hwa University of Medical Technology, Taiwan*; 2. *Department of Senior Citizen Service Management, Chia Nan University of Pharmacy & Science, Taiwan*; 3. *Department of Health Care Administration, Chia Nan University of Pharmacy & Science, Taiwan*; 4. *Diagnostic Radiology, Chi Mei medical center, Taiwan*)

Introduction : Taiwan Country household registration the elderly population about total of 2.45 million 7,648, total population 10.63%, aging index of 65.05%, show increased. With the increase of the elderly population, the need of long-term care elderly will also extend. According to the Taiwan-Fujian area Ministry of the Interior 2005 years the elderly status of the investigation, elderly considered ideal living, there more than 60% of the 65-year-old elderly people want live together with their children, not currently living with children 43% of the elderly, one hope of living together with their children; but lower level of education were more likely to want live with their children. Method : This study surveyed total 421 people, questionnaire survey use that SPSS statistical analysis: Age distribution of 136 (32.3%) aged 41 to 50 years for the highest. Results: Quality of professional services capabilities will affect the facility selection, professional service capabilities and service quality, the attitude all the significant differences. Conclusion : Care for agencies should strengthen transparency quality information, people need understand quality care for through proper channels, and select the appropriate care facility according to their needs, employer should construct a comprehensive model of care to meet the future demand for care for elderly. Keywords : Quality of service, Long-term care facilities, Satisfaction

PP25 S-369

ANALYSIS ON THE INFLUENCE FACTORS OF THE DESIRED LIVING ARRANGEMENTS FOR THE ELDERLY

Duan YUSHAN (*Institute of Gerontology, Renmin university of China in Beijing, China*)

Introduction : As the development of ageing, the number of old people will rise rapidly throughout China. The type of household in which the elderly desire to live will influence the choice of the care for the elderly and well-being in their later life. This article makes a study of the desired living arrangements of the elderly in China based on the survey of National Population and Health Survey for the Elderly conducted in 2008. Method : Descriptive Statistic. Comparing the state of the actual living arrangements and the desired living arrangements for the elderly; conducting univariate analysis of the desired living arrangements for the elderly; Multiple Logistic Regressions. Independent variables is the desired living arrangements of the elderly which include three options: living alone (or only living with spouse), living with child or children and living in nursing home. Results : There exists a correlation between actual living arrangements and desired living arrangements. The model results suggests that age, sex,

marriage, education level, self-report health and source of income have significant impacts on the desired living arrangements. Conclusion : The desired living arrangements of part of the elderly did not quite fit in with their actual living arrangements. Compared with actual living arrangements, more elderly are like to living alone or living in nursing home. Compared with living with child or children, the elderly who are lower aged, male, hanzu, married, more healthy, self-sufficient and living alone (or only living with spouse) are more likely to desired to live alone (or only living with spouse); the elderly who are married, living alone or living in nursing home, less healthy are more likely to desired living in nursing home. Keywords : the Elderly, Actual Living Arrangements, Desired Living Arrangements

PP25 S-370

A SURVEY ON DEMENTIA CARE LEADERS TRENDS WHO COMPLETED THE TRAINING PROGRAM IN TOKYO DEMENTIA RESEARCH AND TRAINING CENTER

Koichi NAKAMURA (*Training Department, Tokyo Dementia Research and Training Center, Japan*)

Introduction : Tokyo Dementia Care Research and Training Center has been carried out training program for dementia care leaders that was appointed by the Ministry of Health, Labor, and Welfare since 2001. They have become a trainer of the training program for dementia care that was carried out in each prefecture. The aim of this study is to clarify the trends of dementia care leaders in training program carried out in each prefecture. Method : Targets of this survey were 526 people who completed the training program in Tokyo Dementia Care Research and Training Center. This research was carried out by mail questionnaire. Major Questions were the reason why they could fill the role, or could not fill the role as a trainer of training program in 2011. Results : The return rates of this survey was 348 people (65.90%). 281 people (80.7%) of respondents answered that they have filled the role as a trainer of training program in each prefecture. 37 people (10.6%) answered that they have not participated as a trainer of training program, and as the reason, The duties of their corporation are busy is the largest in number of answer. Conclusion : The result of this survey demonstrated that most dementia care leaders filled the role in the training programs in each prefecture as a trainer. Keywords : dementia care leaders

Wednesday June 26th

PP26 B-001

THE EFFECT OF COCHINCHINA MOMORDICA SEED EXTRACT ON GASTRIC ACID SECRETION AND MORPHOLOGIC CHANGE IN AGED RAT STOMACH

Hyun Jin JO¹, Nayoung KIM¹, Ryoung Hee NAM¹, Hyun CHANG¹, Joo-Hyon KIM², Ji Hyun PARK³, Jung Mook KANG³, Dong Ho LEE¹, Hyun Chae JUNG³ (*1. Department of Internal Medicine, Seoul National University Bundang Hospital, Korea; 2. Life Science R&D Center, SK Chemicals, Korea; 3. Department of Internal Medicine and Liver Research Institute, Seoul National University College of Medicine, Korea*)

Introduction : Cochinchina Momordica Seed Extract (SK-MS10) has a gastric protective effect. We aimed to assess the effect of SK-MS10 on gastric acid secretion with morphologic changes in the aged rat. Method : Acid secretions were evaluated in the male F344 rats of four different ages (6-, 31-, 74-wk and 2-yr). The 31-wk-old rats were divided to 3 groups and continuously administered chow containing

vehicle, SK-MS10 and lansoprazole, respectively. At the age of 74 weeks and 2 years, basal and stimulated acid was measured and the expression of mRNA and protein of H⁺-K⁺-ATPase were determined. The area of connective tissue of lamina propria was measured. Results: Basal and stimulated gastric acid significantly decreased and connective tissue of lamina propria increased with age. mRNA and protein of H⁺-K⁺-ATPase significantly decreased with age. However, 74-wk-old rats in the SK-MS10 group had higher stimulated gastric acid secretion than those in the vehicle and lansoprazole groups. In 2-yr-old rats of SK-MS10 group there was no increase of connective tissue. Conclusion : As SK-MS10 kept the capacity of acid secretion as well as connective tissue area to comparable to young rats, it might valuable to perform further research regarding mechanism of SK-MS10 as an anti-aging agent in the stomach. Keywords : Gastric acid, Cochinchina Momordica seed, aging

PP26 B-002

LIFE SPAN MODULATION BY ALT1, ALANINE-METABOLIZING ENZYME, IN SACCHAROMYCES CEREVISIAE

Sung-Lim YU¹, Mi-Sun KANG², Ho-Yeol KIM², Choco Michael GOROSPE³, Sung-Keun LEE³ (*1. Inha Research Institute for Medical Sciences, Inha University, Korea; 2. Department of Pharmacology, Inha University, Korea; 3. Department of Molecular Biomedicine, Inha University, Korea*)

Introduction : Importance of alterations in metabolic pathways has been implicated as important factors affecting life span. However, the determination of specific pathways and enzymes involved in life span remain largely unexplored. Meanwhile, caloric restriction (CR) has been known to extend life span of many species. In yeast, CR extends both replicative life span and chronological life span. Method : Using metabolomics and genetic approaches, we identified metabolites affecting CR-induced chronological life span in yeast, *Saccharomyces cerevisiae*. Results : Among 23 metabolites with altered profile by CR, we found that alanine level is inversely correlated with yeast chronological life span. Later analysis using deletion mutant of ALT1, the gene encoding the major alanine transaminase, revealed that life span modulation by ALT1 is TOR1-independent. Further studies showed that *alt1Δ* completely suppresses cytochrome C oxidase subunit 2 expression. Conclusion : This study shows the importance of small molecule metabolism and relevance of metabolomics combined with genetic approach in the mechanistic studies in life span. Keywords : yeast, metabolites, ALT1

PP26 B-003

KOREAN MISTLETOE (VISCUM ALBUM COLORATUM) EXTRACT EXTENDS THE LIFESPAN OF INVERTEBRATES

Shin-Hae LEE, Kyung-Jin MIN (*Department of Biological Sciences, Inha University, Korea*)

Introduction : Dietary restriction (DR), a reduction of food intake without malnutrition, is one of the best reliable interventions for retarding of the aging process. Several pharmacological interventions such as resveratrol, rapamycin, and metformin and several plant extracts such as blueberry and aloe vera have been also investigated for the DR mimetic pharmacological intervention. However, the underlying mechanisms and species-specificity of these extracts are not tested so far. Method : *Viscum album coloratum* (Korean mistletoe; KM) is a semi-parasitic plant growing on various trees, which has been shown to possess a variety of biological functions such as immunomodulating, apoptosis-inducing, and anti-tumor activity. However, there is no information about how the mistletoe extract

affects the length of life of the host. In this study, in order to examine the effect of mistletoe extract on the longevity of the host, we investigated whether Korean mistletoe extract (KME) is able to extend the lifespan in experimental models, *Caenorhabditis elegans* and *Drosophila melanogaster*. Results : When animals were given the diet containing KME, mean survival time of both worms and flies showed significantly higher than that of the control. In addition, KME supplement led to the increase of the resistance to heat shock stress and cold shock stress. Furthermore, KME supplement did not show the additive lifespan extension effect by dietary restriction and increased the expression of sir2. Conclusion : These results suggest that KME extends the lifespan of invertebrates as a putative DR mimetics. Keywords : Korean mistletoe extract, Lifespan, Invertebrates

PP26 B-004

GENOTYPE DETERMINES THE CLINICAL FEATURE IN CADASIL

Sanghee KIM¹, Bong-Hee JEON², Na-Ri KANG², Jae-Sung RYU², Moon-Doo KIM², Young-Suk KWAK², Chang-In LEE², Joon-Hyuk PARK² (1. Department of Psychiatry, Jeju National University, Korea; 2. Department of Psychiatry, Jeju National University Hospital, Korea)

Introduction : Cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy (CADASIL) is an inherited small vessels disease of the brain caused by mutations in the Notch3 gene and the subtype is classified by genotype. CADASIL is characterized by recurrent stroke, transient ischemic accident, migraine, cognitive impairment, and mood disturbances. It is suggested that the clinical feature is associated with the genotype of CADASIL. In this study, we aimed to investigate whether a relationship exists between the genotype and the clinical feature. Method : 53 patients with CADASIL (34 men, 64.2%) were included in the study and the subtype is confirmed by blood gene test and skin biopsy test. Neuropsychiatric symptoms were evaluated using M.I.N.I.. Cognitive function was assessed by MMSE-KC, and quality of life by SF-36. Results : 38 subjects (71.7%) were R544C heterotype (Group A), 13 subjects (24.5%) were gene negative and biopsy positive type (Group B), 2 subjects (3.8%) were R578C heterotype. The common neuropsychiatric symptoms were different by genotype. While stroke (31.6%) and headache (26.3%) was common in Group A, brain hemorrhage (23.1%) and seizure (15.4%) was common in Group B. Group A had a significantly higher frequency of depressive disorder compared to Group B (94.12% vs 5.88%). The mean MMSE-KC score of Group A was higher than that of Group B (23.37±5.41 vs 22.15±3.24), which didn't reach a Conclusion : The results show that stroke, headache and depressive disorder is more common in Group A and brain hemorrhage, seizure and cognitive impairment is more common in Group B. This results indicate that the clinical feature is associated with the genotype of CADASIL. Keywords : CADASIL, neuropsychiatric symptom, depressive disorder, cognitive impairment

PP26 B-005

EFFECTS OF ENDOCRINE DISRUPTORS ON AGING IN RATS

Tadashi SHINKAI, Koji FUKUI (Bioscience and Engineering, Shibaura Institute of Technology, Japan)

Introduction : Tetrachlorodibenzodioxin (TCDD) and bisphenol A (BPA) represent a family of ubiquitous environmental pollutants and are well known as environmental endocrine disruptors and they change

multiple endocrine systems in the living body. Moreover, it has been reported that exposure to the chemicals causes oxidative stress in a variety of animal models and there is a suggestive consideration that they may have influence on aging. Method : In order to investigate the lifespan associated with the endocrine disruptors, we gave a single subcutaneous injection of TCDD (100ng/kg body weight) and BPA (100ug/kg body weight) to pregnant Wistar rats on gestational day 19 and studied effects of a relatively low dose of the chemicals on mortality, body weight and morphological changes in male and female offspring. Results : The mean lifespan of the non-treated animals were 27.1±4.7 months in male and 30.8±5.2 months in female. The lifespan and the body weight decreased in TCDD treated rats. Furthermore, exposure of low dose of TCDD increased apoptotic cells in the rat brains. These results indicate that TCDD which was transferred into the offspring through the placenta and the mammary gland caused the lifespan-shortening. On the other hand the changes of lifespan were not recognized between BPA treated rats and controls. But hypothyroidism was observed in BPA treated animals. It indicates that BPA was also transferred from the mother into the offspring. Conclusion : Our finding suggests that the endocrine disruptors were transferred from the mother into offspring and that may induce modulation of homeostatic functions and cause a change in aging. Keywords : endocrine disruptor, homeostasis, aging

PP26 B-006

A RARE CASE OF MENINGOCOCCAL SEPTICEMIA Y IN THE ELDERLY IN FRANCE

Abrar-Ahmad ZULFIQAR, Tommy COURTEL, Moustapha DRAME, Jean-Luc NOVELLA (Department of Internal Medicine and Geriatric, CHU Reims, France)

Introduction : *Neisseria meningitidis* is a leading cause of bacterial meningitis world-wide. Serogroup Y has historically been uncommon in France. We report a rare case of meningococcal septicemia serogroup Y in a patient aged 91 years. Method : A patient, female, 91 years, followed for pulmonary embolism and cerebral ischemic stroke, was admitted for hyperthermia. Neurological examination didn't find a stiff neck, without purpuric skin. The rest of the clinical exams found no infectious call points. A biological inflammatory syndrome was found. Chest X-ray and bacteriological examination of urine were normal. Aerobic blood cultures isolated the strain serogroup Y *Neisseria meningitidis*, while the study of the spinal fluid were sterile. We noted a complete absence of hypocomplementemia. Meningococcal septicemia by serogroup Y was diagnosed, leading to an effective antibiotic and chemoprophylaxis for contacts. We noted a clinical and biological improvement. Mandatory declaration was made. Results : *Neisseria meningitidis* serogroups B and C have been responsible for the majority of invasive meningococcal disease in France. Invasive infections caused by other capsular groups like Y are infrequent and sporadic in France. Recently an increase of serogroup Y has been noted in France. Septicemia forms are very common for serogroup Y. Invasive forms related to serogroup Y are very often associated with complement deficiency and functional or anatomic asplenia, unlike in the elderly. Serogroup Y are often isolated in the elderly. These strains are phenotypically and genotypically heterogeneous. Serogroup Y strains are predominantly clonal complex ST-23, but with several phenotypes and several combinations of VR1, VR2 and Fet-a. Conclusion : The peculiarity of this case is that frequency of infectious caused by serogroup Y is low in France and also in the elderly. Keywords : *Neisseria meningitidis*; Serogroup Y; Elderly

PP26 B-007

A RETROSPECTIVE STUDY ON TREATMENT OUTCOMES OF SINGLE IMPLANTS IN THE MOST POSTERIOR AREA IN ELDERLY PATIENTS

Byung-Ock KIM (*Periodontics, Chosun University Dental Hospital, Korea*)

Introduction : Aim of study is to evaluate the long-term outcomes of single implants in the most posterior area in elderly patients. **Method :** From June 2001 through December 2012, 457 patients were treated at the Department of periodontology, Chosun University Dental Hospital, Gwang-ju, Korea were identified. A retrospective study design was adopted. Patients gender and age, follow-up duration, distribution of the implants according to the location, inserted implants according to implant system, the inserted implants by diameter and length, cumulate survival rates for total implants, mean marginal bone loss were evaluated. **Results :** 457 patients (289 male and 168 female) were eligible for the present study. 457 implants were inserted in the most posterior area. The diameter and length of the most implants appeared from 5 to 6 mm diameter and 11 to 12 mm length. During the follow-up, 2 implants in 2 patients were failed. A cumulative survival rate was 99.56%. **Conclusion :** The single implant in the most posterior area of jaw in elderly patients is a successful treatment modality and has a positive prognosis as well. **Keywords :** single implant, posterior area, elderly patients

PP26 B-008

AQUATIC PHYSIOTHERAPY IN ELDERLY DEPENDENTS

Debora Melo SIGNORETTI¹, Melina Grossi VENDITTI², Vivian SOUZA³, Gabriela SATO³, Valeria Aparecida Lopes CRISCIMANI⁴, Luciana ALVES⁵, Flavia Renata TOPICIO⁶, Miriam Ikeda RIBEIRO⁷ (*1. Physicaltherapy, Residencial Albert Einstein, Brazil; 2. Physiotherapy, Residencial Israelita Albert Einstein, Brazil; 3. Coordination, Residencial Israelita Albert Einstein, Brazil; 4. Senior Nurse, Residencial Israelita Albert Einstein, Brazil; 5. Nurse, Residencial Israelita Albert Einstein, Brazil; 6. Geriatric, Residencial Israelita Albert Einstein, Brazil; 7. Manager, Residencial Israelita Albert Einstein, Brazil*)

Introduction : The objective of this pilot was to assess the real benefits of including resident dependents, with cognitive impairment in the aquatic physiotherapy of Residencial Israelita Albert Einstein, in order to provide assistance to the Immobilization Syndrome effects. **Method:** This study was developed in a CCRC with 2 female residents, octogenarian, dependents and diagnosed with dementia. It was necessary the involvement of a multidisciplinary team: social assistant, nurse (1 nurse and 1 technician), 2 caretakers, nutritionists, physiotherapists and geriatrician. The aquatic physiotherapy session included 30 minute length exercises for the upper and lower limbs, assisted gait and global passive stretching, and only two sessions for each person per week. **Results :** The elderly female were less responsive to oral commands, with functional impairment and maximum assistance for transferences and mobility, which hindered the physiotherapy assistance in the ground. During the aquatic physiotherapy, the elderly female present themselves more alert, responding to simple command, ambulating with moderate assistance and orally and in their facial expressions showing their sensations to the water and the physiotherapist touch. After the therapy, the caretakers and nurse technicians reported better disposition to hygiene, transference and mobilization of the elderly female. **Conclusion :** The aquatic physiotherapy has benefitted elderly female dependents on motor abilities and with cognitive alterations, enabling the sensorial and functional stimulation, preventing deformities, deleterious immobilization effects, benefitting the patient's neurological,

psychological status and wellness. **Keywords :** elderly, immobilization effects, Aquatic Physiotherapy

PP26 B-009

ANALYSIS OF FUNCTIONAL PERFORMANCE, HANDGRIP STRENGTH AND BALANCE IN ELDERLY ASSISTED BY A CCRC

Debora Melo SIGNORETTI¹, Gabriela SATO², Miriam Ikeda RIBEIRO³, Lilian Tiemi SONODA⁴, Ana Carla Mota CARVALHO⁵, Nivia PIRES⁵, Fatima Cristina Martorano GOBBI² (*1. Senior Physical Therapy, Residencial Israelita Albert Einstein, Brazil; 2. Coordinator, Residencial Israelita Albert Einstein, Brazil; 3. Manager, Residencial Israelita Albert Einstein, Brazil; 4. Physical Therapist, Residencial Israelita Albert Einstein, Brazil*)

Introduction : The objective assess the elderly profile based on motor performance and analyze the assistance approach and physiotherapy assessment in a CCRC. **Method :** Through SPPB tools, the study provided, with international recommendation for risk assessment of functional loss in elderly, where grades lower than 9 show higher probability of falls, hospitalization, functional decline and death; the HG, handgrip evaluation test, related to the risk of falls and functional loss when lower than 17kgf among elderly and the TUG, evaluating the performance in the execution of daily tasks. **Results :** After two year attendance and functionality score, we have observed that elderly independents have shown improvement in SSPB and TUG motor performance, and have maintained the HD measure. The semi-dependents and the dependents have maintained the functional status being unable to perform SPPB and TUG, but have improved the HD score. **Conclusion :** According to deleterious effects of frailty spiral, this study is proposing to establish risk profiles for biological frailty, assess the efficiency of tools based on functionality. It is suggested that intervention by means of physical exercises, individual or group physiotherapy have improved the performance of elderly independent group and in the semi and dependent groups the functional status was maintained, without worsening the functional decline or by variables of Frailty Syndrome. **Keywords :** elderly, long term care, motor performance

PP26 B-010

PROPOSAL FOR A MODEL OF PHYSIOTHERAPY ATTENDANCE TO THE ELDERLY DEPENDENT IN CCRC (COMMUNITY CARE RETIREMENT COMMUNITY)

Debora Oliveira Melo SIGNORETTI¹, Camila SOUZA², Caroline Santos CARUZO³, Melina Grossi VENDITTI³, Gabriela SATO⁴, Miriam Ikeda RIBEIRO⁵ (*1. Senior Physical Therapist, Residencial Israelita Albert Einstein, Brazil; 2. Physical Therapist, Residencial Israelita Albert Einstein, Brazil; 3. Physical Therapist, Residencial Israelita Albert Einstein, Brazil; 4. Coordinator, Residencial Israelita Albert Einstein, Brazil; 5. Manager, Residencial Israelita Albert Einstein, Brazil*)

Introduction : The objective apply a new model of physiotherapy attendance and multidisciplinary assistance to the elderly dependent (cognitive and/or motor) in a CCRC, aiming the quality in the assistance and prevention of deleterious effects of Geriatric Syndromes, Immobilization Syndrome among others. **Method :** Developed in Residencial Israelita Albert Einstein, through the medical routing for the practices held by physiotherapist with respiratory, geriatric, aquatic rehabilitation expertise and in palliative care aiming the comfort, humanization, rehabilitation and maintenance of the functional capacity. The elderly were assessed by an interdisciplinary team and individually evaluated, in order to

determine the assistance and the physiotherapy action plan in group and/or individually, in which the gerontic can be benefitted. Results : After two months of intervention, it was observed the scheduling adequacy and the absence of delay, concomitantly the productivity of the physiotherapists have increased, enabling an improvement in efficiency of the interdisciplinary demands. One hundred thirty six attendances of motor and respiratory physiotherapy were held in the month of September and 16 sessions of aquatic rehabilitation, compared to 76 attendance in the month of August, which denotes the need for a specific physiotherapist for this profile of age. Conclusion : The value of the physiotherapy assistance for elderly dependents has diminished the index of hospitalization, respiratory and urinary infections and, furthermore, the improvement in mobilization and handling of the elderly, with humanization and individualization in the intervention level. Keywords : Elderly, Physiotherapy, Humanization

PP26 B-011

THE EFFECTS OF MOXIBUSTION THERAPY ON CHRONIC BACK PAIN AND DISABILITY OF DAILY LIVING ACTIVITIES IN ELDERLY MEN

Hye Sook RYU¹, Kyung Sook PARK² (1. Major in Gerontological Nursing, Red Cross College of Nursing Chung-Ang University Graduate School, Korea; 2. Major in Gerontological Nursing, Prof. Red Cross College of nursing, Chung-Ang University, Korea)

Introduction : This study was attempted in order to verify the effects of moxibustion therapy on elderly men's pain and disability of daily living activities. Method : A research design is quasi-experiment with pre-post design in nonequivalent control group. As for data collection and experimental treatment, it randomly sampled totally 50 people with 24 people for the experimental group and 24 people for the control group who appeal for chronic back pain and disability of daily living activities among elderly men aged over 60 who visited 4 senior centers where are located in Namyangju city from October 25, 2012 to November 20, 2012. Experimental treatment was carried out moxibustion therapy totally 12 times by 3 times for 4 weeks in the experimental group. As for a research tool, the measurement of pain level was used VAS in Cline, Herman, Shaw, Morton(1992). A measurement tool for disability of daily living activities was used Oswestry's Disability Index. Results : 1) Hypothesis 1 : The hypothesis was supported as saying that "pain level in the experimental group with execution of moxibustion therapy will reduce more than the control group without execution"(F=40.971, p=0.000). 2) Hypothesis 2: The hypothesis was supported as saying that "disability level of daily living activities in the experimental group with execution of moxibustion therapy will reduce more than the control group without execution"(F=104.881, p=0.000). Conclusion : This study examined a change in pain relief level and in disability level of daily living activities following 4 weeks targeting elderly patients who appeal for chronic back pain. Keywords : back pain, moxibustion therapy, elderly men's pain

PP26 B-012

EFFECT OF CHRONIC INCLINE WALKING ON TRUNK MUSCLE CROSS SECTIONAL AREA IN FEMALE SENIORS

Hyo Jeong KIM (Aging Research Center, Korea National Sport University, Korea)

Introduction : The present study was performed to investigate the effect of chronic incline walking on trunk muscle cross sectional area (CSA) in female seniors. Method : Healthy thirty females aged 62-68 years old were recruited from the general community and divided into three groups, control(n=10), level walking(n=10), and incline

walking(n=10) group, as their regular exercise pattern. A visual analogue scale (VAS) and a medical history questionnaire were used as a survey of health status. Magnetic resonance images of psoas, multifidus and elector spinae muscle was obtained between the fourth (L4) and fifth (L5) lumbar. Results : We hypothesized that the demand of mechanical change with incline walking would produce greater resistant-like stimulation than level walking. The psoas major CSA of incline walking group was 9.0% higher than control and 4.9% higher than level walking group with a 5.1% difference between control and level walking group(p<.01). In the CSA of multifidus, a 11.5% and 11.9% difference was observed in incline and level walking group, respectively. The CSA of elector spinae was not significantly different among groups. The total trunk muscle CSA was significantly correlated with age(-3.33, p<.01), weight(0.29, p<.05), exercise frequency(0.32, p<.05), and exercise experience(0.33, p<.01). Conclusion : These results suggest that the chronic incline walking positively effect on the CSA of trunk muscle in senior women. Keywords : aging, walking, muscle cross sectional area

PP26 B-013

SPECIFIC ANTI-AGING INTERVENTION CAN PREVENT AND ABROGATE NON-PATHOLOGICAL SARCOPENIA

Alexander KHALYAVKIN¹, Viacheslav KRUTKO² (1. Kinetics of Biological Processes, Inst of Biochem Physics, RAS & Inst for Systems Analysis, RAS, Russia; 2. Systems Analysis and Information Technologies in Medicine and Ecology, Institute for Systems Analysis of RAS, Russia)

Introduction : The major reason which leads to age-related immobility is non-pathologic sarcopenia during natural aging process. Recent findings indicate that normal sarcopenia strongly depends on parameters of intercellular milieu, which is frequently disturbed due to dysregulation problems of senescent individual. For this reason general anti-aging intervention in addition to adequate mobility and exercise must be useful for prevention and cure non-pathological weakness and immobilization. And the main objective of our research is to confirm via consideration of up-to-date findings the high plasticity of aging process as well as to reveal a possibility of its deceleration and even reversibility. Method : For this reason we used the critical analysis of the array of published findings and our interpretation of these findings in order to unite at the one conception many separate and various data obtained from the molecular level up to the level of population. Results : A heterochronic parabiosis reveals that senescence is an actively controllable process. Accumulated facts are compatible with the hypothesis that living conditions exist which are conducive to a significant deceleration of the human aging due to more adequate and stable functioning of control systems of organism. Moreover the newest findings indicate that in adequate internal milieu even senescent stem cells, mitochondria, lens, mature neurons etc. can fully restore lost status quo. Conclusion : As vast majority cases of age-depended weakness and immobility are connected with a general age-related functional deterioration the realizable prevention of its or its reversibility could be very useful in prophylaxis and cure of these distressing and money-losing events. Keywords : Sarcopenia, Aging deceleration , Aging reversibility

PP26 B-014

RESVERATROL DOES NOT PROTECT AGAINST PARACETAMOL-INDUCED CELL DEATH IN MOUSE PRIMARY HEPATOCYTES

Alice E. KANE¹, Aniko HUIZER-PAJKOS², Victoria C. COGGER³, David G. LE COUTEUR³, Sarah N. HILMER⁴ (1. Clinical Pharmacology and Ageing, Kolling Institute of Medical Research,

University of Sydney and Royal North Shore Hospital, Australia; 2. Clinical Pharmacology and Ageing, Kolling Institute of Medical Research and Royal North Shore Hospital, Australia; 3. Centre for Education and Research on Ageing and ANZAC Research Institute, Concord Hospital, Australia; 4. Clinical Pharmacology and Ageing, Royal North Shore Hospital, Kolling Institute of Medical Research and University of Sydney, Australia)

Introduction : Paracetamol is a commonly used analgesic and antipyretic. Excessive doses can cause hepatotoxicity, which is treated with N-Acetyl Cysteine (NAC). While toxicity is commonest in younger people, most paracetamol associated deaths occur in older people. Calorie restriction protects from paracetamol-induced hepatotoxicity. Resveratrol, a calorie restriction mimetic, reduces paracetamol hepatotoxicity in animal studies and may have a therapeutic role, especially in old age. We investigated the effects of resveratrol on paracetamol-induced hepatotoxicity in vitro. Method : Primary hepatocytes were isolated from young male C57BL/6 mice by collagenase perfusion. Hepatocytes were treated with serum free medium (control), paracetamol (20mM), ethanol (0.5%), NAC (25mM), resveratrol (1-100µM in 0.5% ethanol) or a combination of treatments. Hepatocyte survival was measured using the MTT assay 24 hours after treatment. Results : Cell viability with ethanol (0.5%) and NAC (25mM) treatments did not differ from control. Compared to controls, 20mM paracetamol resulted in 50.4±22.4% cell survival (p<0.05), and concurrent treatment with 25mM NAC maintained cell viability at control levels (p<0.05). Preliminary results suggest cell viabilities with 1-25µM resveratrol do not differ from control, but there is trend towards a reduction in viability with 50-100µM resveratrol treatment (p>0.05). Concurrent treatment with 20mM paracetamol and any resveratrol dose (1-100µM) did not increase hepatocyte viability. Conclusion : The lack of protection from 1-100µM resveratrol against paracetamol induced toxicity in primary mouse hepatocytes implies that resveratrol may not act directly on hepatocytes in vivo. The trend towards dose related toxicity observed with resveratrol is consistent with resveratrol hormesis. Current studies are investigating mechanisms for these findings. Keywords : Resveratrol, Paracetamol, Hepatocytes

PP26 B-015
EFFECT OF ACANTHOPANAX SESSILIFLORUS ON STRESS RESPONSE AND AGING IN C. ELEGANS
Chul-Kyu KIM, Sang-Kyu PARK (Medical Biotechnology, Soonchunhyang University, Korea)

Introduction : Acanthopanax sessiliflorus has been used as traditional medicine in many diseases. Recent studies also reports anti-oxidant and anti-aging activity of Acanthopanax species. Method : In this study, we examined the anti-oxidant activity of the extracts from Acanthopanax sessiliflorus leaves using *C. elegans* as a model system. Then the effect of Acanthopanax sessiliflorus on lifespan of *C. elegans* was determined. In order to identify possible underlying mechanisms of anti-aging effect of Acanthopanax sessiliflorus, we examined thermotolerance and fertility of worms. Results : Resistance to oxidative stress was significantly increased by Acanthopanax sessiliflorus extracts. Since increased resistance to oxidative stress is commonly positively correlated with lifespan extension, we determined the effect of Acanthopanax sessiliflorus on lifespan of *C. elegans*. Both mean and maximum lifespan were markedly increased by Acanthopanax sessiliflorus extracts. In addition, the treatment of Acanthopanax sessiliflorus enhanced the survival of worms under heat stress. However, the reduced fertility or delayed reproduction period frequently accompanied with increased lifespan were not observed in

Acanthopanax sessiliflorus? treated animals. Conclusion : These findings suggest that Acanthopanax sessiliflorus leaves can confer longevity phenotype without reduced fertility, possibly through their anti-oxidant activity. Keywords : Acanthopanax sessiliflorus, *Caenorhabditis elegans*, aging

PP26 B-016
SCREENING FOR THE MYOGENESIS-PROMOTING COMPOUNDS IN PRIMARY MYOBLAST DIFFERENTIATION USING DRUG REPOSITIONING
Hye Yeong SUNG, Jong Sung HA, Sung Sup PARK, Ki Sun KWON (Aging Research Center, Korea Research Institute of Bioscience and Biotechnology, Korea)

Introduction : Sarcopenia is characterized by decreases of skeletal muscle mass and function in an aged over sixty although various physiological changes are occurred in aging. An activation of satellite cells to induce myogenesis in muscle fibers is a growing treatment as a sarcopenia therapy. For enhancing myogenesis in primary myoblast using Drug Repositioning, the application of known drugs and compounds to new indications, we have a plan to screen FDA (USA)-approved drugs achieved from ChEMBL at Korea Research Institute of Chemical Technology (KRRICT). Through a screening, 10 drugs were selected after the increase of MHC, which was assessed in a concentration range from 0.001 µM to 2.0 µM. Finally we collected 5 drugs under the consideration of papers and patents already reported on them, side effects in long-term taking, and hormonal property. We investigated the phosphorylation of Akt, and AMPK, and expression level of p21, which are known to be involved in muscle cell differentiation. We have a plan for technology transfer after medicinal effects are determined using animal model. Method : We used In-Cell ELISA as a screening system, which could measure expression of Myosin heavy chain. Results : 5 drugs were selected for myogenesis-promoting compounds using drug repositioning. Conclusion : Known drugs can be used for sarcopenia treatments. Keywords : Screening, drug repositioning, myogenesis

PP26 B-017
MECHANISM OF METFORMIN: INHIBITION OF DNA DAMAGE AND PROLIFERATIVE
Hyun-Jin NA, Joung-Sun PARK, Mi-Ae YOO (Department of Molecular Biology, College of Natural Science, Pusan National University, Korea)

Introduction : Age-related changes in stem cells could have a profound impact on tissue aging and the development of age-related diseases such as cancer. However, the effects of metformin, a recently recognized anti-cancer drug, on stem cell aging remain largely unknown. In the present study, an experiment was set up to investigate the underlying mechanism of metformin's beneficial effects on age-related changes in intestinal stem cells (ISCs) derived from *Drosophila* midgut. Method : Using *Drosophila* midgut for studying stem cell aging, we determined the expression of γH2AX and 8-oxo-dG as a DNA damage marker, PHH3 as a proliferation marker using immunocytochemistry, and we studied the function of AKT in ISCs and EBs using the UAS-Gal4 system. Results : Results showed that metformin reduced age- and oxidative stress-related accumulation of DNA damage marked by *Drosophila* γH2AX foci and 8-oxo-dG in ISCs and progenitor cells. Metformin also inhibited age and oxidative stress-related ISC hyperproliferation as well as intestinal hyperplasia. Our study further revealed that the inhibitory effects of metformin on DNA damage accumulation may be due to the down-regulation of age-related and oxidative stress-induced AKT activity. Conclusion : These

data indicate that metformin has beneficial effects on age-related changes in ISCs derived from *Drosophila* midgut. Further, our results suggest a possible impact of DNA damage on stem cell genomic instability, which leads to the development of age-related diseases. Additionally, our study suggests that *Drosophila* midgut stem cells can be a suitable model system for studying stem cell biology and stem cell aging. Keywords : *Drosophila* intestinal stem cells, metformin, DNA damage

PP26 B-018

ENRICHMENT AND CHARACTERIZATION OF HUMAN DERMAL STEM/PROGENITOR CELLS BY INTRACELLULAR GRANULARITY

Joong Hyun SHIM, Tae Ryong LEE, Dong Wook SHIN (*Bioscience Research Institute, Amorepacific Corporation R&D Center, Korea*)

Introduction : Adult stem cells from the dermis would be an attractive cell source for therapeutic purposes as well as studying the process of skin aging. Several studies have reported that human dermal stem/progenitor cells (hDSPCs) with multipotent properties exist within the dermis of adult human skin. However, these cells have not been well characterized, because methods for their isolation have not yet been optimized. Method : We found that collagen type IV-sorted hDSPCs had higher intracellular granularity than collagen type IV-sorted non-hDSPCs by flow cytometry. Therefore, we isolated the cells with high intracellular granularity (high side scatter) from normal human dermal fibroblasts (NHDFs). We evaluated stemness properties of hDSPCs by Q-PCR, etc. Results : In the present study, we isolated SSChigh (high side scatter)-hDSPCs from normal human dermal fibroblasts (NHDFs) using a structural characteristic, intracellular granularity, as a sorting parameter. The SSChigh-hDSPCs had high proliferation properties and expressed high levels of Sox2 and S100B, similar to previously identified mouse Sox2+ hair follicle dermal stem cells. The SSChigh-hDSPCs could differentiate into not only mesodermal cell types, e.g., adipocytes, chondrocytes, and osteoblasts, but also neuroectodermal cell types, such as neuronal cells. In addition, the SSChigh-hDSPCs exhibited no significant differences in the expression of nestin, vimentin, slug, twist1, versican, etc. Conclusion : These cells are different from the previously identified multipotent fibroblasts and SKPs. We show that SSChigh-hDSPCs exhibit high proliferation and differentiation potentials and can be isolated by using characteristic of their high intracellular granularity. These cells may maintain the stemness properties necessary for recovering homeostasis in aged human skin. Keywords : Skin, Stem Cells, Age

PP26 B-019

ORALLY-APPLIED CATECHIN INCREASES HEME LEVELS IN RAT BLOOD MITOCHONDRIA

Marni E. CUENO, Muneaki TAMURA, Kenichi IMAI, Kuniyasu OCHIAI (*Department of Microbiology, Nihon University School of Dentistry, Japan*)

Introduction : Catechins are polyphenols that induce anti-inflammatory and antioxidant activities in vitro and are found to have beneficial effects on the cardiovascular system and lower both plasma cholesterol and triglyceride levels in vivo. The mitochondrion is the site of heme biosynthesis and is primarily involved in several aging-related activities. Interestingly, catechin effects on mitochondrial heme biosynthesis have never been elucidated. Method : Throughout this study we made use of young (10-wk old) and old (40-wk old) male rats. One set was orally-applied with gel-encapsulated catechin everyday for 30 days while the other set was used as control. After the

30-day catechin application, blood was obtained from the heart and blood mitochondria were isolated for further analyses. Heme amounts were measured to determine catechin effects. Similarly, hydrogen peroxide (H₂O₂), superoxide dismutase (SOD) and catalase (CAT) levels were subsequently measured to establish mitochondrial reactive oxygen species (ROS) homeostasis. Results : We found that catechin increased mitochondrial heme amounts in all rats. Heme has been correlated to increase H₂O₂ levels, however, in both young and old rats, mitochondrial H₂O₂ levels were decreased. This would suggest that catechin-induced heme increase is not correlated to mitochondrial oxidative stress. We checked mitochondrial SOD and CAT levels in all rat samples and found no significant difference in SOD activity while CAT were significantly increased insinuating that catechin-induced heme increase is associated to antioxidant activity. Conclusion : Our results show that orally-applied catechin increases mitochondrial heme levels which we speculate is associated with antioxidant activity, particularly CAT. Keywords : catechin, heme, mitochondria

PP26 B-020

NOVEL PPAR α/γ γ DUAL AGONIST, MHY 966 MODULATES UVB-INDUCED SKIN INFLAMMATION THROUGH INHIBITING NF-KB ACTIVITY

Min Hi PARK¹, Dae Hyun KIM¹, Ki Wunga CHUNG¹, Daeui PARK¹, Hyoung Oh JEONG¹, Chan Hum PARK¹, Ha Ram BAE¹, Hye Jin AN¹, Eun Ji JANG¹, Ji Yung PARK², Hyen Jung LEE², Hyoung Ryong MOON², Hae Younga CHUNG¹ (*1. Molecular Inflammation Research Center for Aging intervention (MRCA), College of Pharmacy, Pusan National University, Korea; 2. Laboratory of Medicinal Chemistry, College of Pharmacy, Pusan National University, Korea*)

Introduction : Ultraviolet B (UVB) irradiation-induced lipid peroxidation induced inflammatory responses and leading to skin wrinkle formation and epidermal thickening. Peroxisome proliferator-activated receptor (PPAR) α/γ dual agonists have the potential to be used as preventive agent for anti-wrinkle agents through inhibiting inflammatory response and lipid peroxidation. Method : This study evaluated the function of 2-bromo-4-(5-chloro-benzo[d]thiazol-2-yl) phenol (MHY 966), a novel synthetic PPAR α/γ dual agonist, as a dual agonist for PPAR α/γ , and investigated its anti-inflammation and anti-lipid peroxidation. In this present study, we determined function of MHY 966 as a PPAR α/γ dual agonist by reporter gene assay. Additionally, 8-week-old melanin-possessing hairless mice (HRM2) were exposed to a dose of 150mJ/cm² UVB every other day and MHY 966 was simultaneously treated with every day to investigate anti-wrinkle formation and elucidate its molecular mechanisms. Results : MHY 966 stimulated the transcriptional activities of PPAR α and γ . In HRM2 mice, we observed that the mice exposed to only UVB significantly increased pro-inflammatory mediators such as NF- κ B, iNOS, COX-2 and lipid peroxidation, while the MHY 966 treatment down-regulated them through activating PPAR α and γ . Conclusion : We demonstrated that MHY 966 exhibits beneficial effects on inflammatory responses and lipid peroxidation by simultaneous activation of both PPAR α and γ . Our major finding of this study is MHY 966 would be a potential agent against wrinkle formation associated with chronic UVB exposure leading to photoaging. Keywords : PPAR dual agonist , Skin aging, Inflammation

PP26 B-021

ELECTROLYZED-REDUCED WATER EXTENDS LIFESPAN VIA INSULIN/IGF-1-LIKE SIGNAL IN C. ELEGANS

Seul-Ki PARK, Sang-Kyu PARK (*Medical Biotechnology, Soonchunhyang University, Korea*)

Introduction : Electrolyzed-reduced water (ERW) scavenges reactive oxygen species and is a powerful anti-oxidant. A positive correlation between oxidative stress and aging has been proved in many model organisms. In *C. elegans*, many long-lived mutants showed reduced fertility as a trade off against longevity phenotype. **Method :** We aimed to study the effect of ERW on oxidative stress, fertility, and lifespan of *C. elegans*. We also investigated the genetic pathway involved in the effect of ERW on resistance to oxidative stress and lifespan. We compared lifespan and fertility of worms in media prepared with distilled water and ERW. **Results :** ERW significantly extended lifespan and increased the number of progeny produced. Then, the effect of ERW on resistance to oxidative stress and lifespan of long-lived mutants was determined. ERW increased resistance to oxidative stress and lifespan of eat-2, a genetic model of dietary restriction, but had no effect on those of age-1, which is involved in insulin/insulin-like growth factor (IGF)-1-like signal. In addition, knockdown of daf-16, the downstream mediator of insulin/IGF-1-like signal, completely prevented the effect of ERW on lifespan. **Conclusion :** These findings suggest that ERW can extend lifespan without accompanying reduced fertility and modulate resistance to oxidative stress and lifespan via insulin/IGF-1-like signal in *C. elegans*. **Keywords :** electrolyzed-reduced water, *C. elegans*, aging

PP26 B-022

AGE-DEPENDENT CHANGE OF CAVEOLIN-1 EXPRESSION IN THE SKIN:A MARKER FOR SKIN AGING

Seung-Chul LEE, Jee-Young CHOI, Da-In CHOI (*Department of Dermatology, Chonnam National University Medical School, Korea*)

Introduction : There are a variety of biomarkers for chronological aging in the body, and caveolin was suggestive to be implicated in the aging process in the skin. This study was aimed to evaluate the modulation of caveolin-1 (Cav-1) in relation with collagen levels in the skin. Age-dependent change in the expression levels of Cav-1 and collagens I and III (COL I/III) were compared between the young and aged skin of mouse and human *in vivo*, and between the young and senescent human dermal fibroblasts (HDFs) *in vitro*. **Method :** 1.Experimental samples from mouse and human * Mouse and Human- Young aged group, Old aged group 2.Protein and total RNA extracts from mouse skin and human skin 3.Semi-quantitative RT-PCR 4.Immunohistochemistry for Cav-1 5.Confocal microscopy for Cav-1 **Results :** In RT-PCR and Western blot analysis, mRNA and protein levels of Cav-1 were up-regulated, but those of COL I/III were down-regulated, from the aged skin of human and mouse, and also in the senescent HDFs. Immunohistochemical staining revealed that Cav-1 was up-regulated both in the epidermis and dermis of the aged human skin. Immunocytochemical staining showed that Cav-1-positive signals were markedly increased in the cytoplasm of senescent HDFs. The reciprocal negative correlation between Cav-1 and COL I/III was confirmed from our results that COL I/III were markedly up-regulated in Cav-1 siRNA transfected HDFs or Cav-1(-/-) knock-out mice. Collectively, Cav-1 is up-regulated in relation with decreased COL I/III expression in the aged skin. **Conclusion :** Our results suggest us that Cav-1 can be a novel biomarker for skin aging. **Keywords :** Caveolin-1, Collagen, Skin aging

PP26 B-023

EFFECTS OF AROMA INHALATION METHOD ON NURSING STUDENTS' ANXIETY, STRESS AND SERUM CORTISOL LEVELS

Ye-Jung KO¹, Myung-Soon JUNG², Kyung-Sook PARK³ (*1. Nursing Department, Kimcheon Science College, Korea; 2. Professor, College of Nursing, Kyungdong University, Korea; 3. Professor, Red Cross*

College of Nursing, Chung-Ang University, Korea)

Introduction : Nursing college students experience more stress when compared with students of other majors. The reasons of that is being strictly to learn variety of majors of the curriculum within a short period of time and combination of the clinical practice. These anxiety and stress has to resolved in a proper way , otherwise it will be negatively affected to the nursing professionalism and holistic nursing care as well as nursing students, their own health and well being. Therefore nursing students required that the manage of anxiety of test and stress intervention. **Method :** The survey used pre-survey, 5-day experimental treatment (2012.11.17-21) and posterior survey for 65 cases - 31 aromatic inhalation cases and 34 control cases. Pre-survey measured general demographic characteristics and tested anxiety, stress and serum cortisol levels of all cases. The experimental cases were treated with aromatic inhalation using aroma oil (mixed Maychang, lavender, rosewood essence - ratio of 3:5:2), whereas the control cases were treated with common hand massage. Posterior survey tested the differences between the cases. **Results :** The experimental cases treated with aromatic inhalation scored significantly lower in the anxiety test than the control cases($t=2.330$ $p=0.023$). They also scored significantly lower in physical stress($t=-2.910$ $p=0.005$) and psychological stress($t=-3.285$ $p=0.002$) than the control cases. However, there were no differences found in serum cortisol levels($t=0.228$ $p=0.820$). **Conclusion :** Aromatic inhalation, by using maychang, lavender and rosewood essential oils, contributes significantly in reducing anxiety and stress amongst nursing students, and can therefore be an effective intervention to relieve those levels. **Keywords :** Aromatherapy, Nursing Student, anxiety, stress, serum cortisol

PP26 B-024

AMP-ACTIVATED PROTEIN KINASE-DEPENDENT NUCLEAR LOCALIZATION OF GLYCERALDEHYDE 3-PHOSPHATE DEHYDROGENASE IN SENESCENT HUMAN DIPLOID FIBROBLASTS AND AGED RAT SKIN CELLS

Eui-Ju YEO, Hyun Jin KWON, Yun Taek LEE, Myung Yeon LEE, Meong-Sook JEONG, Jae Hong KIM (*Department of Biochemistry, Gachon University School of Medicine, Korea*)

Introduction : Besides its role in glycolysis, glyceraldehyde-3-phosphate dehydrogenase (GAPDH) is involved in several biological functions, including DNA repair and apoptosis. Its diverse activities depend on its intracellular localization. It was previously reported that the nuclear translocation of GAPDH might be regulated by the phosphoinositide 3-kinase signaling pathway acting mainly as a nuclear export signal and the AMP-activated protein kinase (AMPK) signaling pathway acting as a nuclear import signal in human diploid fibroblasts (HDFs). **Method :** Because senescent HDFs showed an increased activity of AMPK, we explored the nuclear translocation of GAPDH by confocal laser scanning microscopy of immunostained senescent HDFs. Age-dependent nuclear localization of GAPDH was confirmed by immunohistochemical analysis of skin cells from aged rats. **Results :** More than 80% of senescent cells showed nuclear GAPDH in 10% FBS and its nuclear accumulation increased to over 90% by serum depletion for 5 days. This nuclear accumulation of GAPDH was not reversed by the re-addition of platelet-derived growth factor but lysophosphatidic acid increased its nuclear export by about 40% in the serum-depleted senescent cells. 5-Aminoimidazole-4-carboxamide-1- β -D-ribofuranoside (AICAR), an activator of AMP-activated protein kinase (AMPK), also increased nuclear accumulation of GAPDH in senescent cells cultured in 10% FBS. AMPK inhibition by Compound C partially prevented both basal and AICAR-induced

nuclear translocation of GAPDH. AMPK depletion by siRNA treatment partially prevented the nuclear accumulation in senescent HDFs. Conclusion : Our data suggest that the nuclear accumulation of GAPDH might be partly due to the enhanced AMPK activity in senescent HDFs. Keywords : glyceraldehyde-3-phosphate dehydrogenase; nuclear localization; AMP-activated protein kinase

PP26 B-025

TRF2 REGULATION BY SUMOYLATION AND UBIQUITINATION

Joonyoung HER (*Molecular cancer Lab, WCU-Yonsei Univ., Korea*)

Introduction : Eukaryotic chromosome end is composed of DNA and proteins, called telomere and forms T loop to protect chromosome ends. TRF2 is a major component of shelterin complex and function to prevent loss of genetic materials and shelter chromosome end to avoid DNA damage machinery. Without TRF2, DNA damage signal occurs and cells go to apoptosis. To avoid it, TRF2 mostly binds to telomere and is very stable. So we think that there should be complex mechanism to degrade. Method : Shelterin complex proteins are regulated by several post translational modifications. Among these modification, SUMOylation is one of essential modifications in ALT cells. It is known that TRF1 and TRF2 are sumoylated by MMS21 and their SUMOylation is required for APB formation in ALT cells but it is not clear what the function of TRF1 and TRF2 SUMOylation is in telomerase positive cancer cells. Results : Here, we found that PIAS1 is another SUMO E3 ligase for TRF2 and SUMOylated TRF2 is regulated by proteosomal degradation. Conclusion : SUMO-specific E3 ubiquitin ligase, RNF4, is also involved in SUMOylated TRF2 degradation and control the levels of SUMOylated TRF2. Keywords : TRF2, SUMOylation, Ubiquitination

PP26 B-026

HJURP REGULATES CELLULAR SENESCENCE IN HUMAN FIBROBLASTS AND ENDOTHELIAL CELLS VIA A P53-DEPENDENT PATHWAY

Jung Hee CHO¹, Jong-Ik HEO², Jae-Ryong KIM³ (*1. Aging-associated Vascular Disease Research Center, Department of Biochemistry and Molecular Biology, College of Medicine, Yeungnam University, Korea; 2. Department of Pharmacy, College of Medicine, Seoul National University, Korea; 3. Dept. of Biochemistry and Molecular Biology, College of Medicine, Yeungnam University, Korea*)

Introduction : Holliday junction recognition protein (HJURP), a CENP-A histone chaperone, mediates centromere-specific assembly of CENP-A nucleosome, contributing to high fidelity chromosome segregation during cell division. However, the role of HJURP in cellular senescence of human primary cells remains unclear. Method : We investigated the effects of HJURP on cellular senescence by measuring senescence-associated beta-galactosidase activity, cell proliferation, and the level of p53 protein. Results : We found the expression levels of HJURP decreased in human dermal fibroblasts and umbilical vein endothelial cells in replicative or premature senescence. Ectopic expression of HJURP in senescent cells partially overcame cell senescence. Conversely, down-regulation of HJURP in young cells led to premature senescence. p53 knockdown, but not p16 knockdown, abolished senescence phenotypes caused by HJURP reduction. Conclusion : These data suggest that HJURP plays an important role in the regulation of cellular senescence through a p53-dependent pathway and might contribute to tissue/organismal aging and protection of cellular transformation. Keywords : Holliday junction recognition protein (HJURP), Cellular senescence, p53, Human primary cells

PP26 B-027

DOWN-REGULATION OF POLO-LIKE KINASE 1 INDUCES CELLULAR SENESCENCE IN HUMAN PRIMARY CELLS THROUGH A P53-DEPENDENT PATHWAY

Jung Hee CHO¹, Hee-Jin KIM¹, Jae-Ryong KIM² (*1. Aging-associated Vascular Disease Research Center, Department of Biochemistry and Molecular Biology, College of Medicine, Yeungnam University, Korea; 2. Dept. of Biochemistry and Molecular Biology, College of Medicine, Yeungnam University, Korea*)

Introduction : Polo-like kinase 1 (PLK1) plays a key role in various stages of mitosis from entry into M phase to exit from mitosis. However, its role in cellular senescence remains to be determined. Method : Therefore, the effects of PLK1 on cellular senescence in human primary cells were investigated. Results : We found that expression of PLK1 decreased in human dermal fibroblasts (HDFs) and human umbilical vein endothelial cells (HUVECs) under replicative senescence as well as premature senescence in response to adriamycin treatment. PLK1 knockdown with PLK1 siRNAs induced premature senescence characterized by large and flattened cell morphology, decreased cell proliferation, increased senescence-associated beta-galactosidase (SA-beta-gal) activity, and higher protein expression of p53. In contrast, up-regulation of PLK1 in old cells partially reversed senescence phenotypes, including increases in cell proliferation, incorporation of bromodeoxyuridine and population doublings, and a decrease in SA-beta-gal activity. Cellular senescence by PLK1 inhibition was observed in p16 knockdown cells but not in p53 knockdown cells. Our data suggest that PLK1 might play important roles in the regulation of cellular. Conclusion : senescence of human primary cells via a p53-dependent pathway and also contribute to tissue/organismal aging and protection of cellular transformation. Keywords : Polo-like kinase 1, Cellular senescence, p53, human primary cells

PP26 B-028

SUPPRESSION OF THE MMR ACTIVITY CONTRIBUTED TO THE SENESCENCE-ASSOCIATED MUTAGENESIS

Sang Pil YOON¹, In Youb CHANG², Ho Jin YOU³ (*1. Department of Anatomy, School of Medicine, Jeju National University, Korea; 2. Department of Anatomy, College of Medicine, Chosun University, Korea; 3. Department of Pharmacology, College of Medicine, Chosun University, Korea*)

Introduction : DNA damage and mutations in the genome increase with age. To determine the potential mechanisms of senescence-dependent increases in genomic instability, we analyzed DNA mismatch repair (MMR) efficiency in young and senescent human colonic fibroblast and human embryonic lung fibroblast. Method : MMR activity was estimated by Western blot analysis, immunohistochemistry, semiquantitative reverse transcription-PCR analysis, and E2F transcriptional activity. Results : It was found that MMR activity is significantly reduced in senescent cells. Western blot and immunohistochemistry analysis revealed that hMSH2 and MSH6 protein (MutS alpha complex), which is a known key component in the MMR pathway, is markedly down-regulated in senescent cells. Moreover, the addition of purified MutS alpha to extracts from senescent cells led to the restoration of MMR activity. Semiquantitative reverse transcription-PCR analysis exhibited that MSH2 mRNA level is reduced in senescent cells. In addition, a decrease in E2F transcriptional activity in senescent cells was found to be crucial for MSH2 suppression. E2F1 small interfering RNA expression reduced hMSH2 expression and MMR activity in young human primary fibroblast cells. Importantly, expression of E2F1 in

quiescent cells restored the MSH2 expression as well as MMR activity, whereas E2F1-infected senescent cells exhibited no restoration of MSH2 expression and MMR activity. Conclusion : These results indicate that the suppression of E2F1 transcriptional activity in senescent cells lead to stable repression of MSH2, followed by a induction of MutS alpha dysfunction, which results in a reduced cellular MMR capacity in senescent cells. Keywords : MSH2, MutS alpha, Senescence

PP26 B-029

MILD MITOCHONDRIAL UNCOUPLING PREVENTS PREMATURE SENESCENCE IN HUMAN DERMAL FIBROBLASTS

Si Young CHO, Dae-Bang SEO, Wan Gi KIM, Sang Jun LEE (*Health Science Research Institute, R&D Center, Amorepacific Corporation, Korea*)

Introduction : Mild mitochondrial uncoupling is considered to prolong life span of organism by reducing the production of reactive oxygen species (ROS) and preventing oxidant damage. However, little is known about the effect of mitochondrial uncoupling on cellular senescence and aging of human. Method : Human dermal fibroblasts (HDFs) were pretreated with or without 60 nM carbonyl cyanide (p-trifluoromethoxy)-phenylhydrazone (FCCP) for 30 min and exposed to 200 μ M H₂O₂ for 2 h at day 0. The cells were continuously subcultivated for 12 days. The effects of FCCP on the cellular senescence and collagen homeostasis were investigated. Results : Cells grown in media supplemented FCCP showed delayed senescence compared to untreated senescent HDFs. Treatment of senescent HDFs with FCCP alleviated an increase in the levels of MMP1 mRNA and protein and a decrease in secreted type I procollagen protein levels. Furthermore, we found that the inhibitory effects of FCCP on senescence-associated MMP-1 expression involved preventing activation of JNK pathways. Conclusion : Our data suggest that a mild mitochondrial uncoupling could prevent development of ROS-induced premature senescence by attenuating the alteration in redox-state and suppressing JNK-mediated MMP-1 expression, which may offer a strategy for improving the collagen loss of chronologically aged human skin. Keywords : Mild Mitochondrial Uncoupling, Human Dermal Fibroblasts, Senescence

PP26 B-030

ROLE OF ARC, APOPTOSIS REPRESSOR WITH CASPASE RECRUITMENT DOMAIN, IN STRESS-INDUCED PREMATURE SENESCENCE (SIPS) OF HUMAN DIPLOID FIBROBLASTS

Yun-Yeong LEE¹, Richard N KITSIS², In Kyoung LIM¹ (*1. Department of Biochemistry and Molecular Biology, Ajou University School of Medicine, Korea; 2. Department of Medicine, Albert Einstein College of Medicine, USA*)

Introduction : It has been known that characteristics of cellular senescence include loss of cell division ability with short telomeres, changes of cell morphology e.g. enlarged and flattened with cytoskeleton protein rearrangement, activity of beta-galactosidase at pH 6.0 and lower, formation of senescence associated heterochromatin foci. Apoptosis repressor with caspase recruitment domain (ARC) has been known as a highly potent and multifunctional inhibitor of apoptosis that is physiologically expressed mainly in the post-mitotic cells such as cardiomyocytes, skeletal muscle and neuronal cells. ARC is upregulated in various forms of malignant tumors, and impairs apoptotic responsiveness to a wide range of stresses and insults, including extrinsic apoptosis initiation by death receptor ligands,

dysregulation of cellular Ca²⁺ homeostasis and ER stress, oxidative stress and hypoxia. ARC is subject to both transcriptional and post-translational regulation and exhibits its function through a multitude of molecular interactions with upstream transducers of apoptosis signals. Method : ARC expression was measured by realtime PCR and immunoblot. Knockdown of ARC by lentiviral infection or siRNA transfection was carried out according to previously established method. Apoptosis phenotype was determined by PI staining, counted survival cells, cell cycle (sub G1) by FACS analysis, apoptotic index and molecular marker proteins. Results : ARC expression was upregulated in the replicatively senescent HDF and stress induced prematurely senescent HDF cells, compared with young cells. By employing lentiviral infection containing shARC or transfection of siRNA analyses, show the cell death by apoptosis during senescence. Conclusion : ARC is required for the maintenance of cell survival and of pre-mature senescence in HDF cells. Keywords : Senescence, ARC, HDF cells, cell death

PP26 B-031

IMMUNOLOGICAL AND VIROLOGICAL RESPONSE OF ELDERLY HIV PATIENTS TO ANTIRETROVIRAL THERAPY

Elizabeth Gar Mit CHONG¹, Philip J.H. POI², Adeeba KAMARUZAMAN³ (*1. Geriatrics, Ministry of Health, Malaysia; 2. Geriatrics, University Malaya Medical Centre, Malaysia; 3. Infectious Diseases, University Malaya Medical Centre, Malaysia*)

Introduction : The introduction of the antiretroviral therapy (ART) has led to improved survival and an increase in aged-HIV infected individuals. The UNAIDS figures has shown that about 15% of the HIV population are now more than 50 years old. This rising trend is of concern because both diagnosing and treatment of HIV in the elderly is complicated by their multiple co-morbid illnesses and late presentation that is associated with poorer outcome. Method : This study was conducted at the Infectious Diseases Clinic, University Malaya Medical Centre. Subjects included into the study were individuals above 50 years old, diagnosed with HIV from 1996-2010 and the young control group were individuals aged 25-40 years old. The individuals in the young control group were selected by matching their CD4 count at presentation, treatment regimen and number of treatment years with the elderly subjects. Results : 206 patients were recruited for the study: 103 subjects in each group. The individuals in the elderly group presented more frequently with opportunistic infections while more of the young control group were asymptomatic and detected by screening. The individuals in the elderly group also had more co-morbid illnesses. Poorer immunological response was found for the individuals in the elderly group presenting with a lower CD4 count (less than 200cells/mm³) after commencing ART. There were no differences in virological suppression between both the groups. Conclusion : The study showed that elderly and young HIV individuals have different demographic differences and poorer immunological response if they present with a CD4 count of less than 200cells/mm³. Keywords : HIV, elderly

PP26 B-032

POSITIVE EFFECT OF NICOTINAMIDE ON CD8+ T CELL SURVIVAL DURING ACTIVATION

Hojin CHOI (*Department of Life Science, University of Seoul, Korea*)

Introduction : Upon TCR stimulation during antigen encounter, T cells are activated and differentiated to secrete cytokines for pathogen clearance. They undergo repetitive clonal expansion which is accompanied with telomere shortening. This in turn sets a limitation to

cells for the capacity for proliferation, and eventually leads to immune senescence. For this reason, modulation of T cell activation can be an important strategy for improving immune function in the elderly. Previously, it was shown that nicotinamide (NAM) improve mitochondrial quality and extended replicative life span of normal human fibroblasts. Method : Primary CD8+T cells were isolated from healthy donors and activated with CD3/CD28[?]conjugated beads in the absence or presence of nicotinamide. The effect on CD8+ T activation and differentiation, and mitochondria and ROS status was examined by flow cytometry and Western blot analyses. Results : Nicotinamide treatment accelerated the expansion of activated CD8+ T cells, and this took place by attenuating the activation-induced cell death (AICD). In the nicotinamide-treated cells, the increase of mitochondria content during activation was suppressed. Moreover, the increase of mitochondrial ROS production was severely compromised without a change in the differentiation potential of effector cells. In addition, the treatment of NAM attenuated the activation-induced increase of cytosolic Ca²⁺. The decrease of intracellular ROS and Ca²⁺ accumulation, both of which are believed to play important role in AICD, possibly protected the activated cells from AICD. Conclusion : The potentiation of CD8+ T cell proliferation during activation by NAM treatment may be beneficial to the elderly who suffer from immune senescence. Keywords : CD8+ T cell, AICD, nicotinamide

PP26 B-033

A NEW MUCOSAL VACCINE ADJUVANT CONSISTING OF RECOMBINANT PSPA FUSED TO A FLAGELLIN ACTIVATES TLR5 AND PROTECTS AGAINST STREPTOCOCCUS PNEUMONIAE INFECTION IN AGED MICE

Jae Sung LIM¹, Chung Truong NGUYEN², Kim Cuc Thi NGUYEN¹, Kyu Suk KIM¹, Shee Eun LEE³, Joon Haeng RHEE⁴, Ik Soon JANG⁵, Kyung A. CHO¹ (1. Department of Biochemistry, Chonnam National University Medical School, Korea; 2. Clinical Vaccine R&D Center, Chonnam National University Hwasun Hospital, Korea; 3. Dental Science Research Institute, School of Dentistry, Chonnam National University, Korea; 4. Department of Microbiology, Chonnam National University Medical School, Korea; 5. Division of Life Science, Korea Basic Science Institute, Korea)

Introduction : The age-associated decline of immune responses leads to a high susceptibility to viral or bacterial infections and a failure of vaccine efficacy in the elderly. The impact of aging on the innate immune system has recently been implicated in the decline of immune responses, but the mechanisms underlying age-related deficits are unclear. Results : In this study, we observed the significant production of Toll-like receptor 5 (TLR5)-induced proinflammatory cytokines, through *Vibrio vulnificus* flagellin stimulation in macrophages from aged mice. This response was similar to the response in young mice, although the macrophages from the aged mice showed both decreased phagocytic functions and lower TLR-dependent cytokine production compared with the macrophages from the young mice. To demonstrate the TLR5-dependent enhancement of immune responses in aged mice, we designed a vaccine platform with FlaB as a mucosal adjuvant for the pneumococcal surface protein A (PspA) against *Streptococcus pneumoniae* infection in young and aged mice. Compared with PspA alone, intranasal administration of the FlaB-PspA fusion protein induced significantly higher levels of PspA-specific IgG and IgA responses in the sera and mucosal secretions in both the young and aged mice. Aged mice that were immunized with FlaB-PspA showed a high protective efficacy against a lethal challenge with live *S. pneumoniae* compared with the mice immunized with PspA alone. Conclusion : These results suggest that TLR5 signaling plays a key

role in age-associated innate immune responses and that FlaB-PspA stimulation of TLR5 may be a new strategy for a mucosal vaccine adjuvant against pneumococcal infection in the elderly. Keywords : TLR5, flagellin, vaccine adjuvants

PP26 B-034

ASSOCIATION OF INFLAMMATORY MARKERS WITH SOCIOECONOMIC STATUS IN OLDER ADULTS: DOES RACE/ETHNICITY MATTER?

Ji Hyun CHO¹, Jennifer WEUVE², Lisa L. BARNES³, Denis A. EVANS², Carlos F. MENDES DE LEON⁴ (1. Epidemiologic Science, University of Michigan, Ann Arbor, USA; 2. Rush Institute for Healthy Aging, Department of Internal Medicine, Rush University Medical Center, USA; 3. Rush Alzheimer's Disease Center, Department of Neurological Sciences and Department of Behavioral Sc, Rush University Medical Center, USA; 4. Department of Epidemiology, School of Public Health, University of Michigan, USA)

Introduction : Inflammatory processes are one of downstream biological pathways by which socioeconomic status (SES) affects disease risk. Studies have demonstrated that chronic health conditions are associated with elevated inflammatory marker levels. SES differences may persist or widen with age, leading to greater chronic disease risk in those of lower SES. Given the SES differences among subpopulations of different racial backgrounds, it is important to examine how SES is associated with inflammation within specific racial groups. Method : A cross sectional analysis was conducted for a sample from the Chicago Healthy Aging Project (CHAP) separately for black and non-black population (n=3618, aged 65 or older). The participants' CRP and IL-6 levels were measured and assayed. Their SES as well as behavioral variables and medication status were obtained. Results : The pattern of the association between inflammation and SES varied across different racial groups. Among blacks, lower-SES groups had higher CRP and IL-6 compared to the highest-SES group, although the inverse gradient was not perfectly linear. The association between CRP and income demonstrates only a marginally significant inverse gradient between low- and middle-income groups. Among whites, there was a significant inverse gradient of association between income and IL-6, but not between education and both CRP and IL-6. Compared to the highest-income group, low-income whites were more likely to have higher CRP. Conclusion : Distinct SES gradient of inflammatory marker levels in blacks and whites suggest that well-targeted interventions are necessary to solve both racial and SES disparities altogether. Keywords : inflammation, socioeconomic status, older adults

PP26 B-035

CAVEOLIN-1 DEPENDENT TLR5 SIGNALING IN IMMUNOSENESCENCE

Kyu Suk KIM¹, Jae Sung LIM¹, Kyung A. CHO² (1. Department of Biochemistry, Chonnam National University Hwasun Hospital, Korea; 2. Department of Biochemistry, Research Institute of Medical Sciences, Chonnam National University Hwasun Hospital, Chonnam National University Medical School, Korea)

Introduction : Aging is associated with a progressive decline in immune function (immunosenescence) resulting in increased susceptibility to viral and bacterial infections and decreased response to vaccines. Previously we found that flagellin-dependent toll-like receptor (TLR) 5 activation is sufficient to enhancing of immune systems and successfully protect against *Streptococcus pneumoniae* infection in old mice. Method : From this study, we found that the expression of TLR5 was well maintained in macrophages from old

mice (>24 months), like that of macrophages from young mice (8 weeks). Results : In this study, we provide new molecular mechanism of caveolin-1 dependent maintenance of TLR5 expression and signaling in immunosenescence. Caveolin-1 is known to as a regulator of signaling molecules and increased with various aging process. In macrophages from old mice, caveolin-1 was also increased and directly interacted with TLR5. Interestingly, TLR5 expression was sensitively affected by caveolin-1 expression status and its signaling was mediated by the interacting with caveolin-1 in macrophages from the old mice. Furthermore we found that caveolin-1 formed triple complex with TLR5 and Myd88, an adaptor protein of TLR5, and this complex was increased by stimulation of flagellin. Conclusion : These results suggest that caveolin-1 might be an important mediator for TLR5-dependent immune responses in immunosenescence. Keywords: Immunosenescence, TLR5, Caveolin-1

PP26 B-036

AGE-ASSOCIATED ALTERATION IN THE FREQUENCY OF REGULATORY T CELL IN HUMANS

Ji-Min KIM¹, Jaeseon LEE², Joo-Yeon JHUN², Jennifer LEE², Ho-Youn KIM³ (1. Division of Rheumatology, Department of Internal Medicine, Keimyung University Dongsan Medical Center, Korea; 2. Rheumatism Research Center, The Catholic University of Korea, Korea; 3. Division of Rheumatology, Department of Internal Medicine, Konkuk University, Korea)

Introduction : Aging is associated with alterations in the immune system which might contribute to increased risk of infection and malignancy in the elderly. Regulatory T (Treg) cells have a critical role in the regulation of autoimmunity, antitumor immunity, and anti-infectious responses. Here we investigated the effect of aging on the frequency of Treg cells and subpopulation of Treg in humans. We also analyzed cell cycle-related genes for their expression in human Tregs with aging. Method : Peripheral blood mononuclear cells (PBMCs) were prepared from peripheral blood of healthy elderly (age ≥ 65) and young subjects (age ≤ 30) on Ficoll-Hypaque gradients. Cells were stained with anti-CD4, anti-CD25, anti-CD45RO and anti-FOXP3 antibodies. Stained cells were analyzed by flow cytometry. Cell apoptosis was analyzed by annexin V staining. Real-time reverse transcription polymerase chain reaction was used to determine the expression of cell cycle-related genes on Treg cells which were sorted by immunomagnetic technique. Results : We demonstrated that healthy elderly individuals had increased frequency of Treg cells (CD4+CD25+Foxp3+ T cells) compared to healthy young individuals. Remarkable increase of memory proportion (CD4+CD25+Foxp3+CD45RO+ T cells) and decrease of naive proportion (CD4+CD25+Foxp3+CD45RO- T cells) were also observed in the population of Treg cells of elderly people. Memory Treg cells as well as total Treg cells of the elderly had more resistance to apoptosis than those of the young. Altered cell cycle-related gene expression was observed in human Treg cells between the aged and the young. Conclusion : Our observations suggest that aging affects the (sub)population of Treg cells in humans. Keywords : aging, T cell

PP26 B-037

SHARED EPITOPE AND RADIOLOGIC PROGRESSION ARE LESS PROMINENT IN ELDERLY ONSET RA THAN YOUNG ONSET RA

Jennifer LEE¹, Eun-Ji KIM¹, Ji Hyeon JU¹, Hee-Baeg CHOI², Tai-Gyu KIM², Ho-Youn KIM³ (1. Rheumatism Research Center, The Catholic University of Korea, Korea; 2. Department of Microbiology, St. Mary's Hospital, The Catholic University of Korea College of Medicine, Korea; 3. Division of Rheumatology, Department of Internal

Medicine, Konkuk University, Korea)

Introduction : To determine the influence of HLA-DRB1 and HLA-DQB1 genes on the disease susceptibility and the disease severity in elderly-onset rheumatoid arthritis (EORA) compared with young onset rheumatoid arthritis (YORA) in Korean patients. Method : Genetic analysis of HLA-DRB1 and HLA-DQB1 alleles was performed in three groups. Group 1 included 63 patients who were diagnosed with RA after the age of 60 (elderly onset RA (EORA)). Group 2 consisted of 109 patients who were diagnosed with RA before the age of 60 (young onset RA (YORA)). Group 3 involved 133 normal controls. The shared epitope-coding alleles included the members of the HLA-DRB1*04 allele group (*0401, *0404, *0405, *0408, *0410), HLA-DRB1*01 allele group (*0101, *0102), HLA-DRB1*1001 and HLA-DRB1*1402. The disease severity was assessed by the modified total sharp score (mTSS). Results : The shared epitope-coding alleles were more frequently observed in the RA patients than in the normal controls. The shared epitopes-coding alleles were less frequently found in EORA group than YORA group (31/63 (49.2%) in group 1, 72/109(66.1%) in group 2, 45/133(33.8%) group 3, $P=0.02$). Although the mTSS of the group 1 was higher than group 2 at symptom onset, the overall mean mTSS of the group 1 was lower than that of group 2 (26.8 vs. 57.5, $P<0.05$). HLA-DQ*04 showed the higher frequency in the patients group than in normal controls ($P<0.001$). And HLA-DQ*04 was less commonly found in the patients with EORA than YORA ($p<0.05$). Conclusion : The presence of shared epitope and radiologic progression are less prominent in EORA patients than YORA patients. Keywords : elderly onset rheumatoid arthritis

PP26 B-038

ABOUT A REALITY OF EXTREME AGES THAT ESSENTIALLY EXCEED A CANONICAL BOUNDARY OF HUNDRED YEARS

Alexander KHALYAVKIN (Kinetics of Biological Processes, Inst of Biochem Physics, RAS & Inst for Systems Analysis, RAS, Russia)

Introduction : The regularities of statistics of mortality allow indirectly estimate a possibility to live up to extremely high ages. Method : The Gompertz law connects the force of mortality $M(t)$ in some cohort with its current age t via formula $M(t)=M^*exp[at]$. Parameter 'M' is a characteristic force of mortality. Kinetic parameter 'a' characterizes the rate of aging. Let extreme age (T_e) is the age when $M(t)=1/year$. Then the life expectancy at t must be approximately one year. Therefore, $T_e(a,M)=(1/a)*ln(1/M)$. It is underestimated evaluation for T_e because $M(t)$ grows more slowly at advanced ages than exponent of the Gompertz law. The second regularity of mortality statistics connects characteristic force of mortality 'M' of some cohort with its kinetic parameter 'a' (rate of aging) via formula $lnM=lnB-a*T$. Parameter 'B' is a characteristic force of mortality when $a=0$ (agelessness) and parameter 'T' is a characteristic species-specific age. Then the relationship between of extreme age and the rate of aging parameter 'a' is $T_e(a)=T+(1/a)*ln(1/B)$. Results : We know that for human beings $B\sim 0.05$ per year and $T\sim 70$ years. As $ln(1/0.05)=3$ so the rough formula for extreme age evaluation is $T_e(a)\sim 70+(3/a)$. As parameter 'a' is around 0.1/year and more for contemporary developed countries so underestimated extreme age for these countries must be around 100 years. We know that for underdeveloped and developing populations (especially for previous centuries) parameter 'a' was around 0.03-0.06/year. It means that the appropriate extreme age should be approximately 120-170 years. Conclusion : Thereby the empirical laws of mortality are compatible with a rare but real opportunity of super-longevity. Keywords : Super-Longevity , Rate of Aging , Regularities of Mortality

PP26 B-039

JOB STRESS AND MORTALITY IN OLDER AGE

Beata TOBIASZ-ADAMCZYK, Piotr BRZYSKI, Marzena FLOREK, Monika BRZYSKA (Chair of Epidemiology and Preventive Medicine, Jagiellonian University Medical College, Poland)

Introduction : The relation between job stress, morbidity and mortality has been the longstanding focus of research interest over the last four decades. This presentation aims to assess the relation between the determinants of psychosocial work environment, as expressed in terms of JDC or ERI models, and all-cause mortality in older individuals. Method : The baseline study was conducted in a simple random sample of a cohort of 65-year-old community-dwelling citizens of Krakow, Poland. All of the 727 participants (410 women, 317 men) were interviewed in their households in the period between 2001 and 2003, using a structured questionnaire on the history of the respondents' occupational activity, including indexes measuring particular dimensions of psychosocial work environment based on Karasek's Job Demand-Control model and Siegrist's Effort/Reward Imbalance model, as well as health-related quality of life and demographic data. Mortality was ascertained by monitoring City Vital Records for 7 years. Analyses were conducted separately for men and women, with multivariate Cox proportional hazard model. Results : During the 7 year follow-up period 59 participants (8,1%) died, including 21 women (5,1%) and 38 men (12%) ($p < 0,05$). Multivariate Cox proportional hazard model showed that significantly higher risk of death was observed only in men with low physical demands and low control, compared to those with low physical demands and high control ($\text{Exp}(B) = 4,65$, $95\% \text{CI} = (1,64; 13,2)$). Conclusion : Observed differences in mortality patterns are similar to the patterns of relationships observed in health-related quality of life (HRQoL) level at the beginning of old age. Keywords : psychosocial working conditions, mortality, older age

PP26 B-040

AMINE NEUROTRANSMITTERS REGULATE LIFE-SPAN IN C. ELEGANS

Haruka HOSHIKAWA, Masaharu UNO, Hiroyuki YOSHIMURA, Sakiko HONJOH, Eisuke NISHIDA (Department of Cell and Developmental Biology, Graduate School of Biostudies, Kyoto University, Japan)

Introduction : Dietary restriction increases life-span in many species from yeasts to mammals; however, the underlying mechanisms remain unclear. In *C. elegans*, four biogenic amines, serotonin (5-HT), dopamine (DA), octopamine (OA), and tyramine (TA) function as neurotransmitters and are emitted depending on food availability. 5-HT and DA are involved in behaviors under fed conditions, while OA and TA are involved in behaviors under fasted conditions. We previously developed an intermittent fasting (IF) regimen (an every 2 days fasting) that extends life-span by more than 60% in *C. elegans*, and thus thought that these amine neurotransmitters might be involved in IF-induced longevity. Method : We measured life-span of the mutants of neurotransmitter-synthesizing enzymes. We tested the effect of neurotransmitters on life-span under ad libitum (AL) feeding conditions. We examined effects of OA treatment on nuclear accumulation of DAF-16, the key transcription factor for longevity. Results : IF-induced life-span extension was suppressed in several of the mutants in neurotransmitter-synthesizing enzymes, and the suppressions for the most part resulted from the mutation-induced life-span extension under AL conditions, suggesting that some of neurotransmitters should mimic IF effects. OA treatment extended life-span of wild type worms under AL conditions and induced nuclear

accumulation of DAF-16. Conclusion : These results suggest that OA treatment can mimic the effects of fasting on DAF-16 nuclear localization and longevity. We are examining the molecular mechanisms of OA-induced longevity in more detail. Keywords : longevity, neurotransmitter, C. elegans

PP26 B-041

MOLECULAR MECHANISMS UNDERLYING FASTING-INDUCED LONGEVITY IN C. ELEGANS

Saya KISHIMOTO, Masaharu UNO, Yumi KANEKO, Saori NISHIOKA, Eisuke NISHIDA (Department of Cell and Developmental Biology, Graduate School of Biostudies, Kyoto University, Japan)

Introduction : As organisms are constantly exposed to many environmental stresses, dealing with stresses is an intrinsic protective mechanism to adapt themselves to the environment. Through exposure to milder stresses, animals increase stress resistance and viability, and thereby live longer. In *Caenorhabditis elegans*, it has been reported that exposure of adult worms to mild stresses can extend life-span. We investigated whether exposure to stresses only during larval stages could have the longevity effect. Method : We first exposed larva to several kinds of stresses at various doses (e.g., oxidative stress, osmotic stress, and fasting), and then measured the adult life-span in unstressed conditions. Results : Our life-span measurements showed that exposure to 1 mM arsenite (oxidative stress), 100 mM NaCl (osmotic stress) during larval stages, or 1 day fasting at L4 stage extended adult life-span of wild-type worms. Fasting was the most effective in extending the life-span. Interestingly, the offspring of the fasted worms was also long-lived. Conclusion : These results suggest that exposure to various stresses during larval stages can extend life-span. Fasting has the marked longevity effect. We are now examining the mechanisms underlying the stress-induced longevity in more detail, and will investigate the mechanisms of transgenerational inheritance of the fasting-induced longevity. Keywords : longevity, stress response, C. elegans

PP26 B-042

INHIBITION OF ERK5 PROTECTS PULMONARY FIBROSIS VIA DOWNREGULATION OF TGF- β 1-SMAD SIGNALING

Suji KIM¹, Jae Hyang LIM², Chang-hoon WOO¹ (1. Department of Pharmacology, Yeungnam University College of Medicine, Korea; 2. Department of Microbiology, Ewha Womans University School of Medicine, Korea)

Introduction : Idiopathic pulmonary fibrosis (IPF) is a progressive and chronic lung disease. Although IPF cause remains unknown, the interstitium of the lungs becomes thick and stiff which eventually cause symptom of breathlessness. It has been established that transforming growth factor- β 1 (TGF- β 1)/Smad signaling pathway plays an important role in lung fibrosis. Method : Herein, we identified whether ERK5 regulates TGF- β 1-induced fibrogenic gene expression in both in vitro and in vivo system. Pharmacological inhibitor of MEK5/ERK5, BIX02189 and depletion of ERK5 with siRNA inhibited TGF- β 1-induced ECM molecules in lung epithelial cells and fibroblasts. Results : Inhibition of ERK5 also blocked TGF- β 1 signal to smad3 transcriptional activity and PAI-1 promoter activity. TGF- β 1-induced Smad3 phosphorylation and nuclear translocation was not regulated by ERK5 signaling. Notably, ERK5 is involved in Smad2 phosphorylation at linker region and Smad3 acetylation. In bleomycin-induced lung fibrosis, we found that BIX02189 treatment improved survival rate and inhibited lung fibrosis of mice after bleomycin. Conclusion : Our results demonstrate ERK5 plays a major role in

TGF- β 1-induced Smad3 acetylation, PAI-1 transcription, and ECM molecules. Taken together, these data suggest that ERK5 may become a potential therapeutic target for treatment of lung fibrosis. Keywords : lung fibrosis, ERK5, smad

PP26 B-043

4-HYDROXYNONENAL ACTIVATION OF SRC TYROSINE KINASE FOR UP-REGULATION OF P38/AP-1 SIGNALING AND COX-2 GENE EXPRESSION IN ENDOTHELIAL CELLS

Eunji JANG¹, Hyoung Oh JEONG¹, Dae Ui PARK¹, Dae Hyun KIM¹, Byung Pal YU², Hae Young CHUNG¹ (1. Molecular Inflammation Research Center for Aging Intervention (MRCA), Department of Pharmacy, Pusan National University, Korea; 2. Department of Physiology, The University of Texas Health Science Center at San Antonio, USA)

Introduction : 4-hydroxynonenal(4-HNE), a major end product of lipid peroxidation, is highly reactive and involved in the alterations of various cellular activities, including inflammatory signaling. However, to date, the mechanistic role of 4-HNE in progression of inflammatory signaling related to protein tyrosine kinases in endothelial cells has not been elucidated. In the present study, we investigated the interaction 4-HNE with non-receptor tyrosine kinases(NRTKs), Src, for its involvement in the molecular modulation of inflammatory signaling pathway. Method : We utilized YPEN-1 cell system. LC MS/MS and docking simulation methods were used. The role of 4-HNE-activated Src in inflammatory signaling pathway was further confirmed by the use of Src inhibitor, Dasatinib and Src siRNA. Results : Results show that 4-HNE through adduct formation activates phosphorylation of Tyr418 of Src, the active form of Src, as detected by immunoprecipitated Src. In addition, LC MS/MS and docking simulation data revealed the adduction site was Cys248 residue of Src. It was found that only p38 MAPK was directly regulated by Src, when the phosphorylation form of mitogen-activated protein kinases (MAPKs) that are key elements in the pathway involved in the transduction of signals from activated Src were immunoblotted. Our further study also showed that HNE-enhanced activation of AP-1 and the expression of one of the AP-1 target gene, COX-2, were modulated by Src. Conclusion : These results showed that 4-HNE adduct formation activated Src, leading to the stimulation of downstream signal, p38/AP-1 and COX-2 in endothelial cells. Keywords : 4-Hydroxynonenal, c-Src, p38, AP-1, COX-2, endothelial cell

PP26 B-044

PEPTIDYLARGININE DEIMINASE 2-MEDIATED PROTEIN CITRULLINATION IN PRION DISEASE

Hee-Jun KIM¹, Byungki JANG¹, Jae-Kwang JIN¹, Yong-Chul JEON¹, Akihito ISHIGAMI², Naoki MARUYAMA², Richard I. CARP³, Yong-Sun KIM¹, Eun-Kyoung CHOI¹ (1. Ilsong Institute of Life Science, Hallym University, Korea; 2. Molecular Regulation of Aging, Tokyo Metropolitan Institute of Gerontology, Japan; 3. Department of Virology, New York State Institute for Basic Research in Developmental Disabilities, USA)

Introduction : The post-translational citrullination (deimination) process is mediated by peptidylarginine deiminases (PADs), which convert peptidylarginine into peptidylcitrulline in the presence of high calcium concentrations. Over the past decade, PADs and protein citrullination have been commonly implicated as abnormal pathological features in neurodegeneration and inflammatory responses associated with diseases such as multiple sclerosis, Alzheimer's disease and rheumatoid arthritis. Based on this evidence, we investigated the roles of PADs and citrullination in the

pathogenesis of prion diseases. Method : Here we used cultured cells expressing PAD2 and the brains of scrapie-infected mice and of patients with sporadic Creutzfeldt-Jakob disease or Alzheimer's disease. To determine the role of PAD2-mediated citrullination in the pathogenesis of prion diseases, we performed RT-PCR, Western blot analysis, 2-DE and proteome analysis, immunohistochemical staining and immunogold labeling. Results : We demonstrated that the up-regulation of PAD2, mainly found in reactive astrocytes of infected brains, leads to excessive citrullination, which is correlated with disease progression. Furthermore, we found that various cytoskeletal and energy metabolism-associated proteins are particularly vulnerable to citrullination. Our recent in vivo and in vitro studies elicited altered functions of enolase as the result of citrullination; these altered functions included reduced enzyme activity, increased protease sensitivity and enhanced plasminogen-binding affinity. Conclusion : These findings suggest that PAD2 and citrullinated proteins may play a key role in the brain pathology of prion diseases. By extension, we believe that abnormal increases in protein citrullination may be strong evidence of neurodegeneration.[This work was supported by the National Research Foundation of Korea Grant funded by the Korean Government (NRF-2011-619-E0001)]. Keywords : Peptidylarginine deiminase 2, citrullination, prion disease, neurodegeneration

PP26 B-045

DEVELOPMENT OF A NOVEL PPAR α/γ DUAL AGONIST, MHY2013

Hye Jin AN¹, Min Hi Park PARK¹, Ha Ram BAE¹, Kyoung Mi MOON¹, Yu Ri JUNG¹, Dae Hyun KIM¹, Ki Wung CHUNG¹, Chan Hum PARK¹, Yeon Ja CHOI¹, Hyung Oh JEONG¹, Hye Jin LEE², Ji Young PARK², Hye Rim KIM², Hyung Ryong MOON², Byung Pal YU¹, Hae Young CHUNG¹ (1. Molecular Inflammation Research Center for Aging Intervention (MRCA), Department of Pharmacy, Pusan National University, Korea; 2. Laboratory of Medicinal Chemistry, College of Pharmacy, Pusan National University, Korea)

Introduction : The findings of the important role of peroxisome proliferator-activated receptors (PPARs) as modulators of lipid and glucose homeostasis have raised attention to the development of PPAR α/γ dual agonists for the treatment of type 2 diabetes and simultaneously prevent dyslipidemia. However, PPAR α/γ dual agonists such as muraglitazar have some side effects including weight gain, cardiovascular risks and potential carcinogenicity during preclinical or clinical trials. Therefore, we report the characterization of a novel PPAR α/γ dual agonist, MHY2013 capable of inducing activity of PPAR through various in vitro approaches. Method : We screened various synthetic compounds for PPAR α/γ agonists by Luciferase assay in human Embryonic Kidney Cells. One of the most active compounds, MHY2013 was selected and performed docking simulation. The cell viability assay was carried out using 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide in rat prostate endothelial cells. To determine whether MHY2013 induce PPAR α/γ transcriptional activity in YPEN-1 cells, we performed various in vitro approaches such as chromatin immunoprecipitation assay, PPRE luciferase assay, immunofluorescence and Western blot analysis. Results : MHY2013 was non-cytotoxic to YPEN-1 cell. Binding affinity of MHY2013 was higher than fenofibrate and rosiglitazone, known as PPAR α and γ agonist, respectively. In addition, MHY2013 induced interaction of PPAR α/γ and peroxisome proliferator response elements. Therefore, MHY2013 increased transcriptional activities of PPAR α/γ . Conclusion : Taken together, the newly synthesized MHY2013 has a powerful agonistic effect on PPAR α/γ in comparison with fenofibrate and rosiglitazone known as PPAR α and γ agonist, respectively. This study suggests that MHY2013 could be an useful

PPAR α/γ dual agonist. Keywords : PPARs, PPAR α/γ dual agonist

PP26 B-046
IMMUNOHISTOCHEMICAL LOCALIZATION OF SIRT6 PROTEIN IN NORMAL ADULT RAT BRAIN WITHOUT CALORIE RESTRICTION

Dong Hoon SHIN¹, Il Young JANG², Chang Seok OH¹, Eunju LEE²
(1. Dept of Anatomy, Seoul National University College of Medicine, Korea; 2. Dept of Internal Medicine, Asan Medical Center, University of Ulsan College of Medicine, Korea)

Introduction : Sirtuins are known to be a family of enzymes highly conserved in evolution, mediating longevity by modulating calorie restriction pathways. Although there are seven members of sirtuin family protein (SIRT1-7) in mammals, SIRT6 immunoreactivities (IRs) was rarely reported until now. In this study on the adult normal rat brain without calorie restriction, we tried to observe SIRT-6 IRs in each brain area. Method : The Brains of adult Sprague-Dawley rats were used in this study. The SIRT6 primary antibody was treated on the brain sections. Fluorescence conjugated secondary antibody was also subjected to it. To see the types of the cells showing SIRT6 immunoreactivities, specific antibodies for neuron, astrocyte, microglia and oligodendrocyte were used. The sections were observed with fluorescence microscope. Results : In this study on the adult normal rat brain without calorie restriction, we observed SIRT6 IRs in neurons of hippocampus, astrocytes in most of brain areas. However, in case of microglia and oligodendrocytes, SIRT6 IRs were very weakly expressed or did not show any positive signs. SIRT6 IRs were mainly localized in the cytoplasm, but not in the nuclei. Conclusion : We can summarize the distribution of specific SIRT6 IRs in different regions of normal adult rat brain. Although SIRT6 is known to be a nuclear protein, in this study, most of immunoreactivities were localized in cytoplasm, but very little in nucleus. In adult rat brain without calorie restriction, SIRT6 protein seems not to be actively functioning in nuclear processes, even if it is expressed in some specific types of neural cells. Keywords : SIRT6, calorie restriction, brain, rat

PP26 B-047
CAVEOLIN-1 MEDIATES SALMONELLA INVASION VIA THE REGULATION OF SOPE-DEPENDENT RAC1 ACTIVATION AND ACTIN REORGANIZATION

Jae Sung LIM¹, Kyu Suk KIM¹, Hyon E CHOY², Kyung A. CHO¹
(1. Department of Biochemistry, Chonnam National University Medical School, Korea; 2. Department of Microbiology, Chonnam National University Medical School, Korea)

Introduction : Caveolar endocytosis has an important function in the cellular uptake of some bacterial toxins, viruses, and circulating proteins. However, the molecular machinery involved in caveolae-dependent bacterial endocytosis is poorly defined. Previously, we reported that both M cells, the antigen-sampling site in Peyer's patches (PPs), and senescent host cells showed a high sensitivity to Salmonella infection, which was dependent on caveolin-1 expression. Results : In the present study, we provide a new molecular mechanism for the caveolin-1-dependent entry of Salmonella into host cells through the direct regulation of actin reorganization. Unlike other known pathogens, the caveolae did not form Salmonella-containing vesicles (SCVs) or endosomes in the host cells but quickly moved to the apical plasma membrane with actin condensation during early invasion. Interestingly, SopE, an injected bacterial protein, and Rac1, regulated actin reorganization through their interaction, were co-localized with and directly interacted with caveolin-1 in caveolae during early

invasion. After the complete internalization of Salmonella, the SopE level decreased in both the caveolae and host cytoplasm, and Rac1 activity was also decreased. Down-regulation of the caveolin-1 by siRNA treatment lead to reduce of Salmonella invasion compare to control siRNA treated cells. Conclusion : These results suggest a new model in which caveolin-1 might be involved in Salmonella entry via its interaction with SopE and Rac1, leading to enhanced membrane ruffles for phagocytosis into host cells. Furthermore, these results explain why specific host cells, such as M cells and senescent cells, which express high levels of caveolin-1, show high sensitivity to Salmonella infection. Keywords : Caveolin-1, SopE, Actin

PP26 B-048
TRANSCRIPTIONAL AUTOREGULATION OF FOXO3A
Jeong-Min LEE, Min-Ju KIM, Jeong-Hyeon KIM, Jee-In HEO, Seong-Hoon PARK, Hong-Jun KANG, Sung-Chan KIM, Jaebong KIM, Jae-Bong PARK, Jae-Yong LEE (Hallym University, Medical School, Department of Biochemistry, Korea)

Introduction : FOXO3a is down-regulated during cellular aging and up-regulated by treatment of hydrogen peroxide even though their molecular mechanism remains still unknown. In order to investigate how FOXO3a is up-regulated by treatment of hydrogen peroxide, we tested mRNA and protein levels of FOXO3a. Method : Promoter activities of serial deletion and point mutants (of FOXO3a promoter) were measured. CHIP assay in FOXO3a promoter were carried out. Results : Both mRNA and protein levels of FOXO3a were increased by H₂O₂ treatment in concentration-dependent manner, indicating that FOXO3a is mainly regulated at transcriptional level. The promoter assay using a reporter construct containing FOXO3a promoter and luciferase gene showed same up-regulation by H₂O₂ treatment. Promoter assay with serial deletions of FOXO3a promoter showed that FOXO3a binding sites of FOXO3a promoter are important, indicating that FOXO3a is transcriptionally autoregulated through FOXO3a binding site in its own promoter. Only FOXO3a overexpression increased FOXO3a promoter activity while overexpression of FOXO1 or FOXO4 could not activate, indicating that FOXO binding sites of FOXO3a promoter interact specifically only with FOXO3a. Serial deletion mutant of promoter and point mutant of FOXO binding sites showed the decrease of promoter activity. CHIP (chromatin-immuno precipitation) assay in FOXO binding sites also confirmed that FOXO3a is a its own transcriptional target gene of FOXO3a. Conclusion : Overall, the results suggest that FOXO3a is transcriptionally up-regulated through FOXO binding site in its own promoter by H₂O₂ treatment. Keywords : FOXO3a, transcriptional autoregulation

PP26 B-049
APE1, XRCC4, AND XPC ARE TRANSCRIPTIONAL TARGET GENES OF FOXO TO MEDIATE DNA DAMAGE-DEPENDANT-ACTIVATION OF DNA REPAIR

Jeong-Hyeon KIM, Jee-In HEO, Seong-Hoon PARK, Hong-Jun KANG, Seung-Min LEE, Jeong-Min LEE, Jae-Bong PARK, Jaebong KIM, Sung-Chan KIM, Jae-Yong LEE (Hallym University, Medical School, Department of Biochemistry, Korea)

Introduction : DNA damage is known to activate DNA repair and also reported to increase FOXO3a, implying that FOXO3a is related with DNA repair. Since the detailed function of FOXO3a in DNA damage and DNA repair has not been elucidated yet, the role of FOXO3a in DNA damage-mediated activation of DNA repair HEF (human embryonic fibroblast) was examined. Method : Promoter activity of APE1, XRCC4, XPC were measured for deletion and point mutants

BER, NER, and NHEJ were measured. Results : When HEF cells were treated with doxorubicin, a DNA intercalating agent the protein level of FOXO3a was increased. APE1 level and BER activity were also increased. Promoter activity of APE1 was increased by increased FOXO3a. Deletion and point mutants in FOXO3a binding sites of APE1 promoter showed decrease of promoter activity. CHIP (Chromatin Immunoprecipitation) assay showed that APE1 binding to FOXO3a binding sites of APE1 promoter was increased in doxorubicin treated-HEF cells, indicating that APE1 is a transcriptional target gene of FOXO3a. Deacetylation and dephosphorylation mutants of FOXO3a (activation of FOXO3a) resulted in up-regulation of APE1 and activation of BER as expected. Additional data also showed that XRCC4, a factor of non-homologous end-joining (NHEJ) and XPC, a component of nucleotide excision repair (NER) are transcriptional target genes of FOXO3a to mediate the increase of NHEJ and NER activities in doxorubicin-treated HEF cells. Conclusion : Our result showed that DNA damage increased the protein level of FOXO3a and thereby up-regulated its target genes, APE1, XRCC4, and XPC to activate BER, NHEJ and NER activities. Keywords : FOXO3a, APE1, XRCC4, XPC, DNA damage, DNA repair

PP26 B-050

MDM20, AN AUXILIARY SUBUNIT OF THE N-TERMINAL ACETYLTRANSFERASE COMPLEX NATB, INVOLVES IN POLYQ AGGREGATE CLEARANCE

Kunihiko YASUDA, Kyoji OHYAMA, Nozomu MORI (*Anatomy and Neurobiology, Nagasaki University School of Medicine, Japan*)

Introduction : Neurodegenerative disorders, like Alzheimer disease, Parkinson disease or Huntington disease, accumulate the protein aggregates in brain and finally induced neuronal death. In this presentation, we report the novel regulation system for protein aggregates clearance. Mdm20 is an auxiliary subunit of the NatB complex, which includes Nat5, the catalytic subunit for protein N-terminal acetylation. The NatB complex catalyzes N-acetylation during de novo protein synthesis initiation; however, recent evidence from yeast suggests that NatB also affects post-translational modification of tropomyosin, which is involved in intracellular sorting of aggregated proteins. We hypothesized that an acetylation complex such as NatB may contribute to protein clearance and/or proteostasis in metazoan and/or mammalian cells. Method : We examined whether the NatB complex or its components affect polyQ aggregation, autophagy induction and regulation of PI3K-Akt-mTOR signaling in rat primary cultured hippocampal neurons and HEK293 cells using over-expression and siRNA methods. Results : The number of polyQ aggregates increased in Mdm20 over-expressing (OE) cells, but not in Nat5-OE cells. Conversely, in Mdm20 knockdown (KD) cells, but not in Nat5-KD cells, polyQ aggregation was significantly reduced. Furthermore, in Mdm20-KD cells, a punctate appearance of LC3 was evident, suggesting the induction of autophagy. Consistent with this notion, phosphorylation of Akt, most notably at S473, was greatly reduced in Mdm20-KD cells. Conclusion : Mdm20, the so-called auxiliary subunit of the translation-coupled protein N-acetylation complex, contributes to protein clearance and/or aggregate formation by affecting the phosphorylation level of Akt independently from the function of Nat5. Keywords : poly-glutamine acetylation autophagy

PP26 B-051

THE EFFECT OF A NOVEL COMPOUND, (Z)-5-(2,4-DIHYDROXYBENZYLIDENE) THIAZOLIDINE-2,4-DIONE (MHY498), ON NITRIC OXIDE-INDUCED MELANOGENESIS

Kyoung Mi MOON¹, So Hee KIM¹, So Ra KIM¹, Hye Jin AN¹, Hye Jin LEE², Yu Ri JUNG¹, Ki Wung CHUNG¹, Yeonja CHOI¹, Youngwoo WOO², Hee Won LEE², Hyung Ryong MOON², Hae Young CHUNG¹ (*1. Molecular Inflammation Research Centre for Aging Intervention (MRCA), College of Pharmacy, Pusan National University, Korea; 2. Laboratory of Medicinal Chemistry, College of Pharmacy, Pusan National University, Korea*)

Introduction : Nitric oxide (NO) and the NO/PKG signaling pathway play a crucial role in ultraviolet (UV)-induced melanogenesis, which is related to the induction of the expression of tyrosinase. In an attempt to find a novel anti-melanogenic agent, we synthesized a new compound, (Z)-5-(2,4-Dihydroxybenzylidene) thiazolidine-2,4-dione (MHY498). The purpose of this study was to investigate the effect of MHY498 on NO and the NO-mediated signaling pathway using in vitro model of melanogenesis. Method : MHY498 inhibited Sodium Nitroprusside (SNP, an NO donor)-induced NO generation, dose-dependently in B16F10 melanoma cells. MHY498 suppressed the tyrosinase activity and melanin synthesis, which induced by SNP in B16F10 melanoma cells. To investigate the affected signaling pathway, guanosine cyclic 3',5'-monophosphate (cGMP) activity were measured by cGMP EIA Kit and Western blot analyses were conducted to determine the effect on the gene expression of tyrosinase and microphthalmia-associated transcription factor (MITF). Results : The activity of cGMP increased by SNP and reduced dose-dependently by MHY498. MHY498 suppressed the expression of tyrosinase and MITF, which were stimulated by SNP. From this study, we confirmed that the enhancement of tyrosinase gene expression through the cGMP pathway is a primary mechanism for NO-induced melanogenesis and the NO-induced pathway by MITF enhances melanogenesis. Conclusion : The newly synthesized tyrosinase inhibitor, MHY498 had an scavenging activity of NO and inhibitory activity of the NO-mediated signaling pathway, which lead to down-regulation of tyrosinase expression in melanogenesis. MHY498 could be a promising anti-melanogenic agent targeting the NO-induced cGMP signaling pathway. Keywords : (Z)-5-(2,4-Dihydroxybenzylidene)thiazolidine-2,4-dione, melanogenesis, nitric oxide

PP26 B-052

A NOVEL TELOMERASE COMPONENT COEXISTS WITH TELOMERASE AND REGULATES TELOMERASE ACTIVITY

Prabhat KHADKA, Ji Hoon LEE, Sun Ah JEONG, In Kwon CHUNG (*Department of Systems Biology and Department of Integrated Omics for Biomedical Science, Yonsei University, Korea*)

Introduction : It has shown that the conventional DNA metabolism machineries directly or indirectly regulate telomerase activity and telomere, still it is not clearly known how DNA replication proteins regulate telomerase. Method : 1. Cell culture 2. Confocal analysis. Results : Here, we report the role of borealin which binds with hTERT and regulates telomerase activity. Borealin plays important role in DNA replication, chromosome alignment, and spindle assembly checkpoint. Here, we show that borealin coexists with telomerase in vivo via telomeric DNA in telomerase positive cells and telomerase-immortalized human somatic cells but not in human ALT cells. In this study, we demonstrate that hTERT interacts with borealin both in vitro and in vivo. Here, we show that the association of borealin with hTERT is independent of RNA but requires DNA and also we show that N-terminal of hTERT binds to borealin. Furthermore, we show that borealin depletion by RNAi reduces the telomerase activity inducing the cell growth arrest in MCF7 cells. Conclusion : Borealin has until now been described as a component of chromosomal

passenger, mainly involved in DNA replication, here, we confirmed that borealin can bind to telomeric end. This is, to our knowledge, the first evidence that Borealin coexist with active telomerase and regulates telomerase activity, revealing a not yet recognized link of this CPC protein to telomere. Keywords : Telomere, Telomerase

PP26 B-053

STEROIDOGENIC ACUTE REGULATORY PROTEIN-RELATED LIPID TRANSFER (START) DOMAIN-CONTAINING 6 IN THE TESTIS AND BRAIN OF AGING RAT
Sang Pil YOON (*Department of Anatomy, School of Medicine, Jeju National University, Korea*)

Introduction : START domain-containing proteins share homologous domain containing a 200- to 210-amino acid and implicate in intracellular lipid transport. START domain -ontaining 6 (StarD6) originally reported to play a role during male germ cell maturation, but we have reported the changes of StarD6 in developing normal and hypothyroid rats. Therefore, we investigated the changes of StarD6 in aging rat testis and brain. Method : Characteristics of chronological aging were compared in testis and brain, respectively. Quantitative and qualitative analysis of StarD6 were done at 6, 12, and 24-month-old male Sprague-Dawley rat testis, with serum testosterone levels at 6 and 24-month-old rats. As there were no significant changes until 24-month-old, the same characteristics of StarD6 were compared at 6 and 28-month-old male rats brain, further subdivided as cerebrum, cerebellum, and hippocampus. Results : Serum testosterone levels decreased as aging and total protein levels of StarD6 in testis decreased. While the immunolocalization of StarD6 in the spermatocyte decreased, cytoplasmic localization unexpectedly appeared in aged testis. Compared with young rats, aged rats showed decrease in StarD6 in the cerebrum and cerebellum without changes in immunolocalization of principal cells. But, aged rats showed increase in StarD6 in the hippocampus with changes in immunolocalization from stratum pyramidale to stratum radiatum and strata lacunosum-moleculare. Conclusion : Taken together, StarD6 decreases in accordance with aging except hippocampus. These results suggest that StarD6 might have a role for neurosteroidogenesis in the hippocampus. Keywords : Aging, Hippocampus, StarD6

PP26 B-054

IMPAIRED AUTOPHAGIC FLUX AND ELONGATED MITOCHONDRIA IN GLUCOSE-STARVED CELLS
Seonbeom SONG, Eun Seong HWANG (*Department of Life Science, University of Seoul, Korea*)

Introduction : Autophagy is a well conserved biological process designed to clear abnormal proteins and organelles such as mitochondria. In addition to this vital role, autophagy is considered to function in replenishing substrates which are required for ATP production and biosynthesis of cellular components in response to nutrient deprivation. When autophagy is activated, autophagosome formation and its removal through fusion with lysosome are accelerated. Method : In glucose-starved cells, it is conceivable that autophagy is activated while mitochondrial respiration rises to meet the demand for ATP supply in the absence of resource for glycolysis. We investigated whether autophagy is executed effectively and how mitochondria survive during glucose starvation. Results : As has been shown in other studies, in cells undergoing glucose starvation, autophagosomal content increased substantially. However, even though autophagy was activated in these cells, mitochondrial content also increased. And, mitochondria formed filamentous networks. The level of p62 increased, indicating that autophagic flux was impaired.

Treatment of CCCP, an uncoupler which causes mitochondrial depolarization, activates mitophagy, resulting in a decrease of mitochondrial content and alleviation in blockage of autophagic flux. Conclusion : Taken together, in prolonged glucose starvation, mitophagy is attenuated due to the lengthening of mitochondria and the impairment of autophagolysis. Keywords : mitochondria autophagy

PP26 B-055

NAM-INDUCED MITOPHAGY : AN EVENT INDEPENDENT OF PINK1/PARKIN PATHWAY
So-young JANG, Eun Seong HWANG (*Department of Life Science, University of Seoul, Korea*)

Introduction : Nicotinamide (NAM), which is a vitamin B3 derivative, is converted to NAD⁺ through NAD⁺-salvage pathway. In previous studies, we reported that NAM alters cellular redox state ([NAD⁺]/[NADH] ratio) and activates mitochondrial degradation through SIRT1-dependent mitophagy. Upon NAM-treatment mitochondria were fragmented, produced less ROS and had high membrane potential. We hypothesized that NAM causes selective elimination of defective mitochondria, which has been proposed to be mediated by PINK1/Parkin-dependent. PINK1 and Parkin have been shown to on damaged mitochondria and degradation by activating autophagosome formation on them. We hypothesized that PINK1/Parkin pathway also plays a role in mitochondrial targeting in the NAM-induced mitophagy. Method : We determined whether PINK1/Parkin pathway is involved in NAM-induced mitophagy activation by using HeLa cells which does not express Parkin. Results: Neither Parkin over-expression nor knock-down affect NAM-induced mitophagy in HeLa and fibroblast, respectively. However SirT1 knock-down abolished NAM-induced mitophagy. And treatment of SirT1 activator induced mitophagy accompanied with mitochondrial fragmentation without increase of mitochondrial membrane potential. Conclusion : NAM induced mitophagy is PINK1/Parkin pathway independent event. Maybe, mitochondria content gets lowered and their quality gets enhance through the activation of SIRT1-mediated basal level autophagy. Keywords : Nicotinamide Mitophagy

PP26 B-056

IMPORTIN α/β AND RAN ARE INVOLVED IN NUCLEAR TRANSLOCATION OF hTERT
Sun Ah JEONG¹, Ji Hoon LEE², Prabhat KHADKA², In Kwon CHUNG² (*1. Department of Integrated OMICS for Biomedical Science, WCU program, Yonsei University, Korea; 2. Department of Systembiology, Department of Integrated OMICS for Biomedical Science, WCU program, Yonsei University, Korea*)

Introduction : The maintenance of eukaryotic telomeres requires telomerase, which is minimally comprised of a telomerase reverse transcriptase (TERT) and an associated RNA component (TERC). Telomerase activity is tightly regulated by its nucleocytoplasmic transport as well as expression of hTERT at both the transcriptional and posttranslational levels. Previously, it was reported that hTERT requires a bipartite nuclear localization signal (NLS) for import to the nucleus. However, the molecular mechanism of nuclear translocation of hTERT between subcellular compartments remained unclear. Method : Telomeric repeat amplification protocol (TRAP), GST pulldown, Immunoprecipitation and Immunoblot, Immunofluorescence Microscopy, RNA interference, In vivo Ubiquitination Assay. Results : Here, we show that hTERT translocates into nucleus via importin α/β dependent pathway, with hTERT NLS which physically associates with multiple importin

alpha(α)s and beta(β) in vitro and in vivo. Depletion of endogenous multiple subfamilies of importin alpha inhibits nuclear translocation of hTERT and thereby decreases telomerase activity via ubiquitination of hTERT in vivo. We further show that importin alpha depletion results in dissociation between hTERT and dyskerin, a main core factor of active telomerase holoenzyme, and consequent loss of telomerase activity in nucleus. Conclusion : Therefore, given that the nuclear translocation of hTERT is mediated by the multiple importin α/β import pathway, it will lead to understand the dynamic regulation of hTERT protein related to the subcellular localization and telomerase activity. Keywords : hTERT, importin, Ran

PP26 B-057

SUMO1 INCREASES AUTOPHAGIC ACTIVATION IN ALZHEIMER'S DISEASE

Sun-Jung CHO, Sang-Moon YUN, Chulman JO, Sang Ick PARK, Young Ho KOH (*Division of Brain Diseases, Korea National Institute of Health, Korea*)

Introduction : In Alzheimer's disease (AD), massive accumulation of autophagic vacuoles (AVs) is observed in the brain. The accumulation of AVs in affected neurons is responsible for amyloid-beta ($A\beta$) production. Previously, we reported that small ubiquitin-related modifier protein 1 (SUMO1) increases $A\beta$ levels. In the present study, we investigated whether SUMO1 is associated with AV formation in AD. Method : Human neuroglioma H4 cells were cultured in DMEM supplemented with 10% fetal bovine serum. H4 cells stably expressing wild-type human APP with Myc tag (HAMg), SUMO1 with EGFP tag (HGS1) were established by G418 selection. For primary cortical neuronal cultures, dissociated cells from cortexes of embryonic rat brains were plated in 12 well dishes coated with poly-D-lysine and maintained in neurobasal medium supplemented with B27. The following primary antibodies were used : α -SUMO1, α -Myc, α -GFP, α -LC3, α -Beclin1, and α -Tubulin. Results : We found that the formation of autophagic vacuoles (AVs) was increased in the brains of APP transgenic mice (APPswXPS1del9). We also found that SUMO1 protein levels were increased in APP Tg mouse. Consistent with our in vivo observation, treatment of primary neuron and H4 cells with $A\beta$ increased SUMO1 protein levels and AVs. Furthermore, overexpression of SUMO1 induced the formation of LC3-II-positive AVs in rat cortical neurons and neuroglioma H4 cells. Conclusion : Our results implicate that SUMO1 might link β -amyloidogenic pathways through autophagy, which is abnormally activated in AD. SUMO1-induced autophagic activation is a key mechanism for understanding the AV-mediated pathogenesis of AD. Keywords : SUMO1, Autophagy, Alzheimer's disease (AD)

PP26 B-058

ROLES OF SENESCENT DERMAL FIBROBLASTS IN CHRONOLOGICAL SKIN AGING

Sunmi KIM, Si Young CHO, Dae Bang SEO, Sang Jun LEE (*Health Science Research Institute, AMOREPACIFIC Corporation R&D Center, Korea*)

Introduction : Senescent cells accumulate with aging in various tissues including skin. Senescent dermal fibroblasts secrete high levels of inflammatory cytokines and matrix metalloproteinases, which have negative influence on structural integrity of skin. We hypothesized that senescent fibroblasts could accelerate chronological aging of skin through the factors they secrete by collapsing structural integrity of dermis. Method : Replicative senescence of primary human dermal fibroblasts was induced by serial passaging and confirmed by senescence-associated- β -galactosidase staining and the expression

levels of cell cycle inhibitors. To investigate effects of senescent fibroblasts on presenescent cells, early passage fibroblasts were treated with conditioned media from senescent cells and the expression levels of skin aging-related factors were analyzed. Furthermore, to examine how these alterations could affect dermal structures, we analyzed changes in contraction of three-dimensional collagen lattice. Results : Expression levels of inflammatory cytokines and matrix metalloproteinases were significantly elevated in replicative senescent dermal fibroblasts. Upon treatment with conditioned media from the senescent fibroblasts, the expression levels of inflammatory cytokines and MMP-1 was increased also in the presenescent dermal fibroblasts. As previously reported, three-dimensional collagen lattices with senescent fibroblasts were contracted greater than those with presenescent fibroblasts when secreted MMP-1 was activated in the collagen lattices. And the contraction of collagen lattice was enhanced not only by senescent cells but also by presenescent cells treated with senescent cell-conditioned media. Conclusion : These results indicate that senescent fibroblasts have active roles on chronological skin aging. Senescent fibroblasts make surrounding presenescent cells to weaken structural integrity of skin dermis and therefore accelerate skin aging. Keywords : Cellular senescence, Skin aging

PP26 B-059

PEROXIREDOXIN V SELECTIVELY REGULATES IL-6 PRODUCTION BY MODULATING JAK2-STAT5 PATHWAY

Hoon-In CHOI¹, Kyoung-Jin CHUNG², Hee-Young YANG¹, Poo-Reun KIM³, Min-Suk KOOK³, Tae-Hoon LEE¹ (*1. Department of Biochemistry, School of Dentistry, Chonnam National University, Korea; 2. Division of Vascular inflammation, Department of Medicine, Technical University of Dresden, Germany; 3. Department of Oral & maxillofacial surgery, School of Dentistry, Chonnam National University, Korea*)

Introduction : Mammalian peroxiredoxin V (PrdxV) is a multifunctional protein that protects cells from DNA damage and inhibits stress-induced apoptosis. Since PrdxV was discovered, it is consistently reported in inflammation field. For example, mRNA levels of PrdxV are increased in rat lung during acute inflammation induced by lipopolysaccharide (LPS). However, the role of PrdxV in the modulation of lipopolysaccharide (LPS)-mediated host cell signaling has not been well elucidated. Method : To characterize the functional role of PrdxV in LPS-mediated immune response, the stable RAW264.7 cell lines encoding wild type (WT) or catalytic cysteine mutant (C48S) of PrdxV were established. The level of pro-inflammatory cytokines in those cells was checked by ELISA and real time PCR analysis. And also, to understand the regulation mechanism of PrdxV, protein-protein interaction between PrdxV and Jak2-Stat5 signal molecules was studied by using co-immunoprecipitation. Results : We found that PrdxV selectively regulates the production of interleukin 6 (IL-6), but not other cytokines. We also found that overexpression of PrdxV may inhibits phosphorylation of signal transducer and activator of transcription 5 (Stat5), which is result in IL-6 reduction, through the inhibition of Jak2 phosphorylation by Jak2-PrdxV interaction. Interestingly, this function of PrdxV was dependent on its catalytic cysteine at 48 residues. In addition, PrdxV is also effective to inhibit the Jak2 phosphorylation, although SOCS1 (Suppressor of cytokine signaling 1) clearly inhibits the Jak2 phosphorylation. Conclusion : Our results indicate that PrdxV is partially involved in regulation of IL-6 production through modulation of Jak2-Stat5 pathway. Keywords : Lipopolysaccharide, Peroxiredoxin V, Inflammation

PP26 B-060

A STUDY ON THE ASSESSMENT OF NUTRITIONAL STATUS OF ELDERLY WOMEN RESIDING IN OLD-AGE HOMES OF KOLKATA, INDIA

Bidisha MAITY¹, Debnath CHAUDHURI², Minati SEN¹
(1. Department of Home Science, University of Calcutta, India;
2. Department of Biochemistry and Nutrition, All India Institute of Hygiene and Public Health (West Bengal University of Health Sciences), India)

Introduction : Malnutrition is often a neglected problem among the elderly persons. Objective of the present study was to assess the nutritional status of elderly women of 60 years and above residing in old age homes in and around Kolkata. **Method :** The study was conducted among 67 inmates of the old age homes in and around Kolkata, India after obtaining consent from them. Mini Nutritional Assessment (MNA) tool was used for the assessment of nutritional status. Anthropometric measurements such as Height, Weight, Mid-arm-circumference (MAC) and Calf Circumference (CC) as well as bio-chemical estimation such as blood Hb, serum cholesterol and albumin levels were also carried out. **Results :** Based on the MNA score the women were classified as malnourished (N= 9, 13.43%, MNA score < 17), at risk of malnutrition (N= 36, 53.73%, MNA score = 17- 23.5) and well-nourished (N= 22, 32.83%, MNA score > 23.5). Significant associations were observed between MNA and Weight (p< 0.0001), BMI (p< 0.0001), MAC (p< 0.0001), CC (p< 0.0001). No significant association between MNA and Bio-chemical parameters was found. **Conclusion :** Nutritional assessment by MNA revealed that majority of the study population were either malnourished or at risk of malnutrition and MNA score was significantly associated with all the anthropometric parameter tested. **Keywords :** Elderly women, old age home, nutritional assessment

PP26 B-061

RENO-PROTECTIVE EFFECTS OF 7-O-GALLOYL-D-SEDOHEPTULOSE, PHENOLIC COMPOUND FROM CORNI FRUCTUS, ON DIABETES-INDUCED ALTERATIONS SUCH AS OXIDATIVE STRESS, INFLAMMATION, AND APOPTOSIS IN TYPE 2 DB/DB MICE

Chan Hum PARK, Hae Young CHUNG (*Molecular Inflammation Research Center for Aging Intervention, Department of Pharmacy, Pusan National University, Korea*)

Introduction : This study was carried out to verify the preventive effects of 7-O-galloyl-D-sedoheptulose (GS), a phenolic compound isolated from Corni Fructus, underlying diabetic renal damage in type 2 diabetes. **Method :** GS (20 or 100mg/kg body weight/day, p.o.) was administered every day for 6 weeks to db/db mice, and its effects were compared with those of the vehicle in db/db and m/m mice. **Results :** In the serum and kidney, biochemical factors and protein expressions associated with nicotinamide adenine dinucleotide phosphate (NADPH) oxidase, inflammation, and apoptosis were examined. As a result, GS administration to type 2 diabetic mice lowered serum and renal oxidative stress through the reduction of reactive oxygen species, lipid peroxidation, and increase in the ratio of glutathione and its oxidised form. These results were derived, at least in part, from attenuating the expression of NADPH oxidase subunit proteins, Nox-4 and p22phox. Moreover, in the GS-treated group, nuclear factor-kappa B-related pro-inflammatory factors (such as cyclooxygenase-2 and inducible nitric oxide synthase) and pro-apoptotic protein expressions (such as Bax and cytochrome c) were alleviated in the kidney. **Conclusion :** The present study demonstrated that the administration of GS isolated from Corni Fructus had a protective effect against renal oxidative stress under type 2 diabetes through regulations of protein

expressions related to oxidative stress, inflammation, and apoptosis. **Keywords :** 7-O-galloyl-D-sedoheptulose, diabetes, inflammation

PP26 B-062

METABOLIC REGULATION BY A NOVEL AGE-DEPENDENT MITOCHONDRIA-ENCODED PEPTIDE

Changhan David LEE, Pinchas COHEN (*Gerontology, University of Southern California, USA*)

Introduction : The mitochondrion is heavily implicated in metabolism and the aging process as well as in age-related diseases, but the mechanistic details of these phenomena are still largely unclear. The recent discovery of Humanin, a small mitochondrial-derived peptide (MDP) encoded within the mitochondrial 16S rRNA, with potent in vivo activities against diabetes and Alzheimer's disease positions the mitochondria as an important regulator of cellular and organismal protection. We discovered another MDP encoded within the mitochondrial 12S rRNA with potent metabolic roles; MOTS3 (Mitochondrial ORF within the Twelve S rRNA). **Method :** MOTS3 expression and function was assessed in rho-0 and HEK293 cells using the Seahorse analyzer, metabolomics, microarray, and immunoblots. 10-week-old CD-1 mice were fed a high-fat diet (60%) and treated with MOTS3 (0.5 mg/kg/day; I.P. daily for 8 weeks). **Results :** MOTS3-specific antibodies confirmed the mitochondrial-derived origin of MOTS3 and indicated reduction of levels in old animals in the circulation and mitochondrial rich organs such as testes. In vitro, MOTS3 increases glucose uptake (>7-fold) and fatty acid oxidation, decreases mitochondrial respiration, and activates AMPK and autophagy. The AMPK activation was due to a 25-fold increase in MOTS3-induced endogenous AICAR levels. Microarray analysis paralleled increased lipid and glucose use and decreased mitochondrial respiration. MOTS3 treatment dramatically curbed weight gain in mice fed a high-fat diet (without changing food intake), reduced blood sugar levels, and activated AMPK in muscles, without evidence of toxicity. **Conclusion :** MOTS3 is a novel and potent age-dependent metabolic regulator that resembles the actions of metformin and has promise in metabolic diseases of aging. **Keywords :** mitochondrial-derived peptides, AICAR, AMPK

PP26 B-063

VITAMIN B12 STATUS WITH AGING AND RELATIONS WITH CLINICAL HEALTH AND NUTRITIONAL PARAMETERS IN KOREANS

Chung Shil KWAK, Ji Hyun CHO (*Institute on Aging, Seoul National University, Korea*)

Introduction : Vitamin B12 deficiency is not rare but under-recognized disorder in older people. The purpose of this study was to examine vitamin B12 status with aging and its correlations with other clinical parameters. **Method :** It was examined blood test, grip strength, walking speed and mini-nutritional assessment(MNA) in 933 volunteers (337 men and 596 women) aged 50 years and over living in Korean rural area. **Results :** The average serum vitamin B12 concentration was significantly decreased with aging, specially after 70 years old, both in men(p<0.05) and women (p<0.01). Serum vitamin B12 concentration showed a significant positive correlation with grip strength(r2=0.1377) and negative correlation with MCV(r2=-0.138), MCH(r2=-0.1594) and serum homocystein concentration(r2=-0.2050) in men, while a significant positive correlation with serum folate(r2=0.1208) and IGF-1 concentrations (r2=0.1250) and negative correlation with serum homocystein concentration(r2=-0.1840) in women. The prevalence of low serum vitamin B12(<340 ng/mL) was 5.04%(n=17) in men and 4.53% (n=27) in women, all of those were

aged 65 years or older. In this old population, low serum vitamin B12 group showed significantly higher prevalence of low serum folate (<3 ng/mL), high serum ALP (>129 U/L) and hypertension in men when compared to normal group, while significantly higher prevalence of serum folate, high serum homocystein (>17 μmol/L), low hematocrit (<36%) and low serum 25-(OH) vitamin D3 (<10 ng/mL) in women. Conclusion : Serum vitamin B12 concentration decreased with aging in Koreans. It would be rather checked low folate and vitamin D3 status, high serum homocystein, low muscle strength, anemia and malnutrition to older people with low serum vitamin B12 concentration. Keywords : vitamin B12 status, aging, clinical parameter

PP26 B-064

METABOLIC SYNDROME AND INFLAMMATORY CYTOKINES IN THE PREDICTION OF ALL-CAUSE MORTALITY AMONG OLDEST OLD INSTITUTIONALIZED CHINESE MEN IN TAIWAN

Chu-Sheng LIN (*Family Medicine Department, Taichung Veterans General Hospital, Taiwan*)

Introduction : The metabolic syndrome is associated with increased cardiovascular morbidity and mortality. The hot topic are inflammatory cytokines of metabolic syndrome . But the data among metabolic syndrome, inflammatory cytokines, cardiovascular mortality and all cause mortality in elderly people are rarely reported. Method : A longitudinal study during 2002 ~ 2012 was performed in a Veterans Care Home, Taiwan. Three groups were analysis, one is alive in veterans care home, another is lost follow up, the other is mortality. The presence of metabolic syndrome was defined according to the AHA/NHLBI criteria with a modification of waist circumference for Asians. Tumor necrosis factor- α (TNF- α) was determined. Serial comparisons were done by Chi square test. Results : A total of 354 residents were enrolled (mean age: 79.07±3.96 years, 100% males) During 10 years of longitudinal follow-up, 130 residents are dead (mean age: 79.46 ±3.78 years), 127 residents (mean age: 78.01±3.51 years) are alive and stay in the same veterans care home, 97 residents (mean age: 79.94 ±4.47 years) are lost from veterans home. The prevalence of metabolic syndrome is 26.9 %. During the follow-up period, all cause mortality did not correlate with metabolic syndrome (p=0.942). However, TNF- α (P<0.001 , HR:1.04) and systolic blood pressure (P=0.002, HR:1.02) were independent risk factors for all-cause mortality. Conclusion : Metabolic syndrome can not predict the all-cause mortality among oldest old institutionalized Chinese men in Taiwan. However, TNF- α and systolic blood pressure are the independent risk factors for all cause mortality among residents of oldest old institutionalized Chinese men in Taiwan. Keywords : Metabolic syndrome, Inflammatory Cytokines, All-Cause Mortality

PP26 B-065

SCD5 IS ASSOCIATED WITH THE DEVELOPMENT OF HCC IN KOREAN POPULATION

Ha Seung SHIN¹, Gyeong Im YU², Dong Hoon SHIN², Su Kang KIM¹, Joo-ho CHUNG¹ (*1. Kohwang Medical Research Institute, School of Medicine, Kyung Hee University, Korea; 2. Department of Preventive Medicine, School of Medicine, Keimyung University, Korea*)

Introduction : Hepatocellular carcinoma (HCC) is the first cause of death among people especially in their 60s in Korea. This study was conducted to examine SCD5 gene expression in HCC tissue and the relationship between 3'-UTR of single nucleotide polymorphisms (SNPs) in SCD5 gene and HCC. Method : SCD5 expression was examined using northern blot. The exonic SNPs (rs3733230,

rs1065403, and rs6840; 3'-untranslated region, 3'-UTR) were genotyped by direct sequencing. Results : In HCC tissue, SCD5 gene expression was strongly observed. One hundred sixty two male HCC patients and 173 male control subjects were recruited. Two SNPs (rs6840 and rs3733230) among three SNPs (rs6840, rs1065403, and rs3733230) in genotype frequencies showed a connection with HCC (P=0.02, P=0.014, under the recessive model, respectively). However, the allele frequency of rs3733230, rs6840, and rs1065403 did not show any connection between HCC and controls. According to the clinical characteristic data of HCC, the genotype frequency of rs3733230, rs6840, and rs1065403 were related considerably with α -fetoprotein (AFP) levels (rs6840: P=0.0019 in the co-dominant 1 model, P=0.043 in the dominant model; rs1065403: P=0.004 in the co-dominant 1 model, P=0.007 in the dominant model; rs3733230: P=0.022 in the co-dominant model). The A allele frequency of rs1065403 was lower in high AFP (>200 ng/ml) group (26.1%) than that in low AFP (\leq 200 ng/ml) group (38.0%). Conclusion : In conclusion, SCD5 gene expression in HCC and SNPs in 3'-UTR of SCD5 are related with HCC. The study also shows that SCD5 may be associated with AFP levels in clinical characteristics. Keywords : stearyl-CoA desaturase 5, hepatocellular carcinoma, single nucleotide polymorphism

PP26 B-066

EFFECT OF SHORT-TERM GAMMA TOCOPHEROL SUPPLEMENTATION ON DIABETIC NEPHROPATHY

Hanna SHIN, Yunsook LIM (*Department of Food and Nutrition, Kyung Hee University, Korea*)

Introduction : Diabetic nephropathy (DN) is the major life-threatening complication of diabetes in the elderly. Diabetes-induced renal damage is associated with inflammation and fibrosis. Gamma tocopherol (GT) has shown anti-inflammatory effect by regulation of proinflammatory eicosanoids, proinflammatory cytokines in inflammation-mediated injury. This study has been conducted to investigate the role of gamma-tocopherol supplementation in acute DN state. Method : Diabetes were induced by injection of alloxan monohydrate (150mg/kg, i.p) dissolved in 0.9% NaCl solution in ICR mice (5.5-week-old, male). Mice with fasting blood glucose (FBG) levels were higher than \geq 250mg/dl were considered as diabetic. Mice were divided randomly into 4 groups: non-diabetic controls (CON), diabetic-controls (DMC), and diabetes treated with alpha-tocopherol (AT) and gamma-tocopherol (GT). Treatment groups were orally administered 35mg/kg of AT or GT diluted in tocopherol stripped corn-oil. General indices (body weights, food intake and FBG) were measured once a week. After 2 weeks treatment, functional indicators of kidney damage (blood urea nitrogen and plasma creatinine), lipid peroxidation and lipid profiles were measured. Morphology changes and inflammatory, oxidative stress and pre-fibrosis markers were also determined. Results: GT significantly decreased FBG levels as much as shown in AT treated diabetic mice. Lipid peroxidation level of GT group was significantly lower than that of DM group. GT group regulated protein levels of inflammation (CRP, MCP-1 and pI κ B), pre-fibrosis (PKC, PKC- β II and TGF- β I) and improved oxidative stress markers (Nrf2, HO-1 and GPx). Conclusion : Short-term GT supplementation might protect diabetic kidney damages through regulation of hyperglycemia-induced oxidative stress, inflammation and fibrosis in DN. Keywords : α , γ -tocopherol, Diabetic nephropathy, Inflammation

PP26 B-067

KNOCKDOWN OF CPSF-2/CLEAVAGE AND POLYADENYLATION SPECIFICITY FACTOR 2 INCREASES LIFESPAN IN C. ELEGANS

Heehwa SON¹, Dongyeop LEE¹, Dae-Eun JEONG¹, Seung-Jae LEE²

(1. Division of Molecular and Life Science, Pohang University of Science and Technology, Korea; 2. Division of Molecular and Life Science, School of Interdisciplinary Bioscience and Bioengineering, World Class University Information Technology Convergence Engineering, Pohang University of Science and Technology, Korea)

Introduction : Abnormal glucose regulation is associated with several age-related diseases including type 2 diabetes, and their causal relationship has been extensively studied. However, research on how glucose influences aging itself has just begun. Several recent reports demonstrated that glucose-enriched diet shortens the lifespan of the roundworm *C. elegans* through poorly understood mechanisms. **Method :** By performing a genome-wide RNAi screen using a glucose-inducible fluorescence reporter, we identified many novel genes that affected the metabolism and the lifespan of *C. elegans*. **Results :** We present our finding regarding the role of *cpsf-2*, a cleavage and polyadenylation specificity factor that regulates 3' end cleavage during RNA processing, in the lifespan regulation of *C. elegans*. We initially found that *cpsf-2* RNAi decreased the glucose-inducible fluorescence reporter. Furthermore, we showed that knockdown of *cpsf-2* significantly increased the lifespan of *C. elegans*. **Conclusion :** These data indicate that reduction of *cpsf-2* may promote long lifespan by reducing metabolism-related genes that play a role in increasing the glucose level. Currently, we are determining which aging-regulatory genes interact with *cpsf-2* to influence lifespan and/or glucose metabolism. We believe our research will help elucidate novel mechanisms by which glucose influences lifespan. **Keywords :** *cpsf-2*, *C. elegans*, glucose metabolism

PP26 B-068

EVODIAMINE IMPROVES INSULIN RESISTANCE BY INHIBITING MTOR-S6K SIGNALING IN ADIPOCYTES AND PREVENTS AGE-RELATED OBESITY IN MICE

Hitoshi YAMASHITA¹, Ting WANG², Tatsuya KUSUDO¹, Tamaki TAKEUCHI¹, Yongxue LI¹, Shanlou QIAO¹, Nozomu MORI³ (1. Biomedical Sciences, College of Life and Health Sciences, Chubu University, Japan; 2. Internal Medicine, Iwate Medical University, Japan; 3. Anatomy and Neurobiology, Nagasaki University School of Medicine, Japan)

Introduction : Regulation of body fat is critical for preventing progression of metabolic syndrome and extending lifespan. Evodiamine reduces obesity and insulin resistance in mice given a high-fat diet; however, the mechanism underlying the effect of evodiamine on insulin resistance and whether evodiamine has beneficial effects for longevity are unknown. **Method :** We performed in vitro experiments using adipocyte culture and in vivo experiments with dietary supplementation of evodiamine in mice. **Results :** In 3T3-L1 adipocyte cultures, evodiamine inhibited insulin-stimulated phosphorylation of mammalian target of rapamycin (mTOR) and activation of ribosomal S6 protein kinase (S6K), leading to downregulation of insulin receptor substrate 1 (IRS1) serine phosphorylation, an indicator of insulin resistance. Beginning at 12 months of age, dietary supplementation of evodiamine at a low dose (1 mg per kg diet) effectively prevented body weight gain and improved glucose tolerance in C57BL/6J mice; whereas increased lifespan did not occur, in which long-term feeding of evodiamine at a high dose (10 mg per kg diet) caused excessive reduction in body weight in aged animals. Down-regulation of mTOR signaling pathway was detected in the white adipose tissue (WAT) of aged mice fed evodiamine diet, suggesting an improvement effect of evodiamine for insulin resistance in vivo. This effect was confirmed in db/db mice injected daily with evodiamine (3 mg per kg body weight) for one week. **Conclusion :** Our

data suggest that evodiamine induces beneficial effects for healthy lifespan by improving age-related obesity and insulin resistance by inhibiting mTOR-S6K signaling in adipocytes in mice. **Keywords :** adipocyte, insulin resistance, evodiamine

PP26 B-069

ECKLONIA CAVA EXTRACT REGULATES FAT METABOLISMS IN HIGH FAT DIET-INDUCED OBESE MICE

HyeYoon EO, Yunsook LIM (Department of Food and Nutrition, Kyung Hee University, Korea)

Introduction : Obesity is considered to be a 'metaflammatory' condition characterized by both metabolic and inflammatory deteriorations. In addition, the increasing population of obese elderly group has become an critical public health problem. Ecklonia cava, a brown algae containing rich amount of dieckol, shows strong antioxidant activity. However, anti-obesity effect of *E. cava* has not been examined yet. We investigated anti-obesity effect of *E. cava* extract (ECE) by regulation of fat metabolism in obese mice. **Method :** Mice were fed with a control diet (CON) or a high fat diet (HF) for 9 weeks. After obesity was induced, the mice were administered ECE at low dose (100 mg/kg/day, LG) and high dose (500 mg/kg/day, HG) by oral gavage for 12 weeks. **Results :** In comparison with the HFD-fed mice, mice fed with ECE attenuated body weight gain and adipose tissue weight (mesenteric and retroperitoneal). Regardless of dosage, ECE significantly reduced both plasma levels of triglyceride and total cholesterol. Moreover, ECE improved hepatic steatosis in HF groups. Moreover, ECE treatment selectively attenuates liver protein levels of both lipogenic and lipolytic markers in HF groups. **Conclusion :** Collectively, ECE supplement may have potential anti-obesity effects via regulation of fat metabolism in HF diet induced obesity. **Keywords:** Obesity, Ecklonia cava, Lipid metabolism

PP26 B-070

EFFECT OF LONG-TERM ENDURANCE TRAINING ON ANGIOGENIC FACTORS IN DB/DB MICE

Hyo Jeong KIM, Hyo Seong YEO (Aging Research Center, Korea National Sport University, Korea)

Introduction : It is well known that type 2DM is closely related to ischemic vascular disease and wound healing defect. Dysfunction of the vascular endothelium is regarded as an important factor in the pathogenesis of diabetic angiopathy. In diabetic skeletal muscle, impaired angiogenesis and reduced VEGF expression have been observed, whereas in healthy muscle, exercise is known to have opposite effects. We hypothesized that long-term endurance training enhances angiogenesis in skeletal muscle of db/db Mice. **Method :** Twenty one db/db mice (8 wk) were randomly assigned into Pre-CON (n=7), Post-CON (n=7, 12 wk), ET (n=7, endurance training) groups. The animals in ET group ran on the rodent treadmill for 1 hour at the level of 12m/min (60% VO₂max) for 12 weeks (5d/w). Change of capillarity was determined by periodic acid Schiff (PAS) staining and VEGF165, and HIF-1 α protein expressions were analyzed by western blotting. **Results :** VEGF165 (30%, p=.003) and Total VEGF (30%, p=.037) protein expressions in heart muscle was significantly increased in ET group compared to control groups. Capillarity was significantly increased in SOL muscle of ET group (39%, p=.000) compared to control groups. **Conclusion :** These results demonstrate the positive effect of long-term endurance training on the angiogenic capacity in the heart muscle and Type I muscle of db/db mice. **Keywords :** diabetes, endurance exercise, angiogenesis

PP26 B-071

EFFECT OF ACUTE LONG-ENDURANCE EXERCISE ON LIPID METABOLIC ENZYMES IN OLD RATS

Hyo Seong YEO¹, Hoo Kyoung BYUN², Su Zu EO³, Hyo Jeong KIM⁴
(1. Aging Research Center, Korea National Sport University, Korea;
2. Exercise Physiology, Korea National Sport University, Korea;
3. Korea Sport Science Institute, Korea National Sport University,
Korea; 4. Aging research center, Korea national sport University,
Korea)

Introduction : It has been suggested that aging is related to crucial metabolic disorders. Lipoprotein lipase (LPL) and hormone-sensitive lipase (HSL) are rate-limiting factors for the metabolism of fatty acids. The present study was undertaken to simultaneously determine the activities of LPL and HSL in red/white skeletal muscle and subcutaneous/visceral adipose tissue with an acute endurance exercise from aged rats. **Method :** 78-week-old female rats (n=16) were randomly divided into control and exercise groups. All animals in the exercise group performed a 3-hr swimming (30min x 6 bouts with 5min rest). LPL and HSL protein expression were measured before and after exercise by western blot analysis. **Results :** The serum metabolic profile related to metabolism decreased by 52.7% (p=.001) for glucose, 65.1% (p=.001) for insulin and 88.4% (p=.001) for total glycogen content with the exercise. The HSL and LPL protein expressions were decreased by 33% and 39% in gastrocnemius red muscle (p<.05) without changing in white muscle. On the other hand, HSL and LPL protein expressions were increased by 54% and 76%, respectively, in subcutaneous fat (p<.05) without changing in visceral fat. **Conclusion :** These results suggest the possibility of metabolic disorder in aged visceral fat. **Keywords :** aging, swimming, LPL

PP26 B-072

EVALUATION OF NUTRIENTS TO PREVENT SO IN THE ELDERLY BY KNHANES 2010

Jae-Kyung NO¹, Chorong OH¹, Sunkug JHO² (1. Department of Nutrition and Health Care, Kyungung University, Korea;
2. Rehabilitation Medicine/Clinical Aging Research Institute, Busan Medical Center, Korea)

Introduction : Age related body composition change, a progressive loss of muscle mass and increase of fat mass such as sarcopenic obesity in the elderly are often under-recognized. As a major problem SO in aged society, early detection and treatment is important and urgent as well as prevention of it. **Method :** We analyzed 1433 subjects (658 men, 775 women) aged 60 yr and older who participated in the four parts of a questionnaire by KNHANES 2010. This study investigated the relation body composition, glucose tolerance indices, inflammation marker, and other biochemical status according to Nonsarcopenic Nonobesity (NSNO), Nonsarcopenic Obese (NSO), Sarcopenic Nonobese (SNO), and Sarcopenic Obese (SO). Further more, as epigenetic modulators, the major nutrient factors such as protein, vitamin D, calcium, unsaturated fatty acid, and antioxidants nutrition were evaluated by food frequency questionnaire (FFQ), and nutrient intake with 24-hour recall. **Results :** The values of HOMA-IR representing insulin resistance were significantly higher in SO group (3.2±1.4 for men, 3.4±2.1 for women), the level of WBC(6.8±2.0 for men, 6.2±1.7 for women) were also higher but the levels of serum 25(OH)D(20.4±6.2 for men, 16.6±6.3 for women) were lower in SO group. Evaluation of nutrients was protein intake (72.3±34.7 for men, 50.6±23.4 for women), calcium (540.7±332.3 for men, 422.6±300 for women), vitamin C(104.0±83.4 for men, 89.4±83.2 for women). **Conclusion :** Body composition changes with aging were strongly associated with inflammation which was controlled by major nutrients intake such as protein, calcium, vitamin D, unsaturated fatty acid, and

antioxidants. Therefore, adequate nutrients are needed for the elderly.

Keywords : Body composition change, aging, nutrients

PP26 B-073

LIVER-SPECIFIC INDUCIBLE NITRIC-OXIDE SYNTHASE EXPRESSION IS SUFFICIENT TO CAUSE HEPATIC INSULIN RESISTANCE AND MILD HYPERGLYCEMIA IN MICE

Shohei SHINOZAKI¹, Cheol Soo CHOI², Nobuyuki SHIMIZU³, Marina YAMADA³, Minhye KIM³, Ting ZHANG⁴, H. Henry DONG⁴, Young-bum KIM⁵, Masao KANEKI³ (1. Geriatrics and Vascular Medicine, Tokyo Medical and Dental University, Japan; 2. Internal Medicine, Gil Medical Center and Lee Gil Ya Cancer and Diabetes Institute, Korea; 3. Anesthesia, Critical Care and Pain Medicine, Massachusetts General Hospital, Harvard Medical School, USA; 4. Division of Immunogenetics, Rangos Research Center, Children's Hospital of Pittsburgh, University of Pittsburgh Medical Center, USA; 5. Division of Endocrinology, Diabetes and Metabolism, Beth Israel Deaconess Medical Center and Harvard Medical School, USA)

Introduction : Inducible nitric-oxide synthase (iNOS), a major mediator of inflammation, plays an important role in obesity-induced insulin resistance. Inhibition of iNOS by gene disruption or pharmacological inhibitors reverses or ameliorates obesity-induced insulin resistance in skeletal muscle and liver in mice. It is unknown, however, whether increased expression of iNOS is sufficient to cause insulin resistance in vivo. **Method :** We generated liver-specific iNOS transgenic (L-iNOS-Tg) mice. And we performed in vivo and in vitro studies, to address the mechanism of insulin resistance. **Results :** L-iNOS-Tg mice exhibited mild hyperglycemia, hyperinsulinemia, insulin resistance, and impaired insulin-induced suppression of hepatic glucose output, as compared with wild type (WT) littermates. Insulin-stimulated phosphorylation of insulin receptor substrate-1 (IRS-1) and -2, and Akt was significantly attenuated in liver, but not in skeletal muscle, of L-iNOS-Tg mice relative to WT mice without changes in insulin receptor phosphorylation. Moreover, liver-specific iNOS expression abrogated insulin-stimulated phosphorylation of glycogen synthase kinase-3 β (GSK-3 β), forkhead box O1 (FoxO1), and mTOR (mammalian target of rapamycin), endogenous substrates of Akt, along with increased S-nitrosylation of Akt relative to WT mice. However, the expression of insulin receptor, IRS-1, IRS-2, Akt, GSK-3 β , FoxO1 was not altered by iNOS transgene. Hyperglycemia was associated with elevated glycogen phosphorylase activity and decreased glycogen synthase activity in the liver of L-iNOS-Tg mice. **Conclusion :** These results clearly indicate that selective expression of iNOS in liver causes hepatic insulin resistance along with deranged insulin signaling, leading to hyperglycemia and hyperinsulinemia. Our data highlight a critical role for iNOS in the development of hepatic insulin resistance and hyperglycemia. **Keywords :** S-nitrosylation

PP26 B-074

INTERMITTENT HIGH GLUCOSE ENHANCES PROLIFERATION OF VASCULAR SMOOTH MUSCLE CELLS (VSMCS) THROUGH MITOGEN ACTIVATED PROTEIN KINASE (MAPK) PATHWAY

Sung Hoon YU¹, Hyung Joon YOO², Dong Hyun KANG³
(1. Department of Internal Medicine, Hallym Medical Center Hallym University, Korea; 2. Division of Endocrinology & Geriatrics, Department of Internal Medicine & Geriatrics School of Medicine Hallym University, Korea; 3. Vascular Research Lab. Division of Endocrinology & Geriatrics, Hallym Medical Center Hallym University, Korea)

Introduction : Objective: To investigate the effects of exposure to

intermittent hyperglycemia on proliferation of obese diabetic rat aortic VSMCs in vitro. Method : VSMCs were incubated for 72 hours with four groups; (1) constant normal glucose medium (4.8 mmol/L); (2) constant high glucose medium (24.5 mmol/L); (3) alternating normal & high glucose media every 12 hours; (4) osmotic control of mannose. The proliferation of VSMCs were analyzed by 3-[4,5-dimethylthiazol-2-yl]-diphenyltetrazolium bromide (MTT assay. And molecular mechanism (including p44/42 MAPK, MEK, Akt and apoptosis pathway) were analyzed. Results : We found enhanced proliferation of VSMCs incubated with constant and intermittent high glucose medium by MTT assay ($p < 0.05$). However, proliferation of VSMCs was more pronounced in intermittent high glucose than in constant high glucose. In western blot analysis, treatment with constant high glucose increase phospho-p44/42 MAPK (ERK1/2) and phospho MEK1/2 expression compared with treatment of normal glucose. And these effects were further enhanced with intermittent high glucose. Akt and phospho-Akt were not affected with hyperglycemia. In apoptotic pathway, Bcl-x1, phospho-Bad and caspase-3 were not affected with hyperglycemia for 72 hours. Conclusion : Intermittent hyperglycemia enhanced proliferation of VSMCs of OLETF rats through MAPK pathway. Keywords : intermittent hyperglycemia, VSMCs, MAPK pathway

PP26 B-075

THE EFFECTS OF ISOCALORIC HIGH FAT DIET AND ENDURANCE EXERCISE ON MITOCHONDRIA BIOGENESIS, ENDURANCE CAPACITY AND INSULIN RESISTANCE IN MALE WISTER RAT

Suryun JUNG¹, Jayoung BYEON¹, Youngsik JU¹, Seoungcho JANG¹, Juhyeon JEONG¹, Nayoung AHN¹, Jusik PARK², Hongsu KIM³, Kijin KIM¹ (1. Department of Sport, Keimyung University, Korea; 2. Department of Sport, Gyeongju University, Korea; 3. Practical Physical Education, Keimyung College, Korea)

Introduction : A decline in mitochondrial biogenesis of skeletal muscle is a common finding in aging. In previous study, raising serum FFA in rat by feeding them a high-fat diet results in an increase in muscle mitochondria. Although obesity is well recognized as the most important health problem related to the genesis of insulin resistance, but fat is still controversial. In this report, we tested the hypothesis that moderate-intensity exercise training with isocaloric high fat diet could increase mitochondria biogenesis and endurance exercise capacity. Method : The rats were randomly separated into 4 groups: A, Isocaloric high fat diet group (50% of calories from fat), B. Chow group, C. Isocaloric high fat diet with endurance exercise (treadmill running, slop 8%, 23 m/min, 120 min/day, 5 days per week), D. Chow group with endurance exercise. Both Isocaloric high fat diet group and chow group were given an equal caloric composition with 3.2kcal/g. equal amount of food were checked every day and given to both groups. Results : 4 weeks of high fat diet did not show any changes in body weight and % body fat. Further the level of glucose and insulin in blood, and insulin-stimulated glucose transport rate in skeletal muscle was not affected by isocaloric high fat diet. After 4 weeks of isocaloric high fat diet with aerobic exercise treatment, mitochondria biogenesis markers and endurance exercise capacity were significantly increased. Conclusion : Therefore isocaloric high fat diet with moderate intensity aerobic exercise is an effective way to induce mitochondrial biogenesis and endurance exercise capacity. Keywords : isocaloric high fat diet , endurance exercise, mitochondria biogenesis,

PP26 B-076

N-3 FATTY ACIDS SUPPLEMENTATION OF OVARIECTOMIZED RATS INCREASE NEUROGENESIS AND RESCUES LEARNING MEMORY PERFORMANCE

Jian-Rong LIN, Hui-Min SU (Physiology, National Taiwan University College of Medicine, Taiwan)

Introduction : Postmenopausal women with estrogen replacement therapy have higher plasma docosahexaenoic acid (DHA, 22:6n-3) levels, delay cognitive decline and reduce Alzheimer's disease risk than those without hormone replacement therapy. However, estrogen therapy increases the risk of breast cancer. It is important to find an alternative way to ameliorate the declined cognition in postmenopausal women. DHA is the major n-3 polyunsaturated fatty acids in the neuronal membrane. Estrogen has similar effects to n-3 fatty acids on hippocampal function. The aim of this study is to examine whether n-3 fatty acid enriched fish oil supplementation would prevent the decline of learning and memory in estrogen deprived rats. Method : Six months old female rats were ovariectomized (OVX) or sham operation and then fed n-3 fatty acid-deficient diet with or without fish oil supplementation for six months. Results : We found that OVX rats showed significantly poorer learning memory compared with the sham operated rats, and fish oil supplementation rescued the declined memory performance. In addition, neurogenesis was increased in OVX rats with fish oil supplementation. Decreasing size of dentate gyrus in OVX rats was ameliorated by fish oil supplementation. CA1 neuronal cell sizes and the number of cholinergic neurons were not significant difference in OVX or sham rats with or without fish oil supplementation. Conclusion : It was concluded that fish oil supplementation improves the learning memory and increase hippocampal neurogenesis in OVX rats. These results suggest that n-3 fatty acids supplementation may have the benefit on delay learning memory decline in estrogen deprivation such as in postmenopausal women. Keywords : estrogen, DHA, neurogenesis

PP26 B-077

COMPLIANCE, TOLERANCE AND ACCEPTABILITY OF A SPECIALLY FORMULATED NUTRITIONAL FORMULA IN THE OLDER ADULTS

Chi-Hua YEN¹, Hsiao-Ling CHEN², Eduardo SCHIFFRIN³, Lorena CHEUNG⁴ (1. Department of Family and Community Medicine, and School of Medicine, Chung Shan Medical University, Taiwan; 2. Department of Nutrition, Chung Shan Medical University, Taiwan; 3. Clinical Development, Nestle Research Center, Switzerland; 4. Nestle HealthCare Nutrition, Nestle Health Science, Asia, Oceania, Africa Region, Singapore)

Introduction : Ageing is a dynamic process with physiological and psychological consequences. Supplementation of properly designed nutritional formula can support the nutritional status of the older adults and thereby can help modulate the detrimental effects related with the ageing process. The primary objective of the trial was to evaluate the compliance, tolerance and acceptability of a specially formulated complete nutrition formula containing a high quality whey protein blend, added pre- and probiotics and enhanced vitamin E level to meet the specific nutrient needs of the older adults. Method : This study was an open-label single center study conducted in a teaching hospital in Taiwan. 30 elderly subjects (9 males and 21 females) with a mean age of 76.3 ± 7.9 years were enrolled in the study. The subjects were instructed to consume 2 daily servings of Nutren® Optimum (Nestle Health Science, Switzerland) for 6 weeks. They were assessed on compliance, tolerance, acceptability, immunity status, inflammation status, nutritional status, and stool characteristics. Results : Twenty-four (80%) of the 30 subjects completed the study. Most of the subjects complied with the recommended dosage and considered the product well-tolerated and acceptable. Pre-albumin level (26.6 ± 6.3 mg/dl vs. 29.6 ± 9.0 mg/dl, $P = 0.0114$), weight (50.0 ± 7.9 kg vs.

51.0±7.8 kg, P=0.0001) and Mini Nutrition Assessment (MNA®) score (9.6 ±1.3 vs. 11.3± 1.4, P<0.0001) were increased significantly from baseline to 6 weeks. Conclusion : Nutren® Optimum was generally well-tolerated, and the compliance and acceptability were good. The oral supplementation of the formula has promoted a significant improvement in the nutritional status of the older adults. Keywords : Oral Nutritional Supplement, Mini Nutrition Assessment

PP26 B-078

THE RELATION BETWEEN METABOLIC CONDITIONS ON PERIODONTAL DISEASE PREVALENCE AMONG ELDERLY KOREANS IN A RURAL AREA

Youn-Hee CHOI¹, Kyeong-Soo LEE², Hee-Kyung LEE³ (1. Preventing Dentistry, Kyungpook National University, Korea; 2. Preventive Medicine and Public Health, Yeungnam University, Korea; 3. Dentistry, Yeungnam University, Korea)

Introduction : The aim of this study was to investigate the relationship between the duration and extent of diabetes and metabolic syndrome component prevalence, and of periodontal disease among rural Korean elderly individuals over 60 years old. Method : : The study population consisted of 399 participants who received regular health examinations at Seongju-gun Public Health Center from 2000 to 2007. Diabetes mellitus and metabolic syndrome components (hypertension, obesity and hypercholesterolemia) were evaluated from clinical records and periodontal health by Community Periodontal Index. Results : Participants with longer duration of diabetes mellitus, hypertension and obesity were more likely to have periodontal disease. Individuals with a greater number of these systemic conditions were more likely to have periodontal disease. Conclusion : Older rural Koreans with diabetes and metabolic syndrome components have unmet periodontal treatment needs. Medical and dental professionals need to coordinate systemic and oral care for this group. Keywords : elderly, metabolic syndrome, Community Periodontal Index

PP26 B-079

OXIDATIVE STRESS IN ALZHEIMER'S DISEASE AND MCI

Dina ZEKRY¹, Francois R. HERRMANN², Karl-Heinz KRAUSE³ (1. Geriatrics, Geneva University, Switzerland; 2. Geriatrics Department, Geneva University Hospitals, Switzerland; 3. Genetic and Laboratory Medicine, Geneva University, Switzerland)

Introduction : Multiple pathophysiological processes are implicated in Alzheimer's disease (AD) as well as in the conversion from mild cognitive impairment (MCI) to AD. Among them, there is increasing evidence for a role of inflammation and oxidative stress. Oxidative stress is related to an imbalance between the production of reactive oxygen species (ROS) and the cellular antioxidant defense mechanisms. Oxidative damage occurs early in the pathogenesis of AD and precedes severe pronounced neuropathologic alterations. It therefore represents a potential area for therapeutic intervention designed to avoid and/or to delay the onset and to slow the progression to AD. Method : Identifying markers in peripheral blood related to oxidative stress that are correlated with the early detection of preclinical AD and with the progression from MCI to AD represents a major challenge. The NADPH-oxidase (NOX) enzymes family represents a notable source of reactive oxygen species (ROS). Results : We will present results from a prospective study analyzing genetic predisposition toward increased oxidative stress through i) analysis of polymorphisms of different NOX isoforms and subunits (Single Nucleotide Polymorphism Chromatin Immuno-precipitation; direct sequencing of hypervariable subunits); and ii) measurement of NOX-dependent oxidative stress in individuals lymphoblastoid cell lines

generated through immortalization of B cells by Epstein-Barr Virus. Conclusion : This approach might provide an innovative and robust biomarker risk profile allowing to detect preclinical AD, the risk of progression from MCI towards dementia and the possible discovery of potential treatment targets like blocking the undesirable actions of NOX enzymes. Keywords : oxidative stress, dementia, MCI conversion

PP26 B-080

NEUROPROTECTIVE EFFECTS OF PLANT EXTRACTS AGAINST THE OXIDATIVE STRESS INDUCED BY ROTENONE

A-Rang IM, Young-Hwa KIM, Seong Wook CHAE, Hye Won LEE, Mi-Young LEE (KM-Based Herbal Drug Research Group, Korea Institute of Oriental Medicine, Korea)

Introduction : The results of many studies implicate oxidative stress in mediating cell death in these disorders. Rotenone, an inhibitor of mitochondrial complex I, has been widely regarded as a neurotoxin and oxidative stress because it induces a Parkinson's disease-like syndrome. In this study, we examined the neuroprotective effects of plant extracts in rotenone-treated PC12 cells. Method : Our experiments contains with cell viability, cellular ATP levels, mitochondrial membrane depolarization, caspase 3/7 activity, the ratio of Bax:Bcl-2 expression levels, mitochondrial superoxide level, and intracellular calcium (Ca²⁺) concentration. PC12 cells were cultured in RPMI 1640 with 10% fetal bovine serum in a humidified atmosphere of 95% air and 5% CO₂ at 37 °C. Results : Pretreatment with plant extracts significantly increased cell viability and ATP levels; they also attenuated caspase activation, mitochondrial membrane depolarization, and mitochondrial superoxide production. Moreover, confocal microscopy showed that the mitochondrial staining pattern was restored from that of extracts treated cells and that the increase in intracellular Ca²⁺ level was blunted by treatment with the extracts. Conclusion : Our results suggest that plant extracts may have the possible beneficial effects in Parkinson's disease by attenuating rotenone induced toxicity. Identification of the active chemical moiety may serve as a starting point for developing neuroprotective therapeutics to treat neurodegenerative disease. Keywords : oxidative stress; neuroprotective effects; rotenone; PC12 cells; mitochondrial dysfunction

PP26 B-081

THE EFFECTS OF REGULAR EXERCISE PROGRAMS ON OLDER ADULTS BOTH MULTIPLE DIMENSIONS OF WELLNESS AND SATISFACTION WITH LIFE SCALE

Changsu LEE¹, Youn-Soo JUNG², Hyunkook KIM³ (1. Fisher Institute of Wellness and Gerontology, Ball State University, USA; 2. Department of Gerokinesiology & Sports Industry, Daegu Hanny University, Korea; 3. Gerokinesiology & Sports Industry, Daegu Hanny University, Korea)

Introduction : This study investigated the effect of 16 weeks' regular exercise programs on older adults both multiple dimensions of wellness and satisfaction of life scale. Method : As research subjects, 132 older adults over 65 years were selected. The participants were divided into two groups (Non Exercise vs Regular Exercise) and, observed the changing of 5 dimensions of Wellness, and satisfaction with life scale. Researchers could see how many participants' wellness and satisfaction levels had gone up or down between exercises using pairs of before and after 16 week's regular exercise program. Results : The researchers found that Regular Exercise group significantly increased 5 dimensions of wellness and satisfaction with life scale

before initiating regular exercise programs ($p < .001$). Moreover, Non Exercise group was significantly increased both wellness dimensions and satisfaction with life scales after regular exercise programs. However, Regular Exercise group was no significant differences in wellness dimensions and satisfaction with life scales after regular exercise programs. Conclusion : Consequently, Regular exercise programs such as nordic walking, theraband exercise, yoga were good programs for the beginners of older adults. If participants were an experienced "senior" regular exercise training, they probably won't need this beginner programs. The researchers suggest that we make further study on the possible guidelines to provide more specific and detail exercise programs for seniors who do not satisfied with basic exercise programs. Keywords : Key words: Regular exercise programs, older adults, Wellness dimension, Satisfaction with life scale

PP26 B-082

MOLECULAR AND GENOMIC APPROACH FOR UNDERSTANDING THE GENE-ENVIRONMENT INTERACTION BETWEEN NRF2 DEFICIENCY AND CARCINOGENIC NICKEL-INDUCED DNA DAMAGE

Hye Lim KIM, Seung Hun KANG, Young Rok SEO (*Department of Life Science, Institute of Environmental Medicine for Green Chemistry, Dongguk University, Korea*)

Introduction : Nickel is a toxic and carcinogenic metal which induces a redox imbalance followed by oxidative stress. Nuclear factor erythroid-2 related factor 2 (Nrf2) is a redox factor that regulates oxidation/reduction status and consequently mediates cytoprotective responses against exposure to environmental toxicants. Method : In this study, we evaluated the protective roles of the Nrf2 gene under oxidative stress and DNA damage induced by 20uM nickel at sub-lethal doses in terms of gene-environment interactions. Additionally, we attempted to identify potential nickel and Nrf2-responsive targets and the relevant pathway via microarray, qRT-PCR, and pathway analysis. Results : Under nickel exposure conditions, we detected significantly higher amounts of DNA damage via a comet assay, in addition to increased intracellular ROS generation in Nrf2 lacking cells, as compared to Nrf2 wild-type cells. Additionally, gene expression data were analyzed via microarray assays for the selection of Nrf2-responsive genes under nickel treatment. In particular, altered expressions of 10 genes (CAV1, FOSL2, MICA, PIM2, RUNX1, SLC7A6, APLP1, CLSPN, PCAF, PRAME) were confirmed via qRT-PCR. These genes functioned principally in a variety of biological processes, including oxidative stress response, necrosis, DNA repair, and cell survival. Conclusion : Therefore, these findings indicate that Nrf2 is an important factor that performs a protective role in the suppression of oxidative stress-induced DNA damage by environmental nickel exposure. Furthermore, we describe the potential biomarkers regarded as molecular targets for Nrf2-related cellular protection against nickel exposure. Keywords : Nickel, Nuclear factor erythroid-2 related factor 2 (Nrf2), Toxicogenomics

PP26 B-083

REACTIVE OXYGEN SPECIES DERIVED FROM DUOX1 MEDIATE KERATINOCYTE DIFFERENTIATION

Hyun CHOI, Tae Ryong LEE, Dong Wook SHIN (*Bioscience Research Institute, AMOREPACIFIC Corporation R&D Center, Korea*)

Introduction : Keratinocytes undergo continuous process of differentiation to maintain skin permeability barrier. Recent studies have demonstrated that the production of reactive oxygen species

(ROS) itself plays a indispensable role in the process of differentiation in various tissues. However, it is unclear the effect of ROS on the differentiation of keratinocytes. Method : Knockdown experiments with Duox1 siRNA were performed in NHKs, and analyzed with Q-RT-PCR and Western blots, etc. Results : Here we show that dual oxidase 1 (DUOX1) is the major ROS-producing source in normal human keratinocyte (NHK) stimulated with ionomycin. Lack of DUOX1 significantly reduces filaggrin gene transcription, implicating the direct role of DUOX1 in the differentiation of the epidermal permeability barrier in the normal human skin. In cultured NHK, treatment of extracellular calcium increases the extracellular level of reactive oxygen species (ROS) and up-regulates the gene transcription of DUOX1 as well as various differentiation markers. Deficiency of DUOX1 in NHK during the process of differentiation decreased gene expression of keratin1 (KRT1), keratin 10 (KRT10), filaggrin, etc. Conclusion : These studies suggest that DUOX1-producing ROS play a significant role on differentiation of human skin through the changes in the expression of proteins essential in normal epidermal differentiation. Keywords : ROS, keratinocyte, skin barrier

PP26 B-084

WHICH DURATION OF SWIMMING EXERCISE IS MOST EFFECTIVE ON COGNITIVE FUNCTION IN FOCAL CEREBRAL INFARCTION RAT?

Jung-Kook KIM, Min-Keun SONG, Jong-Hoo LEE, Jeong-Hyun BYUN, Hyun-Sik YUN, Jae-Young HAN, In-Sung CHOI, Sam-Gyu LEE (*Department of Physical & Rehabilitation Medicine, Research Institute of Medical Sciences, Chonnam National University Medical School & Hospital, Korea*)

Introduction : Regular aerobic exercise has been known to improve cognitive function. There is little basis on the effects of swimming exercise on cognitive function and proper exercise duration for cognitive improvement in cerebral infarction. We aimed to investigate the proper swimming exercise duration for maximal cognitive improvement in focal cerebral infarction rats. Method : Forty male Sprague-Dawley rats, weighing 300±50 g, aged 10 weeks were subjected to photothrombotic cerebral infarction. Four rats died after the operation. All rats were randomly divided into 4 groups: non-exercise group (group A, n=9); short-duration swimming exercise group (group B, n=9); moderate-duration swimming exercise group (group C, n=9); long-duration swimming exercise group (group D, n=9). Swimming exercises were performed at 1st day after cerebral infarction, 5 times a week, for 4 weeks according to the groups. Cognitive function was evaluated using Morris water maze test. Immunohistochemistry and western blotting for BDNF (brain derived neurotrophic factor) and VEGF (vascular endothelial growth factor) in the hippocampus were conducted after 4 weeks. Results : After 4 weeks of swimming exercise, escape latency was shorter in group C than A, C or D. More damaged neuronal cells were found in group A than group B, C and D in CA3 lesion of hippocampus. Group C showed the most significant immunoreactivity of BDNF and VEGF. Expression of BDNF and VEGF proteins was higher in group C than group A, B and D. Conclusion : Moderate-duration regular swimming exercise was the most effective exercise protocol for cognitive improvement in focal cerebral infarction rats. Keywords : Exercise, Cognition, Stroke

PP26 B-085

LONG-TERM VITAMIN E DEFICIENCY INDUCES AXONAL DEGENERATION IN MOUSE HIPPOCAMPAL NEURONS

Koji FUKUI¹, Hirokatsu TAKATSU², Tadashi SHINKAI¹, Shiro URANO³ (*1. Department of Bioscience and Engineering, Shibaura*

Institute of Technology, Japan; 2. Malaysia Japan Higher Education Program, Kolej Kemahiran Tinggi MARA Beranang, Malaysia; 3. Life Support Technology Research Center, Shibaura Institute of Technology, Japan)

Introduction : Vitamin E is a common natural lipophilic vitamin. One of pivotal function of vitamin E is as an antioxidant. Recently, several lines of evidence demonstrate that vitamin E deficiency induces cognitive dysfunction. However, the detail mechanisms of this phenomenon have not yet understood. In these cases, it is difficult to recover cognitive function, because the neurons have been already severely damaged or died. Previously, we found axonal degenerations before induction of cell death in hydrogen peroxide-treated cultured neurons. In this study, we assessed axonal condition in the hippocampal region of vitamin E deficient mice. **Method :** A wild type C57BL/6 mouse strain was used. Vitamin E-deficient mice were fed a vitamin E-deficient diet from 4 week to 3 or 6 month of age. Paraffin block samples of each brain region were made for slices and stained using silver stain. Another, all samples were homogenized and used Western blotting assay. **Results :** Short-term of vitamin E deficient mice did not change axonal morphology in hippocampal CA1 region. However, long-term vitamin E deficient mice remarkably induced axonal degeneration in hippocampal CA1 region. Furthermore, the appearance of microtubule-associated protein (MAP) light chain 3, a major index of autophagy, was lower in long-term vitamin E deficient mice than in short-term ones. **Conclusion :** Long-term vitamin E-deficiency induced autophagy dysfunction. It is well known that vitamin E deficiency accelerates to oxidative damage in central nervous systems. These results indicate that oxidative stress-induced axonal injury is induced in living tissues, but not cultured cells. **Keywords :** Vitamin E deficiency, oxidative stress, axonal injury

PP26 B-086
IN VITRO TOXICITY OF STABLY-NANOSIZED TITANIUM DIOXIDE USING POLYMERIC DISPERSANT IN HUMAN KERATINOCYTE CELLS

Yeo Jin KIM, Young Rok SEO (Department of Life Science, Institute of Environmental Medicine for Green Chemistry, Dongguk University, Korea)

Introduction : Titanium dioxide is one of the most frequently used engineered nanomaterials because it can serve two distinct functions: absorbing and scattering ultraviolet(UV) radiation and/or semiconductor photocatalysis activated by UV radiation. It is unclear whether nTiO₂ have any potential toxicological impact on the dermal system. A few studies have shown that nTiO₂ could penetrate the skin. Although the primary size of commercial nTiO₂ that are used experimentally is generally less than 50 nm, in solution, nTiO₂ tend to agglomerate or precipitate with size > 100 nm. Thus, obtaining a uniform solution of nTiO₂ is a key step in investigating the actual cytotoxicity and molecular pathogenesis of nTiO₂. **Method :** In this study, a stable, homogenous, and weakly aggregated nTiO₂ suspension was obtained by using surfactant-like dispersant, called sodium polyacrylate(PAA). This was used to assess the cytotoxicity and genotoxicity of these nTiO₂ in immortalized human epidermal keratinocytes(HaCaT). **Results :** Approximately 70 % cell viability was remained upon 24 h exposure of 5 ppm nTiO₂/PAA by methyl tetrazolium(MTT)-based cytotoxicity assay. The oxidative stress was induced by nTiO₂, as dose-dependent manner, with respect to the levels of reactive oxygen species(ROS) via ROS reactive probe DCF. DNA damage in terms of DNA adducts and relative intensity of foci was increased toward 24 h exposure of nTiO₂/PAA in dose-related manner, evaluated by comet assay and gamma-H2AX

immunostaining, respectively. **Conclusion :** This implies that nTiO₂ suspension containing a dispersing stabilizer PAA exhibited actual genotoxic potential in HaCaT cells via generation of ROS. Mechanisms driving the genotoxicity and phototoxicity will be of interest for further study. **Keywords :** Titanium dioxide nanoparticle, Sodium polyacrylate (PAA)

PP26 B-087
SEX DIFFERENCES IN REPRODUCTIVE STEROID METABOLISM FROM GONAECTOMIZED MALE AND FEMALE RATS

Hyun-Hwa SON¹, Ju-Yeon MOON¹, Kwang Joon KIM², Kyong Min KIM², Hye Jin CHUNG³, Yura JANG⁴, Minkyung KO⁴, Hesson CHUNG⁴, Sung-Kil LIM², Bong Chul CHUNG¹, Man-Ho CHOI¹ (1. Future Convergence Research Division, KIST, Korea; 2. Department of Internal Medicine, Yonsei University School of Medicine, Korea; 3. College of Pharmacy, Gyeongsang National University, Korea; 4. Center for Neuro-Medicine, KIST, Korea)

Introduction : Inconsistent steroid actions may occur during reproductive physiology and reveal sex differences. Comparative steroid signatures between ovariectomized (OVX) and orchietomized (ORX) rats were therefore evaluated. **Method :** Quantitative steroid profiling was investigated from 4-week-old female and male Sprague Dawley rats (4 shame controls and 6 models for each sex). The gonadectomy was carried out 3 weeks later, and all rats were sacrificed 13 weeks after the surgery. Urine samples were collected at 4, 6, 7, 12, 16 and 20 weeks, and plasma, tissues (adrenal gland, subcutaneous/visceral fats) and femur were obtained after the sacrifice. **Results :** The plasma level of cholesterol and its fatty acid esters were increased in the models, while their levels from both fat tissues were decreased. However, the accumulation of cholesterol was tended to increase in female models. For urinary sex steroids, testosterone was significantly decreased in the male models (P < 0.01) and its level in female models was increased compared to the corresponding controls. A prohormone, androstenedione, was also remarkably decreased in the male models (P < 0.01), while 17β-estradiol was significantly decreased in the female models (P < 0.01). In adrenal, a major stress hormone, corticosterone, was significantly decreased in both models, but its 5α-reductive metabolite, dihydrocorticosterone, was increased in the models. **Conclusion :** Differentiated steroid metabolism was observed between OVX and ORX rats and the results could be correlated with femoral geometry. **Keywords :** sex difference, steroid, reproductive endocrinology

PP26 B-088
THE EFFECTS OF BALANCE TAPPING THERAPY ON LOWER BACK PAIN AND MUSCLE FLEXIBILITY OF THE MIDDLE-AGED WOMEN WITH LOWE BACK PAIN

Si Yeon PARK¹, Su Youn PARK¹, Sang Hee KIM¹, Jung A.H. KIM¹, Jun Sik KIM¹, Yu Rim SHIN¹, Hye Rin YONG¹, Su Mi JUNG¹, Nu Ri JO¹, Kyung Sook PARK² (1. Red Cross College of Nursing, Chung-Ang University, The Master's Course, Korea; 2. Red Cross College of Nursing, Chung-Ang University, Professor, Korea)

Introduction : This study is aimed at investigating the effect of the Balance Taping Therapy on the low back pain and muscle flexibility in middle-aged women who suffer from backaches. **Method :** This study is a quasi-experimental research using non-equivalent control group pre-post test design, and it is directed at a total of 62 middle-aged women (experimental group:32,control group:30) in their 40 to 60s with backaches who use a singing class af cultural center located in D-gu, Seoul from November 10 to November 30, 2012. As for research

methods, the degree of low back pain and muscle flexibility were measured in 30 minutes after the pre and post tests, and data were analyzed using the SPSS 20.0 statistical program. Results : The low back pain score of the group to which the Balance Taping is applied decreased from 5.14 to 3.48, and its degree of muscle flexibility was significantly reduced from -5.16 to 1.92Cm in statistics, compared to non-applied group. As its result, it was found that the Balance Taping is an effective nursing intervention to reduce the low back pain and increase the muscle flexibility. Conclusion : Though this study, it is expected that the use of the Balance Taping Therapy will help reduce low back pain in subjects with backaches and increase their muscle flexibility. However, in order to generalize the effect of the Balance Taping Therapy, it is proposed to conduct repeated studies by expanding the sample size, and examine the effect duration time and effect size through repeated measurements on the dependent variables. Keywords : balance tapping therapy, lower back pain, muscle flexibility

PP26 B-089

BISPHENOL-A EXPOSURE MAY BE NOT ASSOCIATED WITH METABOLIC CHANGES OF STEROIDS IN PRECOCIOUS PUBERTAL GIRLS

Su Hyeon LEE¹, Se Mi KANG¹, Jeongae LEE¹, Mi Jung PARK², Sin Hye KIM², Won-Yong LEE³, Jongki HONG⁴, Man-Ho CHOI¹, Bong Chul CHUNG¹ (1. Future Convergence Research Division, KIST, Korea; 2. Department of Pediatrics, Sanggye Paik Hospital, Korea; 3. Department of Chemistry, Yonsei University, Korea; 4. Department of Basic Pharmaceutical Science, Kyung Hee University, Korea)

Introduction : Estrogens and androgens play key roles in pubertal onset and sexual maturation. Due to the estrogenic and anti-androgenic properties of bisphenol-A (BPA) in reproductive endocrinology, we evaluated the association between BPA exposure and metabolic changes of steroids from precocious pubertal (PP) girls. Method : Gas chromatography-mass spectrometry (GC-MS) based steroid signatures were conducted with urine samples obtained from patients with both 41 peripheral-PP and 43 central-PP to against 33 age-matched healthy girls. In addition, the association between urinary levels of steroids and BPA (< 5 and > 10 µg/g creatinine) in both PPs and controls was investigated. Results : The level of estrone was increased in central-PP (P < 0.01) compared to peripheral-PP, and epitestosterone, 16α-OH-DHEA, 17β-estradiol and estril were significantly increased in only central-PP (P < 0.005). The results could be explained that the level of testosterone activated by luteinizing hormone is decreased in peripheral-PP when many sex steroids are up-regulated in both PP groups. In addition, altered steroid concentrations were introduced to associate with urinary BPA levels, 3 gonadal steroids, testosterone (P < 0.009), 17β-estradiol (P < 0.09) and pregnenolone (P < 0.01), were significantly up-regulated in the high BPA exposure groups of all subjects. Conclusion : The results suggest that BPA exposure may induce the metabolic changes in reproductive steroidogenesis, but it may be not associated with the development of precocious puberty in girls. Keywords : steroid hormone, bisphenol-A, precocious puberty

PP26 B-090

ACCELERATED AGEING IN RHEUMATOID ARTHRITIS PATIENTS: EFFECT OF SERUM ON WOUND HEALING IN HUMAN STEM CELLS IN VITRO

Henriette JOERGENSEN¹, Dino DEMIROVIC¹, Torkell J. ELLINGSEN², Suresh I.S. RATTAN¹ (1. Molecular Biology and Genetics, Aarhus University, Denmark; 2. Department of Rheumatology, Aarhus University Hospital, Denmark)

Introduction : Rheumatoid arthritis (RA) is a chronic inflammatory disease characterized by a large proportion of patients also showing co-morbidity with several age-related diseases such as diabetes, cardiovascular diseases, and fibrosis. Together with a much higher increase in mortality rate of RA-patients, RA is being considered as an accelerated ageing syndrome. The aim of this project is to determine the biological status of blood-derived serum from RA-patients as compared to the serum from normal healthy subjects of equivalent age. Method : The parameters to be studied are the cell migration and proliferation of human cells in vitro in a so-called wound healing assay, using telomerase-immortalized mesenchymal stem cells (hTERT-MSC). Confluent monolayers of hTERT-MSC are mechanically "wounded" creating a fixed size scratch and then allowed to "heal" in the presence of culture medium containing 4% serum from RA-patients or healthy subjects for 3 days. Results : Our hypothesis is that serum from RA-patients is significantly less effective in supporting wound healing as compared with age-matched controls. We have previously shown that there is an inverse correlation between the number of focal adhesion points (FAP) and the rate and extent of cellular migration during cellular ageing of human skin fibroblasts. Our current focus is to examine the effect of serum from RA-patients on the newly formed FAP on hTERT-MSC. Conclusion : These studies will establish cellular and molecular parameters for the biological age status of RA-patients, and also provide novel criteria for determining the efficacy of therapeutic interventions against RA. Keywords : Rheumatoid arthritis, Accelerated ageing

PP26 B-091

ANTI-INFLAMMATORY EFFECTS OF GENISTEIN VIA SUPPRESSION OF TOLL-LIKE RECEPTOR 4-MEDIATED SIGNALING PATHWAY IN BV2 MICROGLIA

Jin-Woo JEONG¹, Cheol Min KIM², Gi-Young KIM³, Hye Jin HWANG⁴, Byung Woo KIM⁵, Yung Hyun CHOI⁶ (1. Department of Biochemistry, Dongeui University College of Oriental Medicine, Korea; 2. Department of Biochemistry, Busan National University College of Medicine, Korea; 3. Laboratory of Immunobiology, Department of Marine Life Sciences, Jeju National University, Korea; 4. Department of Food and Nutrition, Dong-Eui University, Korea; 5. Department of Life Science and Biotechnology, Dong-Eui University, Korea; 6. Department of Biochemistry College of Oriental Medicine, Anti-Aging Research Center & BBI-RIC, Dongeui University, Korea)

Introduction : Genistein, a principal soy isoflavone, has received considerable attention as a protein kinase inhibitor. However the anti-inflammatory effect of genistein is unclear in microglial cells, in this study, we performed whether genistein attenuates the expression of pro-inflammatory mediators and cytokines in lipopolysaccharide (LPS)-stimulated BV2 microglial cells. Method : As inflammatory parameters, the production of nitric oxide (NO), prostaglandin E2 (PGE2), interleukin (IL)-1β and tumor necrosis factor (TNF)-α were evaluated. We also examined the genistein's effect on the activity of nuclear factor-kappaB (NF-κB) and toll like receptor (TLR) signaling pathways. Results : At non-toxic concentrations, genistein attenuated the production of NO and PGE2, by inhibiting inducible NO synthase (iNOS) and cyclooxygenase-2 (COX-2) expression. Furthermore, release and expression of inflammatory cytokines, including IL-1β and TNF-α, were inhibited by genistein. Genistein also suppressed NF-κB translocation by blockade of IκB-α (IκB-α) degradation and inhibited the levels of TLR4 and myeloid differentiation primary-response protein 88 (Myd-88), an adaptor protein of TLR4-mediated signaling, in LPS-stimulated BV2 cells. By using a specific TLR4 signaling inhibitor, CLI-095, as well as TLR4 specific small

interfering RNA, we have shown that BV2 cell activation by LPS is completely dependent on the TLR4 activation pathway. Conclusion : Therefore, our data indicate that genistein attenuates the inflammatory responses by inhibiting the binding of LPS to TLR-4 on microglial cells. Keywords : Genistein, anti-inflammation, TLR4

PP26 B-092

TUMOR SUPPRESSOR GENE, TIS21/BTG2/PC3, INHIBITS DOXORUBICIN-INDUCED PREMATURE SENESCENCE THROUGH ROS-ACTIN ASSOCIATED PROTEIN CASCADE

Jung-A CHOI, In Kyoung LIM (Department of Biochemistry & Molecular Biology, Ajou University School of Medicine, Korea)

Introduction : Cellular senescence is a crucial anticancer mechanism that prevents cell growth at risk for neoplastic transformation. Recently, however, drug-induced senescence has been considered as a factor promoting cancer progression. Results : In this study, we observed that overexpression of TIS21 reduced senescence phenotypes induced by doxorubicin treatment to Huh-7 human hepatoma cells, and resulted in the increased cell death via inhibition of NADPH oxidase (Nox)-generated ROS level in the cells. Noticeably, treatment of Huh7 cells with doxorubicin (100 ng/ml) induced senescence phenotypes along with alterations of F-actin and vimentin rearrangements. Nox-derived ROS changed intracellular distribution and localization of cytoskeletal proteins. These patterns changed by doxorubicin treatment could be blocked by overexpression of TIS21 gene as well as the antioxidant, N-acetylcysteine, treatment. Conclusion : Taken together, the data suggest that overexpression of TIS21 inhibits doxorubicin-induced premature senescence phenotypes via ROS-actin-associated protein cascades. Present study suggests TIS21/BTG2/Pc3 gene as a potential determinant of cellular fate from senescence to cell death after exposed to chemotherapeutic agents. Keywords : senescence, NADPH oxidase, actin, TIS21/BTG2/Pc3

PP26 B-093

A POSSIBLE INVOLVEMENT OF APURINIC/APYRIMIDINIC ENDONUCLEASE ON APOPTOSIS IN AGED RAT KIDNEY

In Youb CHANG¹, Sang Pil YOON² (1. Department of Anatomy, College of Medicine, Chosun University, Korea; 2. Department of Anatomy, School of Medicine, Jeju National University, Korea)

Introduction : We have reported a possible involvement of apurinic/apyrimidinic endonuclease (APE), one of DNA repair pathway, in animal models of hydronephrosis, acute tubular necrosis, and diabetic nephropathy, and found that there is a close connection between APE and p53-dependent apoptosis. Therefore, we investigated the changes of APE in aging rat kidney since aging is the consequence of increased susceptibility to apoptosis and impaired repair. Method : Characteristics of chronological aging were compared between 6- and 24-month-old male Sprague-Dawley rats. Serum blood urea nitrogen (BUN) and creatinine were measured for renal function. Western blot assay was compared for p53, caspase 3, gamma-H2AX, and APE. Immunohistochemical staining of 8-hydroxy-2'-deoxyguanosine (8-OHdG) and APE were performed. Cellular senescence was checked by beta-galactosidase staining. Results : Compared with young rats, aged rats showed significant increase in BUN and creatinine levels. All the checked proteins were significantly increased with aging: 1) increased p53 and caspase 3 may activate the apoptotic pathway, 2) increased gamma-H2AX might mean augmented DNA damage, and 3) increased APE might have dual role in anti-apoptosis and in DNA repair pathway. But, beta-galactosidase staining turned to positive in proximal tubule cells of aged kidney, in which APE decreased its immunolocalization. Conclusion : Taken

together, APE increases in accordance with p53 and caspase 3 despite compromised renal functions in aged rats. These results suggest that APE in aged rats might have a role on p53-dependent apoptosis rather than DNA repair activities in aged renal proximal tubules. Keywords : APE, Apoptosis, Renal proximal tubule

PP26 B-094

OVEREXPRESSION OF MALIC ENZYME IN THE FAT BODY EXTENDS DROSOPHILA LIFESPAN

Young-Eun LEE, Gye-Hyeong KIM, Yeogil JANG, Young-Nam LEE, Donggi PAIK, Joong-Jean PARK (Department of Physiology, College of Medicine, Korea University, Korea)

Introduction : Malic enzyme, linked to tricarboxylic acid cycle, converts malate to pyruvate and produces CO₂ and NADPH. Recently function of malic enzyme that regulates lipid metabolism has been recognized. Pyruvate produced by malic enzyme is transported to mitochondria and changed to acetyl-CoA, the fuel of the TCA cycle. Then the acetyl-CoA is converted to citrate, which is transported to the cytoplasm for lipid biosynthesis. Thus, malic enzyme provides a component not only for the TCA cycle, but for the fatty acid synthesis. In *Drosophila*, Men (CG10120) is homologous to human cytosolic NADP+-dependent Men (ME1, EC 1.1.1.40) and is highly expressed in fat body during larval period. Method : Recently we reported Men overexpression extended fly lifespan. In the present studies, we investigated how Men overexpression made such lifespan extension. Transgenic flies expressing specifically Men transgene were generated and crossed with fat body-specific gene-switch Gal4 driver flies. The lifespan of these flies was measured with feeding RU486, the inducer of GS in various conditions. Results : Men overexpression in the fat body during the larval period was sufficient to extend adult lifespan. In addition, such a condition reduced the body weight, the levels of triglyceride and expression of several genes related lipogenesis, such as acetyl-CoA carboxylase, fatty acid synthase, and carbohydrate-responsive element-binding protein. Moreover, levels of reactive oxygen species and hsp22, mitochondrial oxidative damage protector, were increased in larvae overexpressing Men in the fat body. Conclusion : Together, our results suggest that lifespan extension by developmental overexpression of Men is related to fatty acid metabolism and ROS production. Keywords : *Drosophila*, Malic enzyme, lifespan extension

PP26 B-095

EFFECTS OF JUGLANIN, LOLIOLIDE, AND QUERCETIN-3-O-BETA-D-GLUCURONIDE ON CELLULAR SENESCENCE

Hyo Hyun YANG¹, Jong-Keun SON², Jae-Ryong KIM³ (1. Aging-associated Vascular Disease Research Center, Department of Biochemistry and Molecular Biology, College of Medicine, Yeungnam University, Korea; 2. College of Pharmacy, Yeungnam University, Korea; 3. Dept. of Biochemistry and Molecular Biology, College of Medicine, Yeungnam University, Korea)

Introduction : Cell senescence, induced by the DNA damage response or inflammatory stress, contributes to age-associated vascular disease. Method : We investigated the effects of juglanin, loliolide, quercetin-3-O-beta-D-glucuronide on cellular senescence by measuring senescence-associated beta-galactosidase activity, reactive oxygen species, and p53 protein level. Results : Juglanin and loliolide reduced senescence phenotypes induced by adriamycin as well as cell replication in human dermal fibroblasts and quercetin-3-O-beta-D-glucuronide in human umbilical vein endothelial cells. Conclusion : These results suggest that juglanin, loliolide, and quercetin-3-O-beta-D-glucuronide might be useful for aging intervention based on cellular

senescence. Keywords : Juglanin, Loliolide, Quercetin-3-O-beta-D-glucuronide, aging intervention

PP26 C-001

CHOICE OF TACTICS IN ENDOVASCULAR TREATMENT OF GENERALIZED ATHEROSCLEROSIS BY ELDERLY PATIENTS

Ekaterina SEDOVA¹, Nadegda ALEXEEVA², Kirill KOZLOV², Vladimir KHAVINSON² (1. Cardiology, St-Petersburh Instituit of Bioregulation and Herontology, Russia; 2. Cardiology, Institut of Bioregulation and Gerontology, Russia)

Introduction : Endovascular intervention on the coronary, brachiocephalic, renal arteries and arteries of the lower limbs in elderly patients are minimally invasive and less traumatic in comparison with open surgery. They do not require a long hospital stay, psychologically more comfortable, representing surgery without being cut. In the absence of general anesthesia in endovascular treatment has reduced possibility of post-operative complications, especially in the elderly, who very frequently have comorbidities. Method : The main advantage of endovascular diagnostic procedures are the accuracy and opportunity of simultaneous endovascular treatment at the same procedure. Simultaneous angiography of renal, carotid and low extremities arteries has several advantages as? more precise information about lesions in different vessels and the opportunities for the treatments strategy. In aged patients with multivessel heart disease who have to undergo CABG should be done simultaneously angiography of renal, mammaia and brachiocephalic arteries. Results : According to current guidelines significant lesions of renal or carotid arteries should be treated before the heart surgery because of postoperative stroke and renal insufficiency prophylaxis. Conclusion : The Simulaltaneous (multivessel) approach in angiography and endovascular treatment reduces mortality and improves the quality of life in aged patients. Keywords : generalized atherosclerosis

PP26 C-002

AN E-HEALTH APPROACH HEALTH EDUCATION TO PROMOTE EXERCISE FOR CORONARY HEART DISEASE ADULTS

Eliza Mi-Ling WONG, Doris Y.P. LEUNG, Sek Ying CHAIR, Janet Wing Hung SIT (The Nethersole School of Nursing, The Chinese University of Hong Kong, Hong Kong)

Introduction : Coronary heart disease (CHD) is the leading cause of death worldwide. Health education that feature regular physical exercise as a secondary preventive measure are rarely incorporated in routinely prescribed practice of care despite persistent international evidence of the importance of regular exercise. The overall aim of the study is to test the effectiveness of an e-health educational intervention for CHD patients. Method : CHD patients were recruited in a follow up clinic. Usual care included a written pamphlet and brief verbal information regarding the CHD. Patients in the intervention group received an additional health education via an e-health link. E-health link content covered the general knowledge of CHD and walking exercise promotion. Data were collected at baseline and 3 months after recruitment. Measures included total exercise per week, demographic and clinical data. Results : 70 patients completed the study with 48 (69%) male. The mean age was 61.7 years old (SD= 8.19). There was no significance at baseline data. The increase in total exercise time per week in the intervention group was significantly greater than the control group (intervention: 36.4±41.8, control: 8.6±152.7; P=.003) and the estimated effect size of the e-health intervention was 0.29. Positive effects such as increases in the adherence rate, self efficacy

for exercise as well as a positive perception of the usefulness of the e-health link were found in the intervention group. Conclusion : The e-health approach health education is effective in increasing total exercise per week leading to higher exercise adherence rate for patients with CHD. Keywords : Coronary heart disease, e-health, health promotion

PP26 C-003

ANALYSIS OF THE RELATIONSHIP BETWEEN ARTERIAL STIFFNESS AND AGE IN THE ELDERLY USING THE SPRING CONSTANT METHOD

Ching-Chuan WEI¹, Shu-Wen HUANG², Pi-Shan H SU³, Miao-Yu LIAO⁴ (1. Department of Information and Communication Engineering, Chaoyang University of Technology, Taiwan; 2. Department of Information Management, Chaoyang University of Technology and Taichung Hospital, Taiwan; 3. Department of Family Medicine, Taichung Hospital, Taiwan; 4. Department of Geriatric Medicine, Taichung Hospital, Taiwan)

Introduction : This study aims to investigate the relationship between the arterial stiffness and age in the elderly. Method : We used the spring constant method, which is newly proposed and well validated, to evaluate the arterial stiffness. Based on the blood pressure wave equation, the vibration of arterial well is modeled by the spring oscillation, and then the spring constant used to assess the arterial stiffness is calculated by the radial pulse. The experimental group comprised 56 participants (27 men and 29 women, average age of 66.6 ± 9.6) ranging between 60 and 80 years old. All were subjected to the measurements of pulse at radial artery, and the spring constant was calculated based on them. Results : Statistical analysis of the experimental group indicated a significant negative correlation between the spring constant and age (P < .001; r = - 0.51). The finding implied that the spring constant decreased when the age increased. In other words, the aging of arterial stiffness is more obvious when the person grows older, especially in geriatrics. Conclusion : The spring constant method can be easily calculated. These showed the simplicity in clinical measurement and application. Therefore, the results demonstrated the feasibility of using the spring constant method to monitor the abnormal status of arterial stiffness of the elderly to avoid the cardiovascular diseases. Keywords : spring constant, arterial stiffness, age, radial pulse

PP26 C-004

COMPARISON OF CLINICAL CHARACTERISTICS AND OUTCOMES OF DIABETIC VERSUS NON-DIABETIC ELDERLY PATIENTS WITH PAINLESS MYOCARDIAL INFARCTION

Jaе Yeong CHO¹, Jong Chun PARK², Kye Hun KIM², Hyun Ju YOON² (1. Cardiology, Department of Cardiology, Chonnam National University Hospital, Korea; 2. Cardiology, Chonnam National University Hospital, Korea)

Introduction : Some portion of patients with diabetes mellitus often experience painless myocardial ischemia. However, there are others who are non-diabetic and have painless myocardial infarction. In addition, there are few data available on the prognosis of elderly patients with painless myocardial infarction (PMI). We aimed to investigate whether there is difference of outcomes between diabetic and non-diabetic elderly patients with painless myocardial infarction. Method : Between November 2005 and July 2011, 33,939 consecutive AMI patients were enrolled in Nation Wide Myocardial Infarction Registry (65.3±12.9 years, 25,693 men). We extracted 1,463 elderly patients with painless myocardial infarction. They were divided into

two groups according to presence of diabetes mellitus. (DM Group: n=452, non-DM group: n=999). Primary endpoint was composite of major adverse cardiac events. Results : In-hospital death tended to be more frequent in non-DM group (25.8% vs. 30.4%, p=0.075). One-year outcome tend to be worse in DM group (19.2% vs. 15.6%, p=0.225). Kaplan-Meier analysis showed no difference in 1-year MACE-free survival between groups. Independent predictors of in-hospital death were High Killip class, No PCI and Diabetes mellitus. Independent predictors of 1-Year MACE was Left ventricular ejection fraction (OR 1.862, 95% CI 1.079-3.212, p=0.025). Conclusion : Diabetes did not have critical impact on outcomes after PMI in elderly patients. LV dysfunction was independent predictor of 1-year adverse outcome in elderly patient with PMI. Since LVEF was better in PMI than painful one, low LVEF should be consider as highest risk in risk stratification in this category of patients. Keywords : Elderly, myocardial infarction, diabetes

PP26 C-005

LIMITED MEDICATION KNOWLEDGE PREDICT POOR ADHERENCE TO SELF-CARE IN THE ELDERLY WITH HEART FAILURE BEYOND COGNITIVE IMPAIRMENT

Eun Kyeung SONG¹, Youn-Jung SON² (1. Department of Nursing, College of Medicine, University of Ulsan, Korea; 2. Department of Nursing, College of Medicine, Soonchunhyang University, Korea)

Introduction : Cognitive impairment may be associated with poor adherence to self-care in patients with heart failure (HF). Patient education for medication knowledge is encouraged to improve adherence to self-care, particularly in elderly people with HF. However, the relationships among cognitive impairment, medication knowledge, and adherence to self-care have been unexplored. The purpose of this study was to determine the relationships among these 3 variables. Method : A total of 107 patients with HF over 65 years old completed the Mini-Mental Status Examination (MMSE) by face-to-face interview to assess cognitive impairment. Patients completed the European Heart Failure Self-care Behavior (EHScB-9) to measure adherence to self-care and split by the median score; poor vs. good adherence. Medication Knowledge was used to assess how well patients knew the names, purposes, recommended doses, frequencies, and side effects; lower scores mean more limited medication knowledge. Hierarchical logistic regression was used to determine the relationships among cognitive impairment, medication knowledge, and adherence to self-care. Results : Twenty-nine patients (27%) had normal cognitive function \geq the cut-point of 24 in total MMSE score. The average score of total Medication Knowledge was 13.1(\pm 2.9) with the range of 5 to 22. More limited medication knowledge was independently associated with poor adherence to self-care (OR=1.20, 95% CI=1.01-1.41) in hierarchical logistic regression after controlling for age, gender, NYHA class, educational level, etiology, duration of HF, ejection fraction, total comorbidity score, use of beta blockers, and cognitive impairment. Conclusion : Although most elderly people with HF had cognitive impairment, medication knowledge plays an important role in adherence to self-care. Keywords : cognitive impairment, heart failure, medication knowledge, self-care

PP26 C-006

MICRONUTRIENT DEFICIENCY INDEPENDENTLY PREDICTS HEALTH OUTCOMES IN ELDERLY PEOPLE WITH HEART FAILURE

Eun Kyeung SONG¹, Choung RYOU² (1. Department of Nursing, College of Medicine, University of Ulsan, Korea; 2. Dept of Nursing, Severance Cardiovascular Hosp, Yonsei Univ Health System, Korea)

Introduction : The elderly people are known to be higher risk for micronutrient deficiency. Micronutrient deficiency may be considered as poor adherence to nutritional self-care of patients with heart failure (HF), resulting in adverse health outcome. However, there has been limited research that micronutrient deficiency affects health outcomes. The aim of this study was to determine whether micronutrient deficiency independently predicts adverse health outcomes. Method : A total of 113 consecutive outpatients with HF over 65 years old completed a 3-day food diary to measure intake of 15 micronutrients. The Computer Aided Nutrition Analysis Program for Professionals was used to analyze the food diaries and determine dietary micronutrient deficiencies. Patients completed the Minnesota Living with HF Questionnaire to assess health-related quality of life (HRQoL); higher score means worse HRQoL. Patients were followed for 1 year to determine cardiac-related hospitalization or cardiac death. Hierarchical multiple linear regressions and Cox proportional hazard regressions were used to determine whether micronutrient deficiencies predicted health outcomes. Results : Fifty-one percent of patients had at least 3 micronutrient deficiencies (range 0-14). Calcium, Magnesium, and Vitamin D were the most common micronutrient deficiencies. Micronutrient deficiency was independently associated with worse HRQoL (β =0.187, p=0.025) in hierarchical multiple linear regression. Thirty-nine patients were hospitalized or died during follow-up due to cardiac problems. Number of micronutrient deficiencies independently predicted cardiac event-free survival (hazard ratio=1.14, 95% CI=1.02-1.28). Conclusion : These findings show that elderly people with HF are vulnerable to nutritional self-care. Micronutrient deficiency is an independent predictor of adverse health outcomes in elderly people with HF. Keywords : heart failure, micronutrient deficiency, health outcomes

PP26 C-007

EFFECT OF NIGELLA SATIVA SEED EXTRACT FOR HYPERTENSION IN ELDERLY: A RANDOMIZED CONTROLLED TRIAL

Aulia RIZKA, Siti SETIATI, Aida LYDIA (Internal Medicine, Faculty of Medicine University of Indonesia, Indonesia)

Introduction : The use of herbal agents by elderly is increasing. Since Nigella Sativa (NS) seed extract shows diuretic activity, inhibits sympathetic nerve system overactivity and increases the production of Nitric Oxide, it is potentially used as adjuvant antihypertension for elderly. Aim of the study is to determine the effect of Nigella sativa seed extract on blood pressure of the elderly. Method : A randomized, double-blind controlled trial was conducted in elderly subjects with hypertension in outpatient clinics of Cipto Mangunkusumo National Hospital Jakarta Indonesia on June-September 2011. Intervention group was given 300 mg Nigella sativa seed extract twice daily for 28 days and another group was given placebo. Blood pressure were measured on day 1 and 29. Intention to treat analysis using unpaired t-test to compare blood pressure after intervention between the two groups was performed. Results : Of 85 patients, 76 subjects were fulfilling study criteria and randomized into 2 groups, containing 38 subjects in each group. Both groups were comparable in all important prognostic factors including SBP before intervention which was 159,4 (15,3) mmHg in NS group and 160 (16,2) mmHg in placebo group and also DBP before intervention which was 78,7 (10,9) mmHg in NS group and 79,2(12,8) mmHg in placebo group. SBP of NS group was decreasing to 146,67 (22,4) mmHg and to 143,48 (19,9) mmHg in placebo group (p=0,63). DBP in NS group was decreasing to 75,18 (9,69) mmHg and to 74,2 (10,87) mmHg in placebo group (p=0,59). Conclusion : Nigella sativa does not reduce blood pressure in the elderly. Keywords : Nigella sativa, hypertension, elderly

PP26 C-008

RELATIONSHIP OF TOOTH LOSS AND IMPLANT RELATED TO THE EFFECTS OF PERIODONTAL TREATMENT AMONG PERIODONTAL DISEASE PATIENTS WITH HYPERTENSION

Jae-Mok LEE (*Dept. of Periodontology, School of Dentistry, Korea*)

Introduction : Hypertension is very common disease in Korea. Moreover, prevalence of hypertension is increasing (Min et al. 2010). Hypertension is associated with inflammation (Boos et al. 2005). Elevated inflammatory markers, such as C-reactive protein(CRP), interleukin-6(IL-6) and tumor necrosis factor-(TNF-) were associated with increased risk of developing hypertension(Sesso et al. 2003) and were significantly related to elevated blood pressures. Periodontal disease is characterized by a chronic infection and inflammation in the periodontal tissue leading to the destruction of the bone surrounding the teeth and, ultimately, to tooth loss(Page et al. 1997). An association between periodontitis and cardiovascular disease has been reported in a number of studies. This study was conducted to analyze the effect of hypertension on tooth mortality, implant treatment and prosthetic status among patients with and without hypertension. **Method :** Number of tooth loss and implant treatment at first visit and tooth loss during active treatment was assessed in hypertension group(n=267) and control group(n=291) with moderate to severe periodontal disease. The data was compared using SPSS program. **Results :** The number of tooth loss at first visit was significantly different in two groups(OR:2 .05). Although it is not significantly different, implant treatment history was higher in hypertension group than control group. Hypertension is associated with progressive periodontal disease. Moreover, implant treatment for restoration is considerable restoration treatment option in hypertensive patients. **Conclusion :** In conclusion, a significant association was observed between the extent of tooth loss and hypertension. Therefore, prevention and control of hypertension, supportive periodontal therapy and oral hygiene education should be recommended. **Keywords :** tooth loss and implant therapy in hypertension patients

PP26 C-009

SALT APPETITE IN HYPERTENSIVE AND NORMOTENSIVE OLDER INDIVIDUALS

Patricia Teixeira Meirelles VILLELA¹, Nereida Kilza Da Costa LIMA¹, Paula Teixeira, Meirelles VILLELA², Eduardo Borges OLIVEIRA¹, Julio Cesar MORIGUTI¹, Eduardo FERRIOLI¹, Jose Maria Thiago BONARDI¹, Rodrigo Fenner BERTANI¹ (*1. Clinical Medicine, FMRP-USP, Brazil; 2. Odontology, FORP-USP, Brazil*)

Introduction : Most populations consume more salt than recommended by WHO and high salt intake is an important determinant of hypertension and cardiovascular risk. This study was conducted to evaluate habitual salt consumption and salt preference among hypertensive and normotensive older individuals. **Method :** We studied 28 treated hypertensive (H) and 16 normotensive older individuals (N), mean age of 73.5±7.0 years. French bread with three different concentrations of added salt (421.2, 648.0 and 874.8 mg sodium/100g) were presented to volunteers. Volunteers were instructed to answer a questionnaire, evaluating each sample using hedonic scale of flavor, and in the end of the test they were asked about the preference among samples. 24-hour urinary sodium was collected twice, and blood pressure and body mass index (BMI) were measured in the same day of sensory analysis. Data were analyzed by Fisher's exact test and by unpaired Student "t" test. **Results :** Mean 24-h urinary sodium was greater in H group (H:177±66 mEq, N:141±44 mEq, p = 0.036). Systolic blood pressure showed a tendency to be higher in

hypertensive ones (p=0.08). There was no difference between BMI of both groups. Sixty-eight percent of hypertensive and only 31% of normotensive volunteers preferred the bread sample with higher salt concentration (p=0.06). **Conclusion :** Hypertensive older individuals consume more salt and have higher salt appetite than normotensive ones. **Keywords :** salt appetite, elderly, hypertension

PP26 C-010

ANTIHYPERTENSIVE AGENTS PRESCRIBING FOR THE ELDERLY HYPERTENSION AT ANHUI PROVINCIAL HOSPITAL IN CHINA - A CROSS-SECTIONAL STUDY

Shilian HU¹, Lei WU², Yin CHEN³, Xiang FANG⁴, Song JIN⁵, Gan SHEN⁶ (*1. Anhui Evidence Based-Medicine Center, Gerontology Institute of Anhui Province, Anhui Provincial Hospital, China; 2. Department of Neurology, Anhui Provincial Hospital, China; 3. Anhui Evidence-based Medicine Center, Anhui Provincial Hospital, China; 4. Department of Gerontology, Anhui Provincial Hospital, China; 5. Department of Cardiology, Anhui Provincial Hospital, China; 6. Gerontology Institute of Anhui Province, Anhui Provincial Hospital, China*)

Introduction : Hypertension is continuously increasing in the elderly population in China. The objective of present study was to assess the prescribing pattern of antihypertensive treatment in the aged hypertensive inpatients at a tertiary public hospital in the central region of China in accordance with the recommendations of current international guidelines. **Method :** A retrospective cross-sectional study was performed from 1 January to 31 December, 2011. Patients (≥60 years old) who have been diagnosed with hypertension based on the JNC-7 guidelines and those who were currently treated with antihypertensive drugs were included. Data were extracted from Health Information System. **Results :** A total of 1584 aged hypertensive inpatients were included with 1209 males vs. 555 female. Among 539 (34.03%) patients receiving monotherapy, Calcium Channel Blockers (CCBs) were the most frequently prescribed drugs (66.73%). Combination therapies were offered to over 60% while the two-drug regimen was preferred for 44.82%. Angiotensin-Converting Enzyme Inhibitors (ACEI)/Angiotensin Receptor Blocker (ARBs) and Beta-blockers (BBs) being the most frequent drug combination (33.89%), followed by the combination of ACEI/ARB with either CCBs(22.78%) or Diuretics(20.22%). The combination of Diuretics (D) and CCBs plus ACEI/Angiotensin Receptor Blocker (ARBs) accounted for only 13.6% of total triple-drug combination(18.62%). **Conclusion :** The patterns appear to be partly in accordance with the recommendations of international guidelines. There was a tendency to use CCBs in the aged hypertensive patients in monotherapy, whereas BBs and ACEI/ARBs were the most prescribed in the combination therapy. The utilization of D was an area that needs to be addressed in the combination therapy. **Keywords :** elderly hypertension, prescription, China

PP26 C-011

EFFECT OF BLOOD PRESSURE LEVEL ON COGNITIVE FUNCTION AND DAILY LIFE ABILITY IN THE VERY ELDERLY HYPERTENSIVE PATIENTS

Juan DUAN (*Geriatrics, The Second Xiangya Hospital, China*)

Introduction : Study of the cognitive function and the ability of daily life status in the very elderly hypertensive patients and the effect of blood pressure levels on cognitive function and ability of daily life. Provide the evidence for clinical intervention measures. **Method :** We randomly assigned 120 patients who were 80 years of age or older. The object is divided into three groups according to the blood pressure

level. To evaluate the daily living ability and cognitive function of research object by ADL and MMSE. Use χ^2 test and logistic regression analysis to evaluate the independent risk factors for cognitive function and daily life. Results : There was no significant difference among 3 groups in ADL \pm 0.05%. Group B had significantly higher MMSE score than group A, $P < 0.05$, and there was no statistical significance between group A \pm 0.05%. Age, PP, TCD and history of cerebrovascular disease are independent risk factors for cognitive function \pm 0.05%. Age, diabetes mellitus and ABI are independent risk factors for daily life ability \pm 0.05%. Conclusion: 1 The level of blood pressure is related to cognitive function in the very elderly hypertensive patients. Pulse pressure, age, history of cerebrovascular disease, cerebral blood flow and 24 hour urinary albumin is the independent risk factors of cognitive function. We should control the level of blood pressure in order to maintain and improve the cognitive function in the very elderly hypertensive patients. 2 The level of blood pressure do not affect the ability of daily life directly. Age, diabetes, ABI are independent risk factors of ADL. Keywords : Very elderly hypertensive patients; Activity of daily living; Cognitive function

PP26 C-012

AGING-RELATED DECLINE OF ELASTICITY OF BLOOD VESSEL IS THE MAIN FACTOR OF VASCULAR SENESCENCE

Xiaojuan BAI, Huimeng QI, Hongyu ZHOU, Bing WU (Departments of Gerontology and Geriatrics, The First affiliated Hospital of China Medical University, China)

Introduction : To explore the ankle brachial index (ABI) and brachial-ankle pulse wave velocity (baPWV) in the same group of healthy people in longitudinal section. To investigate the elasticity of blood vessel decreasing rate with aging. Method : Based on the healthy people cohort in 2008 in Shenyang, the healthy people were divided into ≤ 44 years old, 45-54 years old, 55-64 years old, 65-74 years old and ≥ 74 years old groups according 2008 age. We conduct 310 self-control analysis after 3 years later. They finished biochemistry, carotid ultrasonograph, limb blood pressure detected by arteriosclerosis detector (systolic blood pressure, diastolic blood pressure, pulse pressure), baPWV, ABI and so on. Results : There are significant differences between serum total cholesterol, lower-density lipoprotein, systolic blood pressure, diastolic blood pressure, pulse pressure, ABI, baPWV, ABI changed value and baPWV changed value in different groups in 310 healthy people ($P < 0.05$). There are positive correlation between serum lower-density lipoprotein, serum uric acid, systolic blood pressure, diastolic blood pressure, pulse pressure, ABI, baPWV, baPWV changed value and age ($P < 0.05$). There is negative correlation between ABI changed value and age. There are significant differences of high-density lipoprotein, lower-density lipoprotein, serum uric acid, fasting plasma glucose, systolic blood pressure, diastolic blood pressure, pulse pressure, ABI, baPWV in the twice examination ($P < 0.01$) after self-control analysis. Conclusion : There are association between age and ABI and baPWV. Elasticity of blood vessel decreased induced by aging is the main factor of vascular senescence. Keywords : aging; ankle brachial index; brachial-ankle pulse wave velocity

PP26 C-013

LACK OF INDEPENDENT RELATIONSHIP BETWEEN NORMAL AGING-RELATED KIDNEY AND CARDIAC DIASTOLIC FUNCTION DECLINES IN A HEALTHY CHINESE POPULATION

Lulu HAN¹, Xiaojuan BAI¹, Hongli LIN², Xuefeng SUN³, Xiangmei CHEN³ (1. Departments of Gerontology and Geriatrics, The First affiliated Hospital of China Medical University, China; 2. Department of kidney, Dalian Medical University, China; 3. Department of kidney, General Hospital of Chinese PLA, China)

Introduction : Age-related changes in kidney structure and function have been well documented. This study aimed to assess the relationship between declines of normal aging-related kidney function and cardiac diastolic function in a healthy Chinese population. Method: 852 healthy adults aged 30-98 years were enrolled and divided into four groups according to quartiles of estimated glomerular filtration rate (eGFR) and cystatin C (CYSC). Cardiac diastolic function was measured by ratio of peak velocity of early filling to peak velocity of atrial filling (E/A), which was derived by B-mode echocardiography. Lower E/A was defined as measures under the 25th percentile of sample distribution (0.784). Results : Both eGFR and CYSC were significantly correlated with age (eGFR: $r = -0.102$, $P < 0.01$; CYSC: $r = 0.544$, $P < 0.01$). Age was significantly associated with E/A ($r = -0.381$, $P < 0.01$). Binary logistic regression analysis revealed that second, third and fourth quartile groups of CYSC were associated with lower E/A in an unadjusted model with odds ratios of 2.49 (1.403-4.419), 4.177 (2.368-7.37), and 7.614 (4.387-13.217), respectively. However, this association was lost after full adjustment. eGFR was only associated with lower E/A in group IV (fourth quartile; 2.058, 95% CI: 1.3-3.258) in an unadjusted model, and this association was lost after age adjustment. Conclusion : We conclude that aging is a major factor contributing to declines in kidney and cardiac diastolic function in a healthy population but there is no independent relationship between normal aging-related kidney and cardiac diastolic function declines. Keywords : cystatin C, glomerular filtration rate, cardiac diastolic function

PP26 C-014

MICROSCOPIC POLYANGIITIS : A CASE REPORT IN A TUNISIAN MAN OF SIXTY

S. EL AOUD¹, S. MARZOUK¹, Radhouane GOUIAA², M. ABBES¹, F. FRIKHA¹, M. JALLOULI³, Y. CHERIF¹, M. SNOUSSI¹, Z. BAHLLOUL¹ (1. Internal Medicine, Hedi Chaker Hospital, Tunisia; 2. Polyclinique CNSS - Sfax, Tunisian Association of Gerontology, Tunisia; 3. Internal Medicine, Hedi Chaker ospital, Tunisia)

Introduction : Microscopic polyangiitis (MPA) was first recognized as a separate disease entity in 1948 in a subgroup of polyarteritis nodosa (PAN) patients. It usually occurs in patients older than 50 years. Method : Results : Case report : A 69-year-old man developed hemorragic stroke after two episodes of transient dysarthria and left hemiplegia, a typical manifestation of capsular warning syndrome. Electromyography has shown mononeuritis multiplex in both upper and lower extremities. However, he has others systemic manifestations, such as inflammatory polyarthralgia involving small and large joints and hemoptysis. The renal analysis showed a microscopic haematuria ($H = 20000$ elements/mm³), a proteinuria (1.68 g/24h) and decreasing of renal function (creat = 190 μ mol/l). The titer of anti-myeloperoxidase anti-neutrophilic cytoplasmic antibodies (p-ANCA) was elevated. Renal specimens show focal segmental necrotizing glomerulonephritis without any immune deposition. Bronchoalveolar lavage confirmed alveolar hemorrhage. The patient was diagnosed with MPA. he received corticosteroid therapy and cyclophosphamide at the dose of 1 g as monthly intravenous pulses. Conclusion : Discussion: MPA is a necrotizing vasculitis involving the small vessels without granulomatous inflammation. The usual clinical presentation is significant renal disease. Neurological manifestations

are at the most peripheral, found in only 14-36% of the cases. However central nervous system complications are rarely reported especially cerebral thrombosis MPA commonly affects patients with advanced age. Early identification and treatment of this disease is important to improve the prognosis and prevent mortality. Keywords : Microscopic polyangiitis Elderly

PP26 C-015

ANTIPHOSPHOLIPID SYNDROME IN THE ELDERLY: FIVE CASE REPORTS

Yosra CHERIF, Moez JALLOULI, Sameh MARZOUK, Radhouane GOUIAA, Makram FRIGUI, Mouna SNOUSSI, Zouhir BAHLOUL (Internal Medicine, University Hospital, Sfax-Tunisia, Tunisia)

Introduction : The antiphospholipid syndrome (APS) is characterized by the occurrence of venous or arterial thrombosis or miscarriage, associated with a laboratory evidence of antiphospholipid antibodies (aPL). The first vascular event usually occurs in young adults and rarely in people over 65 year-old. Method : We gathered five among 67 patients considered to have APS based on the Sapporo classification criteria, whose the age of onset was over 65 years. Results : Five patients, 3 men and 2 women, were diagnosed with APS. The mean age at diagnosis was 78 years (70-84). 3 patients have deep venous thrombosis of the lower limb, one has venous thrombosis of the upper limb and brachiocephalic vein and one has central retinal vein occlusion associated with a cerebral ischemic stroke. Significant amounts of antibodies to α_2 -glycoprotein I were found twice in 2 patients. The anticardiolipin antibodies were positive twice in 3 of them. No deficiency in natural coagulation inhibitors was found. All patients were treated with heparin and long-term anti-vitamin K and thrombosis were cleared in all cases. Two of them were presented with bleeding complications: Hematuria and hematoma in one patient and rectal bleeding in another case. One of them developed one year after a colon cancer. Conclusion : APS is scarce in elderly and there clearly are no differences in the spectrum of clinical findings compared to younger. An intensive search for cancer is prompted in these patients. Treatment for these patients should be given carefully, since age has been demonstrated to be a risk factor for severe bleeding episodes. Keywords : Antiphospholipid, thrombosis, elderly

PP26 C-016

A METHOD TO ESTIMATE THE CONFIDENCE INTERVAL AROUND A MULTIVARIABLE RISK SCORE PREDICTION

Wonsuk YOO¹, Brian A. FERENCZ², Issa ALESH³ (1. Dept. of Community Health and Preventive Medicine, Morehouse School of Medicine, USA; 2. Translational Research and Clinical Epidemiology, Centre for Evidence Based Medicine, Wayne State School of Medicine, University of Oxford, USA; 3. Division of Cardiovascular Medicine, Wayne State University School of Medicine, USA)

Introduction : Multivariable risk scores predict an individual patient's risk of disease based on that person's unique combination of risk factor values (e.g. Framingham Risk Score). However, the risk scores produce only a point estimate of risk for each person, with no estimate of the precision of that risk estimate. Method : Using NHANES individual patient level data, we calculate the Framingham Risk Score (FRS) and Reynolds Risk Score (RRS) for all patient in the NHANES data set with 95% CI, and compare the predicted FRS and RRS for each person to determine if the point estimates are similar and if one of the scores has consistently smaller IQR. Results : We resampled 10000 variables of age, sbp, cholesterol, HDL, and hsCRP from normal distributions. The average of 1000 point estimates are far greater than 0.204 and empirical 95% confidence interval for risk prediction is so

large (0.03-0.99). Conclusion : The results suggest that the current risk prediction models (Reynolds, Framingham, and QRISK) are so imprecise that they do not provide any meaningful information, assigning patient's to risk categories (low, intermediate, and high) based on their risk scores is too imprecise and therefore should NOT be used to make treatment decisions. Keywords : Framingham risk score, Reynold risk prediction model, empirical confidence interval

PP26 C-017

OXIDATIVE STATUS IN ELDERLY PATIENTS WITH DIABETES MELLITUS AND FALLS INCIDENCE

Andrei ILNITSKI¹, Kiryl PRASHCHAYEU², Natalja POZDNIJAKOVA² (1. Clinical Gerontology, Belarusian Association of Gerontology and Geriatrics, Belarus; 2. Clinical Gerontology, Non-commercial Organization, Researching Medical Centre 'Gerontology', Russia)

Introduction : The research purpose is to examine the contents of sulfhydryl (SH) groups and malon dialdehyde in elderly patients with diabetes mellitus and falls incidence. Method : The 1st group includes 52 elderly persons (men - 23, women - 29), from 60 to 74 years old, with the group average age of 64.2+2.2 years. The 2nd group includes 37 middle-aged persons (men - 16, women? 21), from 40 to 49 years old, with the group average age of 46.1+3.0 years. Results : The middle-aged and elderly patients had the following SH group level: in the group with falls incidence, DM in combination with AH ? 318.3+4.7 and 285.1+3.7 μ mol/L; with dyscirculatory encephalopathy? 319.1+4.5 and 287.2+3.3 μ mol/L; with diabetic arthropathy? 318.9+3.9 and 288.1+3.1 μ mol/L; with CHD ? 318.5+3.5 and 287.2+3.1 μ mol/L; with anxiety-depressive syndrome ? 319.1+3.1 and 288.4+3.2 μ mol/L; with diabetic retinopathy ? 318.7+3.4 and 289.1+3.1 μ mol/L; which is significantly higher than in those with metabolic syndrome ? 301.5+2.3 and 215.2+2.1 μ mol/L, diabetic polyneuropathy ? 302.8 +2.2 and 214.9 +2.2 μ mol/L, dyscirculatory encephalopathy with cerebral infarction consequences ? 302.4+2.1 and 215.1+2.3 μ mol/L, $p < 0.05$. The following MDA levels were found in middle-aged and elderly patients statistically negative situation for elderly too ($p < 0.05$). Conclusion : The study of oxidative status for diabetes mellitus, its complications and related clinical conditions has revealed that elderly patients with diabetes mellitus and falls incidence are characterized by significantly more expressive changes of oxidative homeostasis to pro-oxidant side in comparison with middle-aged patients. Keywords : diabetes mellitus

PP26 C-018

THE EFFECTS OF MEAL CALORIE VARIATION ON METABOLIC SYNDROME, HYPERTENSION, DIABETES MELLITUS

Bumjo OH¹, Min Sun PARK² (1. Department of Family Medicine, SMG-SNU Boramae Medical Center, Korea; 2. Department of Family Medicine, Seoul National University Hospital, Korea)

Introduction : There are few studies about association between meal calorie variation and metabolic syndrome, hypertension, diabetes mellitus in healthy populations. This study was done to assess the association of meal calorie variation and metabolic syndrome, hypertension, diabetes mellitus. Method : A total of 4,512 subjects were selected. The diagnosis of metabolic syndrome was made according to the criteria of NCEP-ATP III established in 2001 with Asia-Pacific waist circumference. We defined meal calorie variation as the standard deviation of four meal's calorie (breakfast, lunch, dinner, snacks). To examine the association between the metabolic syndrome components and meal calorie variation, we used the method of

multiple linear regression analysis. To examine the association between the metabolic syndrome, hypertension, diabetes mellitus and meal calorie variation, we used the method of multiple logistic regression analysis. Results : The prevalence of the metabolic syndrome, hypertension, and diabetes mellitus in our subjects was 30.6%, 26.5%, 8.7%. Increased meal calorie variation was not associated with the components of metabolic syndrome. The only significant finding was that HDL-cholesterol was associated negatively with increased meal calorie variation in men. ($\beta=-4.73$, P value=0.003) Unfortunately, meal calorie variation was not associated with the prevalence of metabolic syndrome, hypertension, diabetes mellitus. Conclusion : After statistical adjustment for age, body mass index, smoking, total calorie intake, physical activity, regular exercise, total alcohol intake, total carbohydrate, fat, protein intake, monthly income, the meal calorie variation was not associated with the metabolic syndrome, hypertension, diabetes mellitus. Keywords : metabolic syndrome, meal calorie variation, diabetes mellitus

PP26 C-019

THE ASSOCIATION OF SERUM VITAMIN D LEVEL AND METABOLIC SYNDROME IN ELDERLY KOREAN WOMEN

Chang-Hae PARK (Department of Family Medicine, Eulji University Hospital, Department of Preventive medicine, Chungbuk National University, Korea)

Introduction : Vitamin D status, as indicated by 25-hydroxyvitamin D (25-(OH)D), is inversely associated with glucose homeostasis, lipid profiles, and blood pressure. Evidence on the association of vitamin D with metabolic syndrome (MS), however, is very limited in elderly women. Therefore, we investigated the association between them in this study. Method : This study was a cross sectional study including 198 elderly Korean women who visited a health promotion center in a university hospital from January 2010 to May 2011. MS was defined according to the AHA/NHLBI criteria and the Korean Society for the Study of Obesity. MS and its individual components were assessed as well as serum 25-(OH)D levels with multiple logistic regression analysis. Results : The overall prevalence of the MS in participants of this study was 55(27.2%). After multiple adjustments, compared with the highest quantile serum 25-(OH)D level group (18.5-45.4 ng/mL), the odds ratio for MS in the lowest level group (4.3-8.0 ng/mL) was 2.72 (95% CI=1.06-6.95), in the lower level group (8.1-12.5 ng/mL) was 1.70 (95% CI=0.65-4.46), and in the intermediate level group (12.6-18.4 ng/mL) was 1.62 (95% CI=0.60-4.35). Among the components of metabolic syndrome, the odds ratios for abdominal obesity, impaired fasting glucose, elevated blood pressure, low HDL cholesterol level, and high triglyceride level in the lowest serum 25-(OH)D level group were 2.70(0.78-9.34), 1.48(0.61-3.60), 1.49(0.57-3.92), 2.15(0.89-5.22), and 2.44(0.98-6.07), respectively. Conclusion : We found that a low serum 25-(OH)D level is significantly associated with the presence of MS in elderly Korean women. Keywords : Vitamin D, metabolic syndrome, abdominal obesity

PP26 C-020

THE EFFECT OF HIGH-DOSE VITAMIN D SUPPLEMENTATION ON GLYCEMIC CONTROL AND ARTERIAL STIFFNESS

Hyung Joon YOO¹, Ok Hyun RYU², Sung Hoon YU³, Sung Hwa Lee LEE⁴ (1. Dept. of Internal Medicine & Geriatrics, Hallym Univ. School of Medicine, Kangnam Sacred Heart Hospital, Korea; 2. Department of Internal Medicine, School of Medicine Hallym University, Korea; 3. Department of Internal Medicine, Hallym Univ. Kangnam Sacred Heart Hospital, Korea; 4. Internal Medicine, Hallym Medical Center, Korea)

Introduction : Vitamin D deficiency is very common in Korea. Recent epidemiologic studies showed the striking inverse relationship among vitamin D level, cardiovascular disease, and insulin resistance/glucose intolerance. But there are few interventional studies that evaluate the causal relationship among vitamin D, glycemic control, and vascular function. We investigated the role of high-dose vitamin D. Method : We enrolled type 2 diabetic patients who took antidiabetic agents or managed diabetes by lifestyle modification. We excluded patients who took vitamin D or calcium. We also excluded chronic kidney disease patients (in men: $Cr>1.5$ mg/dL, in women: $Cr>1.4$ mg/dL) and heavy alcoholics. We randomized participants into 2 groups: intervention group (Vitamin D 2000IU/day+Calcium 200mg/day) or placebo group (Calcium 200mg/day). We compared HbA1c, brachial-ankle pulse wave velocity (baPWV) for the study period. Results : We randomized 81 participants into placebo (n=41) and intervention (n=40) group. There was no difference in glycemic control (HbA1c 7.54±0.50% vs 7.50±0.49% in placebo and intervention group, respectively), diabetes duration, oral antidiabetic agents, body mass index, and baPWV between groups. 62 participants completed the 24-week study. In the end of study, HbA1c was 7.49±0.62% in placebo group and 7.63±0.69% in intervention group ($P=0.417$). There was no difference in adjusted means of baPWV (Rt baPWV 1498±46cm/sec vs 1549±42cm/sec, Lt baPWV 1478±49 vs 1542±44cm/sec) after controlling for age, sex, diabetes duration, and pulse pressure. Conclusion : Daily 2000 IU vitamin D supplementation in short-term period may be ineffective in lowering blood glucose and ameliorating peripheral arterial stiffness. Keywords : high-dose vitamin D supplementation, glycemic control, arterial stiffness

PP26 C-021

ERYTHROCYTES AS TARGET CELLS IN CASE OF DIABETES MELLITUS IN ELDERLY

Kiryl PRASHCHAYEU¹, Andrei ILNITSKI², Tatiana PAVLOVA³, Natalja POZDNIJAKOVA¹ (1. Clinical Gerontology, Non-commercial Organization 'Researching Medical Centre 'Gerontology', Russia; 2. Clinical Gerontology, Belarusian Association of Gerontology and Geriatrics, Belarus; 3. Pathology, Belgorod State University, Russia)

Introduction : The research purpose is to provide morphofunctional characteristics of red blood cells in case of diabetes mellitus in elderly. Method : 67 patients from 28 to 77 years old. Light microscopy, scanning electron microscopy, scanning probe microscopy. Results : In case of DM type 1, not more than 10-15% of unchanged discocytes were detected. 20% discocytes had multiple excrescences, mulberry-shaped cells were also found among such discocytes. There were discocytes with crest ridges, spherical discocytes, including spherical red blood cells with excrescences. About 5% of red blood cells had the shape of deflated balls and were burned-out. All that indicated both erythron disfunction and progressing cell destruction in blood channels. In addition, both microcytes (5.49 μ m) and macrocytes (8.36 μ m) were observed, which was indicative of poikilocytosis. In average, cells (6.5±0.5 μ m) were smaller than those of the standard size (7.5). Red blood cells of the patients with DM type 2 were mostly in the form of discocytes. Poikilocytosis appeared in a lesser degree than in the previous group and was indicated mostly by macrocytes (8.72 μ m). Average size of cells was 7.0±0.5 μ m, which is still somewhat lesser than the standard size. In this group we observed significant membrane flexibility during the contact of cells with each other, which exceeded the rates in the control group. The situation in elderly were more catastrophically than in younger and middle-age patients. Conclusion : Erythrocytes can be deemed to be target cells in case of diabetes mellitus. The data obtained about morphofunctional changes should be taken into account. Keywords : erythrocytes, diabetes mellitus

PP26 C-022

HIDDEN OBESITY AND RISK OF LIFE-STYLE RELATED DISEASE IN THE ELDERLY JAPANESE

Hiroshi SHIMOKATA¹, Fujiko ANDO², Masafumi KUZUYA³
(1. Department for Development of Preventive Medicine, National Center for Geriatrics and Gerontology, Japan; 2. Department of Sports and Health Sciences, Aichi Shukutoku University, Japan; 3. Department of Geriatrics, Nagoya University, Japan)

Introduction : Obesity is relatively rare but prevalence of life-style related disease is not low in Japanese elderly population. Hidden obesity with low BMI and high body fat percentage may be a risk of life-style related disease. The purpose of this study is to clarify the risk of life-style related disease by hidden obesity in the elderly. Method : Subjects were 57,244 men (age at the first visit 46.0±9.8 years, age range 17 to 92 years) and 34,884 women (44.8±10.1 years, 18 to 89 years) who had a comprehensive medical checkup between year 2000 and 2011. Obesity was defined as BMI≥25. Hidden obesity was defined as BMI<25 and percent body fat≥20% in men and ≥30% in women. Risks of diabetes, hypertension, and dyslipidemia by hidden obesity were estimated in the elderly subjects and compared with those in young and middle-aged subjects using generalized estimation equation (GEE). Results : Odds ratios of diabetes, hypertension, and dyslipidemia were estimated in the hidden obese elderly born before 1930's compared with those in the non-obese elderly. Odds ratios of diabetes were 1.21 (95%CI: 1.08-1.36) in men and 0.92 (0.68-1.34) in women. Odds ratios of hypertension were 1.30 (1.14-1.48) and 1.40 (1.12-1.75), and odds ratios of dyslipidemia were 1.87 (1.66-2.09) and 1.78 (1.48-2.14), respectively. These odds ratios in the elderly were smaller than those in young and middle-aged population born after 1940's, but were significant except diabetes in the elderly women. Conclusion : Hidden obesity was a risk factor of life-style related disease in the elderly Japanese. Keywords : hidden obesity, life-style related disease, longitudinal study

PP26 C-023

WEIGHT-LOSS INDUCED CHANGES IN RMR: ASSOCIATION WITH LEPTIN AND ADIPONECTIN LEVELS

Mathieu MALTAIS, Martin BROCHU, Isabelle DIONNE (Faculty of Physical Education and Sports, University of Sherbrooke, Canada)

Introduction : Weight loss induced by caloric restriction and resistance training may affect resting metabolic rate (RMR) in obese postmenopausal women in two different ways, with some studies showing an increase in RMR and some showing a decrease in RMR. These differences could be explained by different adipokine response. Adiponectin and leptin seem to have a role on energy metabolism, hunger and/or glucose homeostasis. Method : 28 obese postmenopausal women were separated into two different groups and pooled by baseline fat mass, depending on RMR response. Subjects who increased RMR after resistance training and weight loss intervention and subjects who decreased RMR after intervention. Fat mass was measured by DXA, RMR by indirect calorimetry and leptin/adiponectin by radioimmunoassay procedures. Results : Leptin values were significantly different between groups (p<0,05), but not adiponectin. As such, leptin increased in the RMR+ group and decreased in the RMR- group. Fat mass significantly decreased in the RMR- group only (p<0,05). Pearson correlation analysis indicated a significant and positive relationship between RMR and leptin (r=0,56, p<0,01) as well as with fat mass (0,6 p<0,001). Linear regression analysis indicated that leptin is a significant predictor of RMR. Conclusion : Surprisingly, the results of this study shows that an increase in RMR is explained by the increase in leptin levels, rather

than changes in fat mass and muscle mass, which was non-significant. Also, when losing fat mass, leptin levels seem to decrease and this is related to a decrease in RMR values, which could explain the yo-yo effect subjects encounter when weight loss is present. Keywords : Weight loss and resistance training, Resting metabolic rate, Leptin

PP26 C-024

LIFESTYLE MODIFICATION REALLY WORKS FOR DIABETES CONTROL

Yin-Ming LI (Family Medicine, Buddhist Tzu Chi General Hospital, Tzu Chi University, Taiwan)

Introduction : Lifestyle modification really works for diabetes control. Method : Here we presented a case of weight reduction with excellent diabetes control. Results : A dentist, a victim of breast cancer aged 55, who had underwent surgery for breast cancer and chemotherapy at 49 years old. Diabetes was accidentally diagnosed at regular follow up, fasting serum blood sugar 300 mg/dl and HbA1c 11.3%. She was obese, body weight 71.5 kg and body height 154 cm. She visited a general practice clinic and oral medical medication (Glipizide 5 mg once daily) was given for sugar control. After a consultation of lifestyle modification, she determined to change her lifestyle. She quit her favorite coke and candy and adopts a healthy lifestyle- small meals and 30 minutes walking three times daily. Her body weight was decreased by 1.5 kilogram weekly. She also actively monitors her blood sugar and body weight at home. After one month she started to control her diabetes with "Glucophage" 500 mg twice a day instead of Glipizide. Six months later, her body weight was 53 kg and good blood sugar control- fasting sugar 100 mg/dl and HbA1c 5.3%. One year later her fasting sugar was 89 mg/dl, HbA1c 5.4%, low density cholesterol 79 mg/dl, decreased from 119 mg/dl. Conclusion : This case once again proves that weight reduction really works at diabetes control. Patient's active role is crucial at chronic disease management. Family physicians should make effort in encouraging patients' self lifestyle modification. Keywords : obesity, weight reduction, diabetes

PP26 C-025

THE RELATIONSHIP BETWEEN URIC ACID AND METABOLIC SYNDROME IN THE ELDER TAIWANESE

Sung Lin HU¹, Min Chun CHAO¹, Ming May LAI¹, Chia Ing LI¹, Chiu Shong LIU², Cheng Chieh LIN³, Wen Yuan LIN³ (1. Department of Family Medicine, China Medical University and China Medical University Hospital, Medical Research, China Medical University Hospital, Taiwan; 2. Department of Family Medicine, China Medical University and China Medical University Hospital, School of Medicine, Taiwan; 3. Department of Family Medicine, China Medical University and China Medical University Hospital, School of Medicine, Graduate Institute of Clinical Medical Science, Taiwan)

Introduction : Elevated serum uric acid level increased the risk of metabolic syndrome (MetS) in general population. This relationship between uric acid and metabolic syndrome, however, is not clear in the elderly. We aim to investigate the association between uric acid and metabolic syndrome prevalence in the elder Taiwanese. Method : All individuals aged 65 and over were recruited in Taiwan. A total of 1093 subjects, out of 1774 registered residents, were contacted by face-to-face interview. The response rate was 61.6 %. However, only 588 subjects with serum uric acid level and completed questionnaires were kept for final analyses. Hyperuricemia was defined as more than 7.5 gm/dL in men and 6.5 gm/dL in women. Multiple logistic regression analysis was used to estimate the association between MetS and hyperuricemia. Results : There were 187 subjects corresponding to the definition of MetS. After adjustment for age, sex, social habit

(cigarette smoking, alcohol consumption, betel nut chewing and exercise), and chronic kidney disease, the ORs (95% CI) of having MetS among subjects with hyperuricemia were 1.93(1.33-2.79), compared with subjects with normouricemia. We also found that the prevalence of the individual components (elevated BP, hypercholesterolemia, hypertriglyceridemia) of MetS were higher in subjects with hyperuricemia than in subjects with normouricemia after adjustment for potential confounders. Conclusion : Elevated serum uric acid level was associated with the prevalence of MetS and its components in the elderly Taiwanese. Keywords : hyperuricemia, metabolic syndrome, uric acid

PP26 C-026

ASSOCIATION OF METABOLIC SYNDROME WITH SMOKING, ALCOHOL CONSUMPTION, TEA CONSUMPTION AND EXERCISE AMONG CHINESE NONAGENARIANS/CENTENARIANS

Li LUO, Qiukui HAO, Birong DONG (Department of Geriatrics, West China Hospital, S.C.U, China)

Introduction : Metabolic syndrome (MetS) which includes obesity, hypertension, dyslipidemia and insulin resistance has been shown to cause many adverse events among the old people. There is no study to observe the association of metabolic syndrome with habits of smoking, alcohol consumption, tea consumption and exercise among very old people. In this study, we aimed to examine the relationship between metabolic syndrome and these habits among the oldest-old people using a cohort of Chinese aged 90-108 years. Method : A cross-sectional study based on The Project of Longevity and Aging in Dujiangyan which is a population-based study of 870 people aged 90 years and more. Venous blood samples were collected after an overnight fast in order to measure the biochemistry indicators. Results: Among the 662 participants for this analysis, the mean age was 93.5±3.3 years (range 90-108 years) .The total prevalence rate of Metabolic Syndrome was 9.8%.There were significant differences between the participants with and without Mets among the habits of smoking, tea consumption(former and current) and current habit of exercise.(p<0.05).After adjustment for age, gender and cognitive function, there was no statistic significant odds ratio for Mets among all these habits. Conclusion : For Chinese Nonagenarians/ Centenarians, among these habits (current and former) of smoking, alcohol consumption, tea consumption and exercise, there seems no significant association of Mets. Keywords: metabolic syndrome, Nonagenarians/Centenarians, exercise

PP26 C-027

RELATION BETWEEN THE NUMBER OF MEDICATION AND THYROID HORMONES IN THE ELDERLY

Silvana Oliveira E. SILVA¹, Mariana AROEIRA-NEVES¹, I. Thien CHAN², Andressa SIMOES², Helder R. De GIVIGI², Julia ALMEIDA², Leticia B.B. De M. TEXEIRA¹, Michele Lopes FAGUNDES¹, Patricia F.S. TEIXEIRA¹, Mario VAISMAN¹, Carlos Montes PAIXAO JR³ (1. Endocrinologia, Universidade Federal do Rio de Janeiro, Brazil; 2. Faculdade de Medicina, Universidade Federal do Rio de Janeiro, Brazil; 3. Clinica Medica -Geriatrics, Universidade Federal do Rio de Janeiro, Brazil)

Introduction : The number of medication and thyroid diseases are both prevalent in the elderly population and the number of drugs that disturb the metabolism of thyroid is crescent. Is our goal to observe if the use of many medications is associate with subclinical hypothyroidism (SH) (defined by normal T4 free and high TSH) and which classes of medication are more related to it. Method : We

interviewed 270 geriatric outpatients > 65 years old at the Hospital Universitario Clementino Fraga Filho that do not use levothyroxine replacement or have hyperthyroidism or used contrast in the last 6 months. They were submitted to a questionnaire, dosage of the thyroid hormones (TH) and chart review. Those patients or their caregiver signed a consent form earlier approved by the Ethics Committee of the hospital. Results : There is significant association SH with the number of medications used (p=0,017) on the group with <85 years old (mean age 77,46 years old). No significant association was found when the total sample and >85 years old were analyzed. The medications classes studied (lipid-lowering drugs, antidepressants, cholinesterase inhibitors and memantine, other psychotropic drugs, hypoglycemic and antihypertensive drugs) were not associated with SH. Conclusion : The amount of medication classes may influence TH levels, but none of the classes studied were related to it. Other classes might be implicated or the association of these drugs may disrupts the metabolism of the TH. Maybe the results of the older patient group could not be associated by the sample size. Keywords : elderly, polypharmacy, hypothyroidism

PP26 C-028

THE INQUIRY ABOUT THE AGE-ASSOCIATED CHANGES OF THYROID FUNCTION AND AGING---ANALYSIS OF 1540 COHORT PERSONS

Yongxing MA, Pei-Fang LU, Ri-Ping HAN (Department of Aging, Antiaging and Cognitive Function, Shanghai Institute of Gerontology and Geriatrics, Affiliated Huadong Hospital, Shanghai Medical College, Fudan University, China)

Introduction : To observe the basal value aging changes of thyroid function (T.F.) and sub clinical decrease of thyroid function in the adults and elderly. Including aged ≥85 yrs. old in 1540 persons. Method : To study the basal values of T3, T4, FT3, FT4 and TSH with BM in the elderly and the relationship between TSH and T3, T4, FT3 and FT4. Of every five years groups in randomised cohort sample with 1540 persons (45-90 years. M 1367, F 173) of healthy care objects in HuaDong Hospital. The mean value of TSH revealed TSH of 0.8609-4.03039 mIU/L in 1231 patients (Group A), TSH of ≥4.3039 mIU/L in 174 patients (Group B) and TSH of < 0.8609 mIU/L in 99 patients (Group C). Results : He mean value (M±SD) of combined statistical results of M+F in various age groups in 1540 cohort persons. 2. The mean value (M±SD) of M+F combined statistical results in ≥70yrs. group: Conclusion : 1.There was significant decreasing of the mean value of T3 and T4 on the whole with aging. No significant aging decreasing of FT4 and FT3 as a whole except aged over 85 years were found. 2. Level of TSH was significantly increased on the whole with aging but decreased in aged > 90 years. Keywords : Thyroid function; Aging changes; Aging changes of thyroid function

PP26 C-029

HIGHER RATES OF TRANSIENT HOARSENESS AND HYPOCALCAEMIA AMONG ELDERLY PATIENTS UNDERGOING TOTAL THYROIDECTOMY

Ioannis Emmanouil PETRAKIS, Konstantinos LASITHIOTAKIS, Alexandros ANDREOU, Maria VENIANAKI, George CHALKIADAKIS (General Surgery, University Hospital of Heraklion Crete, Greece)

Introduction : Multinodular goiter and thyroid cancer become more prevalent with increasing age. Herein, we assess the prevalence of thyroid cancer and long term outcomes of patients older than 65 years undergoing total thyroidectomy for endemic multinodular goiter. Method : We retrospectively assessed all consecutive patients

undergoing total thy-roidectomy for multinodular goiter between January 1990 and October 2008. Demographics, clinical presentation, pathological characteristics and long term postop-erative outcomes were collected from the prospectively maintained electronic data-base of the department and all thyroid cancer patients underwent telephone interview with the use of structured form. Results : Among 1.161 patients included in the study, there were 183(15.7%) patients older than 65years. Elderly patients presented with larger goiter but the prevalence of thyroid cancer was not significantly different than younger patients (21.4% vs. 23.1%, P=0.97). Transient postoperative hypocalcaemia was significantly more com-mon in the elderly (34.9% vs. 23.7%, P=0.002). There was a trend towards higher rates of transient postoperative hoarseness in the older age group (39.5% vs. 24.6%, P=0.06). Within a median follow-up time of 78.5 months similar rates of disease re-currence (90.7% vs. 93.2%, P=0.558) and mortality (2.3% vs. 0.9%, P=0.137) were noted between patients older and younger than 65 years. Conclusion : In this hospital based sample, the prevalence thyroid cancer after total thyroidectomy for multinodular goiter is similar between patients older and younger than 65 years old. However, older patients experience higher rates of transient post-operative hoarseness and hypocalcaemia. Keywords : total thyroidectomy, multinodular goiter, thyroid cancer, elderly,

PP26 C-030

THE RELATIONSHIP BETWEEN DIABETES AND COLORECTAL ADENOMA IN THE ELDERLY

Hsinen HUANG, Yi-Ching YANG, Jin-Shang WU, Ru-Hsueh WANG, Feng-Hwa LU, Chih-Jen CHANG (*Department of Family Medicine, National Cheng Kung University Hospital, Taiwan*)

Introduction : Diabetes is considered as a risk factor for colorectal cancer. In the previous studies, the association between diabetes and colorectal adenoma is inconsistent. However, there is no study on the relationship between diabetes and colorectal adenoma in the elderly. The aim of this study was to investigate the association between diabetes and colorectal adenoma in the Taiwanese elderly population. Method : A total of 1277 participants consisted of 758 men and 519 women with ages more than 60 years were included after excluding a past history of diabetes, colorectal cancer, inflammatory bowel disease, familial adenomatous polyposis and colectomy. Diabetes was defined by 2011 American Diabetes Association diagnostic criteria. Subjects were classified into three groups: non-adenoma, non-advanced and advanced adenoma. Results : There was significant difference in the prevalence of diabetes among groups. In addition, the following variables were different among groups: triglyceride, gender, and the prevalence of hypertension. In the multinomial logistic regression analyses, diabetes was related to advanced adenoma. In addition, male gender and hypertension were also associated with advanced adenoma. Conclusion : Diabetes had a higher risk in advanced colorectal adenoma in the elderly. We recommended early detection for diabetes to recognize the risk of colorectal adenoma in clinical practice. Keywords : colorectal adenoma diabetes

PP26 C-031

THE ROLE OF ABDOMINAL RADIOGRAPHY IN DIAGNOSIS AND MANAGEMENT OF CONSTIPATION IN OLDER ADULTS

Hyun Suk LEE (*Geriatrics, Fremantle hospital, Australia*)

Introduction : Constipation is a common problem in older adults. History can be unreliable and often with atypical presentation. This audit reviewed the role of abdominal radiography in diagnosis and management of constipation in Aged Care patients in both in- and out-patient settings. Method : Radiology database was used to identify

patients in Aged Care clinics, medical ward and restorative unit who had plain abdominal X-ray (AXR) ordered from 1st of January 2011 until 31st of October 2011. Their radiology and medical records were reviewed retrospectively and relevant information was retrieved. Results : Thirty seven out of the fifty patients had evidence of faecal loading on AXR. These patients were commenced on bowel regimen or had the regimen intensified. Fourteen out of thirty-seven patients (38%) had improvement in bowel symptoms following the bowel regimen. In thirteen patients, where AXR showed no faecal loading, no bowel regimen was commenced or intensified and in few patients bowel regimen was reduced or ceased. Eleven patients who had faecal loading on initial AXR underwent repeat AXR to assess response to constipation management and seven of these patients had shown either resolution or less faecal loading. The most common indications for AXR in this study were for assessing for constipation and faecal incontinence. The most common medications that may precipitate constipation found in this audit were antipsychotics and antidepressants. Conclusion : Abdominal X-ray is useful in diagnosis of constipation when they presented with bowel or lower urinary tract symptoms or delirium. The finding from the AXR guides the subsequent patient clinical management. Keywords : Constipation, abdominal radiography, older adults

PP26 C-032

CLINICAL AND PATHOLOGIC FEATURES OF ELDERLY GASTRIC CANCER: NO POORER PROGNOSIS AND SURGICAL TOLERANCE

Joo Hyun LIM¹, Dong Ho LEE², Cheol Min SHIN², Na Yung KIM², Hyun Chae JUNG¹, In Sung SONG² (*1. Department of Internal Medicine, Seoul National University Hospital, Korea; 2. Department of Internal Medicine, Seoul National University Bundang Hospital, Korea*)

Introduction : Gastric cancer is one of the most common cancers, having great incidence in the elderly. However, little is known about elderly gastric cancer. This study was designed to evaluate the specific features of elderly gastric cancer. Method : We reviewed medical records of 1107 patients who had undergone radical gastrectomy for gastric cancer between June 2005 and December 2009. They were divided into non-elderly group (<65, n=676) and elderly group (≥65, n=431). Between both groups, these were compared: symptoms, comorbidities, tumor marker levels, stages, H. pylori status, locations, Lauren type, differentiation, complications, microsatellite instability, p53 over expression. Results : More elderly patients showed elevated tumor markers (CEA: 4.9% vs. 8.7%, p = 0.041, CA19-9: 6.1% vs. 13.2%, p = 0.001) and advanced diseases (42.5% vs. 49.4%, p = 0.023) There were no significant differences in N stage (62.4% vs. 58.2%, p = 0.164) or H. pylori status (63.6% vs. 57.5%, p = 0.153) between the groups. More elderly patients had Lauren intestinal type (40.7% vs. 58.2%, p < 0.001). Complication rate did not differ between the groups (6.1% vs. 8.1%, p = 0.187). Microsatellite instability (p < 0.001) and p53 over expression (p < 0.001) were more frequent among the elderly. Conclusion : Elderly gastric cancer was related to pathologic features known for favorable prognosis except p53 over expression, despite the more advanced stage. Surgery in the elderly was as tolerable as in young patients. We recommend looking favorably upon surgery for elderly patients with operable gastric cancers. Keywords : elderly, gastric cancer, feature

PP26 C-033

PATTERNS OF THE UPPER GASTROINTESTINAL TRACT PATHOLOGIES OF SENILE PATIENTS ACCORDING TO X-RAY DIAGNOSTICS

Natalia POLYARUSH, Tatiana STOVOLKOVA, Tamara ZHELNOVA, Oleg YAKOVLEV (*Samara Regional Clinical Hospital for War Veterans, First Research Institute of Rehabilitation of War Veterans of Medical Institute 'REAVIZ', Russia*)

Introduction : In Samara regional clinical hospital of war veterans we performed 168 x-ray examinations of patients with disease patterns of alimentary system. The patients of ages from 60 to 86 (95 females, 73 males). **Method :** We used combine method of traditional and double contrast using BarVIPs medicine and gas-producing mix in the condition of multiposition and multiple view examination. **Results :** We revealed 54 patients with pathology of the upper gastrointestinal tract: Zencer diverticula - 1, midesophageal diverticula - 3, gastroesophageal hernia and reflux esophagitis - 41, gastritis - 35, duodenitis - 26, gastric diverticula - 2, gastric ulcer - 3, gastric polyp - 3, leiomyoma - 1, gastric cancer - 1, duodenum diverticulum - 3, duodenum cancer - 1. The results of our diagnostic findings indicate some specific features of the upper gastrointestinal tract pathology of senile patients. **Conclusion :** We revealed combinations of several diseases in 28 examinations. We found out all types of axial gastroesophageal hernia: cardiac, cardiofundic, subtotal, total. We revealed rare localization diverticula: cardia. In gastric ulceration we diagnosed multiple ulcers, penetrate ulcer and ulceration with the signs of malignancy. Duodenum diverticula differed by large size and multiple locations. Notably malignant tumors are more often localized in the upper gaster, which were diagnosed on the developed stage of cancer with long period of erased clinical picture or asymptomatic disease course. **Keywords :** upper gastrointestinal tract, x-ray diagnostics, esophagus and stomach

PP26 C-034

EXPERIENCE OF AN ELDERLY GASTROINTESTINAL BLEEDING PATIENT ASSOCIATED WITH DEGENERATIVE ARTHRITIS

Shih-Ping WU¹, Ya-Chuan HSU² (*1. Nursing, Chi Mei Medical Center and Chang Jung Christian University, Taiwan; 2. Department of Nursing, Chang Jung Christian University, Taiwan*)

Introduction : This article describes the caring experience of a 79 year-old male with degenerative arthritis who is taking analgesics cause gastrointestinal bleeding and admitted to geriatric care units. **Method :** Clinical observation, family meeting, physical examination and telephone visit were used guided by the holistic assessment to identify nursing problems from 2 MAY 2011 to 14 MAY 2011. **Results :** During hospitalization, the major nursing problems were chronic pain and impaired skin integrity. **Conclusion :** During the nursing process, the author established a good relationship with patient and offered elderly specialist nursing intervention to relieve physical discomfort from degenerative arthritis and mental stress induced from the uncertain prognosis of disease. We also enhance the patient's understanding of degenerative arthritis, increase patient's confidence for self-care through family's support, to promote the quality of patient's life and decrease the recurrence of gastrointestinal bleeding. We hope this experience of nursing care could provide a reference for geriatrics nursing practice. **Keywords :** Gastrointestinal bleeding, degenerative arthritis, elderly

PP26 C-035

CLINICAL RETROSPECTIVE STUDY OF IMPLANTS IN GERIATRIC PATIENTS OLDER THAN 70 YEARS

Hyo-Jung LEE¹, Jung-Tae LEE¹, Eun-Gyung LEE¹, Young-Kyun KIM², Pil-Young YUN², Myung-Jin KIM³ (*1. Department of Periodontology, Section of Dentistry, Seoul National University*

Bundang Hospital., Korea; 2. Department of Oral and Maxillofacial Surgery, Section of Dentistry, Seoul National University Bundang Hospital., Korea; 3. Department of Periodontology, Section of Dentistry, In-Jae Baek hospital Busan, Korea)

Introduction : The objectives of this study were to analyze the presence of systemic diseases, the associated complications, and other problems occurring following loading of an implanted prosthesis and to evaluate the amount of bone resorption occurring at the apex of alveolar bone. Therefore, this study analyzed these effects on dental implants in elderly patients or those with systemic diseases. **Method :** In total, 35 patients over the age of 70 who had been operated on at Seoul National University Bundang Hospital between June 2003 and December 2006 were included. According to the types of additional surgical procedures, implant site, implant prosthesis, and systemic diseases, statistical comparisons were made of peri-implant bone resorption at last follow-up. **Results :** Following the completion of prosthodontic treatment, after a mean period of 32.7 months, the mean peri-implant bone resorption was 0.27 mm and the peri-implant bone resorption was not significantly related to the type of upper prosthesis ($p = 0.389$), the surgical procedures accompanying placement ($p = 0.439$), or the presence/absence of systemic disease ($p = 0.893$). **Conclusion :** According to this analysis, implant therapy in geriatric patients should not be considered particularly high risk. **Keywords :** Geriatric patients, Implant

PP26 C-036

REHABILITATION APPROACH ON DYSPHAGIA OCCURRED POSTOPERATIVELY OF LARYNGECTOMY AT OVER 10 YEARS HAVE PASSED - A CASE REPORT-

Naomichi MURATA¹, Eiko OKAMOTO², Kyoko ARIOKA¹, Noriko KANDA³, Yumi FUJIWARA², Naoki KOBAYASHI² (*1. Center for Special Needs Dentistry, Okayama University Hospital, Japan; 2. Dentistry, Mannari Hospital, Japan; 3. Dentistry, Goshikidai Hospital, Japan*)

Introduction : Laryngoectomy for laryngeal cancer is considered resulting less dysfunction of cricopharyngeal opening. Although there is a report of occurrence of dysphagia due to insufficient sensory stimuli input to the pharyngeal portion at early postoperative stage, we have successful result with balloon dilatation method for the case of a dysphagia shown at over 10 years from the operation. **Method :** 83 years old male patient who had laryngoectomy in 1997, visit us complaining the transport disorder of foods to pharynx and rhinorrhea. Poor oral hygiene and decreasing of saliva secretion were observed. With VE exam, there is given as dysphagia due to dull swallowing reflex, pharyngeal constriction and dysfunction of cricopharyngeal opening. Training of using balloon assured at the second VF exam was periodically repeated on bedside and for oral hygiene care was followed. **Results :** Dysfunction of cricopharyngeal opening was improved by 3 months later. As food transport disorder and rhinorrhea were disappeared 6 months later. Therefore, balloon training was temporarily ended. At 7 months later, no specific problems were observed by routine exam, so decided to complete entire dysphagia training, and keep continued the oral hygiene care. Improvement of oral hygiene condition, redness of gingiva, and swollen gum were observed. **Conclusion :** In previous reports, the causal factor of dysfunction of cricopharyngeal opening is explained due to dysfunction of sensory stimulation, however, this case presented the swallowing dysfunction at over the 10 years from the operation. Therefore, we suspected one of the causal factors is due to the dysfunction of cricopharyngeal opening. **Keywords :** Dysphagia rehabilitation, Laryngoectomy, Oral Health Care

PP26 C-037

SALIVA OF OLDEST OLD CORRELATE TO THE ORAL AND GENERAL HEALTH CONDITIONS; TOKYO OLDEST OLD SURVEY ON TOTAL HEALTH (TOOTH)

Toshimitsu IINUMA¹, Yusuke FUKUI¹, Motoko FUKUMOTO¹, Kensuke NISHIO¹, Jun LEE¹, Kentaro URATA¹, Yasumichi ARAI², Michiyo TAKAYAMA², Yukiko ABE², Takashi IWASE³, Nobuhito GIONHAKU¹, Kazuo KOMIYAMA³, Nobuyoshi HIROSE² (1. Department of Complete Denture Prosthodontics, Nihon University School of Dentistry, Japan; 2. Division of Geriatric Medicine, Department of Internal Medicine, Keio University School of Medicine, Japan; 3. Department of Pathology, Nihon University School of Dentistry, Japan)

Introduction : As the oldest old population has been rapidly increased in worldwide, considerable concern has arisen about the social and economic burden of diseases and disability in aged group. We continue studying the Tokyo Oldest Old survey on Total Health (TOOTH). In this study, we focused on the saliva secretion in aged 85 years or older. Saliva secretion and composition reflects the body health conditions. Measurement of salivary IgA is useful for the non-invasive assessment of secretory immunity. A Cortisol in the saliva is an indicator of stress. Method : The subjects participated 542 oldest old (236 men, 306 women; range, 85 - 102 years) in this study. Total saliva was collected and measured the amount from all subjects by non-invasive procedure. Secretory IgA and cortisol in the saliva were assessed by the ELSA assay. In addition, oral health, the physical performance and degree of independence also were evaluated by dentists and geriatricians. Results : The amount of saliva was clearly correlated with sIgA, cortisol, number of remaining teeth, and maximum bite force. Saliva was also correlated to physical performance levels among the oldest old living in Tokyo, including the grip and the time up & go test. Conclusion : In conclusion, the saliva amount and sIgA and cortisol were indicator for the oral health as well as a physical performance of the oldest old. Our results incorporated non-invasive measurements of total health conditions, demonstrated the feasibility of a new comprehensive study. The data may help develop new models of health promotion. Keywords : oldest old , saliva

PP26 C-038

EFFECTS OF THE AUDITORY VERBAL CUES ON DRINK SWALLOWING: A STUDY BASED ON PSYCHOMETRIC ANALYSIS AND SURFACE-ELECTROMYOGRAPHY

Aya NAKAMURA¹, Satoshi IMAIZUMI² (1. Graduate School of Comprehensive Scientific Research, Prefectural University of Hiroshima, Japan; 2. Department of Communication Science and Disorders, Faculty of Health and Welfare, Prefectural University of Hiroshima, Japan)

Introduction : For dysphagia rehabilitation, pureed or minced food, which is served to individuals with dysphagia to prevent aspiration, is not easily recognized based on appearance. This difficulty in recognition may have a negative influence on flavor perception and swallowing, resulting in decreased appetite. The aim of this study was to investigate possible effects of auditory verbal cues on drink swallowing. Method : Subjects were two groups, younger participants and older participants. Apple juice, aojiru (grass) juice, and water were ingested with or without auditory verbal cues. Flavor perception and ease of swallowing were measured using a visual analog scale, and swallow physiology by cervical auscultation and surface electromyography. Results : The auditory verbal cues had significant effects on flavor and ease of swallowing as well as on swallow

physiology. The taste score significantly increased when the participant's anticipation was primed by accurate auditory verbal cues, while the ease of swallowing score significantly decreased when the anticipation was contradicted. There was no significant effect of auditory verbal cues on distaste score. Regardless of age, the maximum suprahyoid muscle activity significantly decreased when a beverage was ingested without auditory verbal cues. The interval between the onset of swallowing sounds and the peak timing point of the infrahyoid muscle activity significantly shortened when the anticipation induced by the cue was contradicted in the elderly participant group. Conclusion : These results suggest that auditory verbal cues can improve the perceived flavor of beverages and swallow physiology. These phenomena can be utilized for dysphagia rehabilitation. Keywords : auditory verbal cues, swallowing, surface electromyography

PP26 C-039

ARE THE PRE- AND PERI-OPERATIVE FACTORS IMPORTANT FOR OCCURRENCE OF DELIRIUM AFTER ORTHOPEDIC SURGERY?

Chih-Kuang LIANG¹, Chin-Liang CHU², Ming-Yueh CHOU³, Ti LU⁴, Chien-Jen HSU⁵, Yu-Te LIN⁶, Liang-Kuang CHEN⁷, Yuk-Keung LO⁶ (1. Geriatric Medicine Center, Kaohsiung Veterans General Hospital, Aging and Health Research Center, Institute of Environmental and Occupational Health Sciences, National Yang-Ming University, Taiwan; 2. Department of Psychiatry, Ping-tung Branch of Kaohsiung Veterans General Hospital, Taiwan; 3. Geriatric Medicine Center and Department of Family Medicine, Kaohsiung Veterans General Hospital, Aging and Health Research Center and Institute of Public Health, Yang Ming University, Taiwan; 4. Department of Psychiatry, Kaohsiung Veterans General Hospital, Taiwan; 5. Department of Orthopedics, Kaohsiung Veterans General Hospital, Taiwan; 6. Geriatric Medicine Center and Division of Neurology, Kaohsiung Veterans General Hospital, Taiwan; 7. Center for Geriatrics and Gerontology, Taipei Veterans General Hospital, Aging and Health Research, Centre, Institute of Health Welfare and Policy, National Yang Ming University, Taiwan)

Introduction : Delirium is closely related to poorer outcomes among older patients in many clinical conditions especially for orthopedic surgery. The purpose of this study was to evaluate the association of pre-operative and peri-operative factors for occurrence of delirium after surgery. Method : This prospective study was conducted from January to December of 2011. All patients admitted to a tertiary medical centre for orthopedic surgery in Southern Taiwan were invited for study. Demographic characteristics and functional status were evaluated by trained nurses. Pre- and peri-operative conditions, including route for admissions, pain, time to surgery, blood loss, anesthesia type, the surgical procedures, ASA score, pre-operative laboratory data and vital signs were also collected. The diagnosis of delirium was made according to the criteria of DSM IV. Results : Overall, among 232 enrolled patients (mean age:74.7 ± 7.8 years, 46.6% males), 25.9% receiving vertebral surgery, 31.0% receiving hip surgery, and 43.1% receiving knee surgery. Overall, the prevalence of delirium was 9.1%, and older age, male, lower body mass index, hearing impairment, higher Charlson's Comorbidity Index, poorer nutrition, poorer cognition, poorer functional status and the longer waiting time to surgery after admissions were all significant factors for delirium occurrence. However, logistic regression showed that only age (O.R.=1.093, 95% C.I.=1.005~1.188, p=0.038), male (O.R.=6.134, 95% C.I.=1.489~25.271, p=0.012) and MMSE score (O.R.=0.804, 95% C.I.=0.730~0.884, p<0.001) were significantly risk factors for post-operative delirium. Conclusion : The overall prevalence for

elderly patients receiving orthopedic surgery developing post-operative delirium was 9.1%, and older age, male, and lower MMSE score were independent risk factors. Keywords : Delirium, Orthopedic Surgery

PP26 C-040
COGNITIVE FUNCTION, DEPRESSION AND AGGRESSIVE BEHAVIOR IN ELDERLY MEN WITH DEMENTIA AT ELDERLY NURSING HOMES

Dae Soon KWON, Bo Kyoung KIM (*Graduate School Student, Red Cross College of Nursing, Chung-Ang University, Korea*)

Introduction : This study is a descriptive survey research in order to inquire into cognitive function, depression, and aggressive behavior level of elderly men with dementia who entered the elderly nursing homes, to grasp difference in depression and aggressive behavior according to cognitive level, and to survey correlation between variables. Method : The period of data collection was from October 1, 2012 to November 1. Research subjects were measured the dementia elderly men's cognitive function, depression, and aggressive behavior. Totally 180 copies were used in this study. Data collection was made through SPSS Windows 18.0 statistical program. Results : (1) The elderly men with dementia at elderly nursing homes were indicated to have lots of serious cognitive function (under 10 points) as for cognitive function, to have depression of exceeding the reference score (8 points) in depression tool, and to have high aggressive behavior, too. (2) Depression was indicated to have no difference according to cognitive function level in elderly men with dementia at elderly nursing homes. The aggressive behavior according to cognitive function level was indicated to have difference. 3) The depression in elderly men with dementia at elderly nursing homes showed correlation with aggressive behavior. This was shown to be higher in aggressive behavior in the higher depression. Conclusion : The above results show that there is a need of nursing intervention for reducing cognitive function, depression, and aggressive behavior in elderly men with dementia at nursing homes by grasping influential factors of causing cognitive function, depression, and aggressive behavior. Keywords : dementia, cognitive behavior, depression, aggressive behavior

PP26 C-041
EXPLORING HEARING AND VISION IMPAIRMENT AMONG COMMUNITY DWELLING ELDERLY IN MALAYSIA

Farizah MOHD HAIRI¹, Zainudin MOHD ALI², Rohaya RAMLI², Suriyati ABDUL AZIZ², Noran Naqiah HAIRI¹, Choo WAN YUEN¹, Sajaratulnisa OTHMAN³ (*1. Department of Social and Preventive Medicine, University of Malaya, Malaysia; 2. Negeri Sembilan State Health Department, Ministry of Health Malaysia, Malaysia; 3. Department of Primary Care Medicine, University of Malaya, Malaysia*)

Introduction : The Malaysian National Morbidity and Health Survey II in 1996 reported that the prevalence of hearing and vision impairment among our elderly was 40% and 21% respectively. These sensory deficiencies affect speech communication, independence and overall well-being of the elderly. Our aim was to explore the pattern of hearing and vision impairment among community dwelling elderly in Malaysia. Method : This was a cross-sectional study conducted from August to October 2012 among 1234 community dwelling elderly in Negeri Sembilan, Malaysia via face-to-face interview, which comprised questions on demographic variables, screening on hearing and vision impairment. Data were analysed with univariate and

multivariate methods. Results : The mean age was 71.9 years (standard deviation=7.3 years); 68.3% were female, almost 90% only obtained primary education or had no formal education; 50% were married and 47% were widowed. The prevalence of hearing impairment was 30%. Among the hearing-impaired only 4.6% use hearing aids. On the other hand, the prevalence of vision impairment was higher at 71%; 60% reported far-sighted, 46.1% short-sighted and 18.1% had cataract problem. However, only 52.8% wore spectacles. Conclusion : The pattern of hearing and vision problems explored but left untreated highlights the need for medical alertness in identifying these problems early to incorporate appropriate management and treatment among the needy elderly. It is also important to empower the elderly to be aware of their problems and informing them of possible solutions. Keywords: deafness, visual impairment, older persons

PP26 C-042
PREVENTING FALLS AMONG OLDER PEOPLE WITH MENTAL HEALTH PROBLEMS: A SYSTEMATIC REVIEW

Frances BUNN¹, Charles SIMPSON¹, Angela DICKINSON¹, Venkat NARAYANAN², Christina VICTOR³, Deborah HUMPHREY², Caroline GRIFFITHS² (*1. Centre for Research in Primary and Community Care, University of Hertfordshire, United Kingdom; 2. Older Adults, Oxford Health NHS Foundation Trust, United Kingdom; 3. School of Health Sciences and Social Care, Brunel University, United Kingdom*)

Introduction : Falls are a leading cause of mortality and morbidity in older people and these risks are exacerbated by mental health conditions such as depression and dementia. Previous reviews have focused on people with dementia and cognitive impairment, but not those being cared for with other mental health conditions or in mental health settings. To evaluate the effectiveness of fall prevention interventions for older people with mental health conditions. Method : We conducted a systematic review of fall prevention interventions for people aged 65 and over in both inpatient and community health settings providing care for patients with mental health conditions. We searched a range of electronic databases and undertook lateral searches to identify both controlled and uncontrolled studies. Studies were assessed for risk of bias on six domains. Due to heterogeneity results were not pooled but are reported narratively. Results : Fifteen studies met our inclusion criteria. Interventions that include multifactorial, multi-disciplinary interventions and those involving increasing staff awareness appear to reduce the risk of falls but the evidence is mixed and quality of the studies varied. Only 2 studies, both undertaken in the US, were undertaken in mental health settings. We found no data relating to process outcomes or patient views. Conclusion : The review provides evidence that fall prevention interventions can be effective in preventing falls in older people with mental health problems. There is a dearth of falls research undertaken in mental health settings or which focus specifically on patients with mental health problems. Keywords : Falls, Mental health

PP26 C-043
SEASONAL DIFFERENCES ON FALLS AND FRACTURES IN BRAZILIAN OLDER ADULTS

Angelo Jose G BOS¹, Iride Cristofoli CABERLON² (*1. Institute of Geriatrics and Gerontology, Pontifical Catholic University of Rio Grande do Sul, Brazil; 2. School of Nurse, ULBRA, Brazil*)

Introduction : Falls and fractures in the older adult represent a significant public health problem, facing the process of longevity in Brazil. The influence of environmental factors, such as climate, on falls risk is related to the functional state and mobility of older adult. Thus,

the present study aimed to investigate seasonal differences on falls and fractures in the older adult in Rio Grande do Sul, Brazil. Method : Data were collected from the 6556 charts of older adult patients presenting falls from four units of Public Urgency and Emergency. Results : Among them, 4,664(71%) were women and 1,892(29%) were men, with 26.8% of cases occurring in winter followed by autumn with 24.5% ($p < 0.05$). Thirty-one percent of falls had fractures confirmed by radiology (women 32%, men 28%, $p < 0.0001$). The season with the highest number of fractures was winter, where fractures were observed in 34% of falls ($p = 0.0002$), with spring (28% of falls) the lowest. Age, sex, and winter were the significant risk factors for falls. Conclusion : We conclude that falls in winter are more frequent and more severe. Female gender and older age are more vulnerable to falls and fractures. This survey results point to the need for further epidemiological and clinical studies that can clarify issues related to other approaches to risk factors for falls and fractures. These approaches include behavioral factors, extrinsic and intrinsic multifactorial interventions; particularly in the context of primary and secondary care by the Brazilian Unique Health System. Keywords : Public Health, Falls, Season

PP26 C-044

FALL AND COGNITIVE CONDITION IN ELDERLY OLD PERSONS

Dongqing ZHAO, Yanling ZHANG (*West China Hospital Sichuan University, Geriatrics, China*)

Introduction : The world population survey data show the older people (>60 years old) is 10.80% of the total in the world's population in 2009, while it will be 21.95% in 2050. Fall is one of the most important causes of bad health and disability. Fall related damage such as fracture and cerebral trauma will increase mortality in the old. Method : In 2005, we performed a cross-sectional study in Dujiangyan, Sichuan province. Results : We include 743 very old persons (89-108 years old, the median 93) in our study (238 men). Our questionnaire includes demographics, living conditions, social contact, cognitive function, subjective well-being, personalities and characteristics, physical condition, chronic diseases, activities of daily living (ADL), medicine, physical activity, and leisure-time activity. The primary outcome was the times of fall in one year. According to their education background, we divided them into two groups, educated and non-educated (90.31%)(never go to school). We have dealt with the data by software SPSS 17.0 and analyze of it by Logistic Regression. In these person 53.4% had fell in one year and 73.04% were found fell twice or more. we found that fall was related with cognitive function($p = 0.059$ correlation coefficient 1.403 95%CI 0.987-1.994), subjective well-being($p = 0.034$ correlation coefficient 0.954 95%CI 0.914-0.996), personalities and characteristics($p = 0.019$ correlation coefficient 1.135 95%CI 1.049-1.700) and ADL($p = 0.057$ correlation coefficient 0.979 95%CI 0.958-1.001). Conclusion : In the group without education, we found that the people with disturbance of consciousness would be easier to fall in their daily life. While in the group with education, more persons are needed to gain positive results. Keywords : fall, very old, cognitive function

PP26 C-045

FALL RISK IN OLDER ADULTS WITH COGNITIVE IMPAIRMENT

Hyun Suk LEE (*Geriatrics, Fremantle hospital, Australia*)

Introduction : Fall risk is twofold higher in older adults with cognitive impairment (CI). Most trials in fall prevention study excluded older people with cognitive impairment or dementia. Fall risk factors in

older people with cognitive impairment may be different to older adults without cognitive impairment. There is no known effective fall prevention strategy in older adults with cognitive impairment. This prospective study assessed the effect of multidisciplinary intervention targeting fall risk factors in older adults in community. Method : Older people residing in community presented to balance and mobility clinic for fall prevention. Cognitive assessment was conducted and older people were categorised as normal cognition, mild cognitive impairment and dementia. Fall risk factors were analysed in each groups to identify different characteristics. Multidisciplinary intervention targeting fall risk factors were offered to all patients. Timed up and go test (TUG), Modified falls efficacy scale (MFES), Berg balance scale (BBS) and history of falls were reviewed at baseline and after completion of the intervention. Results : About 40 percent of patients had cognitive impairment or dementia. 88 percent of patients had falls in the past. Fall risk factor profile was similar among older people with normal cognition, CI and dementia. Mean TUG was slower and BBS was lower in older adults with cognitive impairment at baseline. BBS and TUG improved and fall rate declined after the intervention in older people with cognitive impairment. Conclusion : Multidisciplinary intervention was effective in older adults with CI. Cognitive assessment needs to be incorporated into routine fall risk assessment. Early implementation of fall prevention strategy in older people with CI reduced falls rate. Keywords : fall risk factor, multidisciplinary intervention, cognitive impairment, older adults

PP26 C-046

EFFECT OF ALFACALCIDOL ON FUNCTIONAL MOBILITY IN INDONESIAN ELDERLY WOMEN: RANDOMIZED CONTROLLED TRIAL

Jane Estherina Fransiska SINAGA (*Internal Medicine, School of Medicine, University of Indonesia, Indonesia*)

Introduction : Previous studies reported the D-analog alfacalcidol, increases muscle power and balance and lead to a highly significant decreases in the number of fallers and falls in Caucasian elderly community-dwelling population. Method : A randomized, double-blind controlled trial was conducted in elderly women subjects geriatric clinic of Cipto Mangunkusumo National Hospital Jakarta Indonesia on April-September 2012. Intervention group was given 0,5 mcg alfacalcidol and 500 mg calcium daily for 90 days and another group was given placebo and 500 mg calcium. Balance test, Timed-up and Go Test (TUG) was measured at the beginning and after 3 months. Per protocol analysis to functional mobility after intervention between the two groups was performed. Results : 95 subjects were fulfilling study criteria and randomized into 2 groups, containing 47 subjects in alfacalcidol group and 48 subjects in placebo group. Both groups were comparable in all important prognostic factors including age, BMI, nutritional status, muscle strength. After three months the mean time in alfacalcidol group used for the TUG was decrease significantly by 2,49 s ($p < 0.0001$). There were significant improvement of the median time for TUG in the group that received alfacalcidol compared to placebo (9,01 vs.10,07 $p = 0.028$). Conclusion : Treatment with 0.5 mg alfacalcidol with calcium effectively improved functional mobility in Indonesian elderly women. Keywords : alfacalcidol, functional mobility, Indonesian elderly women

PP26 C-047

EFFECTS ON FALLS OF A ONE-YEAR HOME-BASED CASE MANAGEMENT INTERVENTION IN FRAIL OLDER PEOPLE

Ulrika OLSSON MOLLER, Jimmie KRISTENSSON, Patrik MIDLOV, Charlotte EKDAHL, Ulf JAKOBSSON (*Department of*

Health Sciences, Lund University, Sweden)

Introduction : Today frail older people to a higher extent receive healthcare at home and the number of falls increase with age and frailty level. The objective of this study was to investigate the effects of a one-year home-based case management intervention in frail older people (aged 65+ years) on self-reported falls, injurious falls and falls resulting in medical care. **Method :** A sample of people aged 65 + years with disability and repeated health care contacts were randomly assigned to an intervention group (n=80, mean age 81.4 years (SD 5.9), 65% women) or control group (n=73, mean age 81.6 years (SD 6.8), 68.5% women). The intervention group received monthly home-visits for 12 months by a nurse and physiotherapist with a multifactorial preventive approach including assessment, information giving, an individual physical exercise programme, home hazard evaluation/ modification and referrals. The control group received usual care. Data on falls were collected through personal interviews at 3, 6, 9, and 12 months. **Results :** In the intervention group 96 falls occurred during the 12-month follow-up period compared with 85 falls in the control group (p=0.900). Of those falls 40 and 38 falls in the intervention and control groups, respectively, were injurious (p=0.669) and 19 falls in the intervention group resulted in medical care compared with 15 falls in the control group (p=0.151). **Conclusion :** This home-based case management intervention was not able to prevent falls, fall injuries or falls resulting in medical care in frail older people. Further home-based studies to frail older people to prevent falls needs to be conducted. **Keywords :** falls, frail, case management

PP26 C-048

FALL PREVENTION AND MANAGEMENT IN KOREAN LONG TERM CARE SETTINGS: A GAP IN EVIDENCE BASED PRACTICE

Myonghwa PARK¹, Mi-Hwa PARK² (1. College of Nursing, Chungnam National University, Korea; 2. Department of Nursing, Sejojeong College, Korea)

Introduction : This study was to explore gap between actual practice and evidence-based fall prevention and management for the older adults in long term care settings to establish baseline data for evidence-based fall protocol development and dissemination. **Methods:** The subjects were 600 nursing staff members from 32 long term care hospitals in Korea. Self-administered questionnaires were used to collect the data and the results of the study were analyzed with descriptive statistics, t-test, ANOVA and Pearson correlation. **Method:** The subjects were 600 nursing staff members from 32 long term care hospitals in Korea. Self-administered questionnaires were used to collect the data and the results of the study were analyzed with descriptive statistics, t-test, ANOVA and Pearson correlation. **Results :** There were statistically significant differences between fall prevention management practice in real clinical settings and evidence based practice. Nursing staff members' knowledge and attitudes toward fall prevention and management contributed to the gap in evidence based practice. There were also statistically significant differences in evidence based fall management practice according to the nursing staff members' career and experiences of fall education. **Conclusion :** To ensure best care for fall management, the factors contributing to these gaps need to be analyzed to identify the barriers. In addition, the evidence-based fall prevention and management protocol suitable for long term care settings needs to be developed and disseminated. * This work was supported by research grant of Basic Science Research Program through the National Research Foundation of Korea (NRF) funded by the Ministry of Education, Science and Technology (No. 2010-0024922). **Keywords :** Fall

PP26 C-049

STEPPING OUT INTO ACTIVE LIFE -A COMMUNITY-BASED FALL PREVENTION PROGRAM FOR THE ELDERLY

Noor Hafizah ISMAIL¹, Ian Yi Onn LEONG¹, Mei Lin TEOH¹, Joseph Antonio MOLINA² (1. Department Of Continuing and Community Care, Tan Tock Seng Hospital, Singapore; 2. Health Services and Outcomes Research, National Health Care Group, Singapore)

Introduction : Falls is an important cause of mortality and morbidity amongst elderly living in the community. Multi-intervention Fall prevention program in the community that targets risk factors has been shown to reduce falls in elderly. This research described the outcomes of a fall prevention program conducted in the community dwelling elderly. **Method :** 745 elderly were enrolled into a multi-factorial fall prevention program which consist of medical assessment to screen for fall risk factors, twice weekly exercise, home safety assessment and education. The participants were follow up for 1 year period and the following outcomes were measured: Time up and Go, Berg Balance Score, Step test , Chair rise and 6 minute walk, Quality of life as measured by EQ5D and Fear of Falling. Falls and admissions were also collected throughout the 1 year period. **Results :** The mean age of the participants was 73 ± 8 years , 28.3% were males. At the time of analysis 296 participants had completed 1 year follow up. There was significant improvement in Berg Balance scores, six minute walk , step test and Chair rise between baseline and 1 year. The EQ5D and the falls efficacy show significant improvement in the first 3 months of follow up and then plateaued. There was a 10% reduction in the proportion of fallers (Odds ratio 2.43 95% CI 1.39,4.24). **Conclusion :** Community fall prevention program for the elderly does improve physical performance, quality of life, fear of falling and risk of falling. **Keywords :** falls, community, elderly

PP26 C-050

GERIATRIC GIANTS AND THEIR CONSEQUENCES ? CRUCIAL PROBLEM AMONG THE ELDERLY IN-PATIENTS IN ACUTE GERIATRIC WARD

Pavel WEBER¹, Hana MELUZINOVA², Hana Matejovska KUBESOVA¹, Vlasta POLCAROVA¹, Kamila GREPLOVA¹, Katarina BIELAKOVA¹, Dana WEBEROVA¹, Petronela AMBROSOVA¹ (1. Department of Internal Medicine, Geriatrics and Practical Medicine, Faculty Hospital and Masaryk University Brno, Czech; 2. Department of Internal Medicine, Geriatrics and Practical Medicine, Faculty Hospital and Masaryk University, Czech)

Introduction : With increasing age the degree of dependency and occurrence of geriatric syndromes grow substantially. The retrospective study of data was aimed at conducting an analysis and comparison of geriatric syndromes among age different groups. **Method :** Between 1995 and 2011 years we had altogether 12,210 elderly patients of an average age 80.5±7.0 y. (range 65-103 y.) hospitalized at the Department of Geriatrics. We divided the patient set into three different age subgroups (65-74 y.; 75-84 y. and ≥ 85 y.; e.g. 21.4%; 47.9% and 30.7% of all hospitalized patients) and compared the results among them. **Results :** All the subgroups showed statistically significant increase of the geriatric syndromes, such as falls, immobility, incontinence and cognitive impairment and dementia with increasing age (p<0.001). Their occurrence in the above mentioned age different sets was according to single geriatric syndromes and sex (female and male): falls 22%, 27.8%, 39.9% and 20.5%, 27%, 36.1%; immobility 26.4%, 29.3%, 42.5% and 30.3%, 30.1% and 39.2%; incontinence 38.4%, 50.6%, 69.5% and 38.2%, 47.4%, 61.8%; dementia and cognitive impairment 13.4%, 23.4%,

38.1% and 15.8%, 24.3%, 33.2% respectively. Age cut-off for geriatric syndromes occurrence based on ROC analysis is for female sex 83.5-84.5 y. and for male sex 78.5-82.5 y. We documented also higher occurrence of loneliness, higher need of after-care and dependency in the ADL with growing age and female gender. Conclusion : The increasing occurrence of geriatric giants with age and female gender has crucial importance and could have serious consequences not only for individuals and families but also for demands on and costs of health and social care. Keywords : geriatric giants - increasing age - decreasing self-sufficiency - growing dependency - frailty

PP26 C-051

PREDICTORS OF FALLS AND RECURRENT FALLS AMONG OLDER ADULTS WITH CANCER: THE HEALTH AND RETIREMENT STUDY

Tuo Yu CHEN (*School of Aging Studies, University of South Florida, USA*)

Introduction : Older adults with cancer are at a greater risk for falling than the general population due to side effects of cancer treatment, pain, and general deconditioning. Although previous research has found that poor balance, gait, vision, and vestibular function and difficulties in activities of daily living (ADL) and instrumental activities of daily living (IADL) predict falls, no study to date has examined these factors concomitantly. Furthermore, there is limited research on recurrent falls in this vulnerable population. Method : Thus, this study aimed to investigate the known predictors of falls and identify predictors of recurrent falls among seniors with cancer across time using the data from the Health and Retirement Study. On average, participants (N = 1505) were 75 years old, white (88%), and female (53%). The Spearman correlation and multivariate logistic analyses were used to analyze the data. Results : The results indicated that greater difficulties in performing ADL (OR = 2.06, p = .001) and faster walking speeds (OR = .82, p = .026) at baseline significantly predicted falls whereas more comorbidities (OR = 1.82, p = .034) at baseline was a significant predictor of recurrent falls at follow-up. Having greater comorbidities (OR = 1.49, p = .033) at baseline was also a predictor of fall-related injury. Conclusion : These findings have implications for the course of cancer treatment. Education regarding ADLs and walking patterns as well as the treatment of comorbidities should be provided concurrently with cancer treatment to prevent future falls in this population. Keywords : cancer, falls, recurrent falls

PP26 C-052

DETERMINANTS OF FALLS AND/OR FEAR OF FALLS IN COMMUNITY DWELLING ELDERLY

Gulistan BAHAT¹, Ilker BAY¹, Timur Selcuk AKPINAR¹, Asli TUFAN¹, Cihan KILIC¹, Akin BASKENT¹, Sevilyay NADIR¹, Ozlem SOYLUK², Nilgun ERTEN¹, Mehmet Akif KARAN¹ (*1. Department of Internal Medicine, Division of Geriatrics, Istanbul University Istanbul Medical School, Turkey; 2. Department of Internal Medicine, Bakirkoy Education and Research Hospital, Turkey*)

Introduction : Falls are the major cause of fractures in all ages. However, the majority of osteoporotic fractures occur in the elderly. If we can prevent falls, we can also prevent the majority of the osteoporotic fractures. In this study, we aimed to study the determinants of falls and/or fear to falls in community dwelling elderly. Method : The community dwelling elderly ≥ 60 years of age admitted to our geriatrics outpatient clinics were included into study. Age, gender, timed up and go (TUG) test, 4 meters usual gait speed, chronic disease number, chronic drug number, geriatric syndrome number, activities of daily living (ADL) scores, presence of depression,

dementia, urinary incontinence, fecal incontinence, visual impairment, polypharmacy, undernutrition, dynapenia, sarcopenia according to muscle mass, sarcopenia according to EWGSOP definition, chronic pain, serum 25(OH)vitamin D, TSH levels were studied for their possible effect on falls and/or fall fear. Results : 95 elderly were included into the study. 27.4% were males, 72.6% were females. Mean age was 73.6 \pm 5.9. 32.6% had at least 1 fall in the previous year and 43% had fear to falls. Only determinants of falls and/or falls fear were older age, higher number of geriatric syndromes, dependency in ADL, higher TUG period and lower 4 m usual gait speed (p<0.05). Conclusion : Older elderly with higher number of geriatric syndromes, with at least 1 dependency in ADL are more likely to fall or have fall of fearing. In physical examination, TUG test and 4 meters usual gait speed may help to predict elderly at risk of falls. We suggest that assessment of geriatric syndromes, functional status, TUG and usual gait speed should be an integral part of evaluation for osteoporotic fractures. Keywords : Falls, fear of falling, assessment

PP26 C-053

QUANTIFYING THE EFFECT OF FRAILTY ON GENTAMICIN PHARMACOKINETICS IN OLDER INPATIENTS: A POPULATION MODELING APPROACH

Claire JOHNSTON¹, Sarah N. HILMER¹, Andrew J. MCLACHLAN², Slade T. MATTHEWS³, Peter R. CARROLL³, Carl M.J. KIRKPATRICK⁴ (*1. Department of Clinical Pharmacology and Aged Care, University of Sydney/Royal North Shore Hospital, Australia; 2. Faculty of Pharmacy/Centre for Education and Research on Ageing (CERA), University of Sydney/Concord RG Hospital, Australia; 3. Sydney Medical School, University of Sydney, Australia; 4. Centre for Medicine Use and Safety, Monash University, Australia*)

Introduction : Frailty is a multifactorial biological syndrome characterized by a cumulative dysregulation of physiological processes and is associated with changes in pharmacokinetics. The aim of this study was to determine and quantify the impact of frailty on the clearance of gentamicin and perform dosing simulations to propose appropriate dose recommendations for older people. Method : Gentamicin concentration-time data were pooled from 2 prospective observational studies of older hospitalized patients; one on prophylactic gentamicin and one on therapeutic gentamicin for the empiric treatment of sepsis. Data were modeled using NONMEM. Results : Gentamicin pharmacokinetics were investigated in 38 older patients (30 prophylactic and 8 therapeutic) with a total of 89 gentamicin concentration observations. A one compartment linear pharmacokinetic model best described the data, which included between subject variability on both clearance and volume of distribution parameters. The addition of frailty to the model reduced the random variability after renal function (based on estimated creatinine clearance using lean body weight) and lean body weight were included. Frail patients had a 14% lower gentamicin clearance compared to non-frail. Simulations showed that gentamicin dosing based on total body weight, renal function and frailty at 7 mg/kg gave the highest percentage of patients achieving target gentamicin exposure, with 2.9% of patients reaching potentially toxic levels. Without the adjustment for frailty, 5.8% of patients had a higher risk of toxicity. Conclusion : This study has shown that frailty may independently predict reduced clearance of gentamicin in older patients. Adjustment for frailty when calculating dose may reduce the number of patients experiencing gentamicin toxicity. Keywords : Frailty

PP26 C-054

BODY COMPOSITION AND ITS RELATIONSHIP WITH FRAILTY PHENOTYPE OF BRAZILIAN ELDERLY: A SUB-

PROJECT OF "FIBRA"

Fernanda Pinheiro Amador Dos Santos PESSANHA¹, Eduardo FERRIOLLI¹, Jose Ailton De Oliveira CARNEIRO¹, Andre Filipe Junqueira DOS SANTOS¹, Juliana Lemos De Souza MARCHESI¹, Karina PFRIMER¹, Rutineia De Fatima MICHELETTO¹, Nereida Kilza Da Costa LIMA¹, Julio Cesar MORIGUTI¹, Eduardo FERRIOLLI² (1. Medical Clinic, University of Sao Paulo-USP/RP, Brazil; 2. Medical Clinic, University of Sao Paulo-Ribeirao Preto, Brazil)

Introduction : Although weight loss is a component of the frailty cycle, this syndrome may be related either to an underweight or an obesity setting. **OBJECTIVE:** To investigate the possible association of body composition assessed by Body Mass Index (BMI) with profiles of frailty in elderly Brazilians. **Method :** Cross-sectional study in subjects aged ≥ 65 years, participants of the 'Survey of Frailty in Elderly Brazilians ? FIBRA', chosen by probabilistic sampling in 14 Brazilian cities in five demographic regions. The elderly were classified as frail and pre-frail according to the phenotype proposed by Fried et al. and BMI was calculated using weight / height². The classification proposed by WHO was adopted to define nutritional state. The association between frailty and BMI was assessed using multinomial logistic regression. **Results :** The study included 5006 elderly, mostly women (65.9%), with low income (56.3%) and low education (50.1%). Mean age was 73.1 (6.1) years. The prevalence of frailty was 11.6%. 22.1% and 27.6% of the frail subjects were underweight and obese, respectively. Subjects with BMI <18.5 and BMI ≥ 35 kg/m² were, respectively, 1.74 (1.40- 2.15) and 1.59 (1.16 ? 2.17) times more likely to be frail when compared to the ones with normal weight (18.5 to 24.99 kg/m²) (p <0.01). BMI range between 25.00 and 29.99 was a protective factor for frailty, with odds ratio 0.57 (0.46-0.70) (p <0.01). **Conclusion :** Both malnutrition and moderate obesity seem to be related with frailty in Brazilian elderly, while overweight plays a protective role. **Keywords :** Frailty, Body Composition, Elderly

PP26 C-055

A SARCOPENIC DEMENTIA CASE: SUCCESSFUL TREATMENT WITH NUTRITION SUPPORT AND RESISTANCE TRAINING

Ergun BOZOGLU, Mehmet Ilkin NAHARCI, Umut SAFER, Ilker TASCI, Huseyin DORUK (Geriatrics, Gulhane School of Medicine, Turkey)

Introduction : The prevalence of sarcopenia observed in population aged 80 years or older is 11.50%. Sarcopenia is a syndrome characterized by a progressive and generalized loss of skeletal muscle mass, strength and performance with a risk of adverse outcomes, such as physical disability, poor quality of life and death. **Method :** Eighty-eight years old dementia patient admitted out geriatric department with complain of dental problem. She could not eat properly as she has no teeth and this caused the increase of depressive symptoms. Her history consists of dementia, hypertension, chronic kidney disease and hypothyroidism. **Results :** Our geriatric assessment showed that patient had low body mass index, skeletal muscle mass, hand grip strength and 15-ft (4.572 m) course gait speed. We ordered Ensure Plus® nutrition shakes 3 packs/day and Abound® therapeutic nutrition drinks 2 packs/day and also resistance training program. After 6 months, patient body mass index (first visit vs. 6th month visit; 25.9 vs. 27.6), and skeletal muscle mass (6.45 kg/m² vs. 6.58 kg/m²) improved, also decreased depressive symptoms. But no change in hand grip strength and 15-ft (4.572 m) course gait speed. **Conclusion :** Ensure Plus® and Abound® combination treatment with resistance training seem to be good alternative for treatment of sarcopenia. Also this regime could

improve depressive symptoms related to this condition. **Keywords :** sarcopenia, dementia, nutrition

PP26 C-056

ASSOCIATION BETWEEN MUSCLE MASS INDEX AND METABOLIC SYNDROME IN THE ELDERLY

Cristiane Alves BORGES¹, Graziela Morgana Silva TAVARES², Vera Elizabeth CLOSS³, Isadora De Souza RODRIGUES⁴, Carla Helena Augustin SCHWANKE⁵, Silvana JUNGES⁶, Maria Gabriela Valle GOTTLIEB⁵ (1. Biology Department, Pontifical Catholic University of Rio Grande do Sul, Brazil; 2. Physical Therapy, Federal do Pampa University, Brazil; 3. Program in Biomedical Gerontology, Pontifical Catholic University of Rio Grande do Sul, Brazil; 4. Pharmacy, IGG-PUCRS, Brazil; 5. Graduate Program in Biomedical Gerontology, Pontifical Catholic University of Rio Grande do Sul, Brazil; 6. Graduate Program in Biomedical Gerontology, IGG PUCRS, Brazil)

Introduction : The metabolic syndrome (MS) as well as to changes in body composition are very prevalent in the elderly. The objective of the present study was to verify the association among muscle mass (MM), muscle mass index (MMI) and MS in elderly. **Method :** Cross-sectional study. We selected 75 elderly people (14 men and 61 women) of the Ambulatory Geriatric Service of the Hospital of Sao Lucas, Brazil. They were randomized into two groups: group 1=elderly with MS (40), group 2=elderly without MS (34). The variables evaluated were: age, sex, MM, MMI. The instruments used were the following: for the diagnosis of MS was used the (NCEP-ATPIII), for the measurement of MM and MMI we used the following formulas: $MM = \text{height}^2 \times (0.00744 \times \text{arm circumference}^2 + 0.00088 \times \text{thigh circumference}^2 + 0.00441 \times \text{calf circumference}^2) + 2.4 \times \text{sex} + 0.048 \times \text{age} + \text{race} + 78$ and $MMI = (\text{kg}) / \text{height}(\text{m})^2$. We performed a correction for subtraction of subcutaneous fat using the formula $Cm = \text{Climb} - \pi S$. **Results :** The average age of the groups was: MS=73.53 \pm 6.734; without MS group =73.23 \pm 7.273, p=0.085. There was no significant difference in the average MM of the groups investigated (MS:MM=23.60 \pm 4.98 and without MS: MM= 21.96 \pm 4.52, p =0.14). However, there was a significant statistic difference between the groups with respect to the MMI (MS:MMI=10.04 \pm 2.09, without MS:MMI= 9.08 \pm 1.62, p=0.03). **Conclusion :** MS is associated with the MMI in this sample, where it was observed that elderly people with MS have a slightly higher average of the MMI than elderly without MS. However more research is needed to elucidate the effect of MS on skeletal muscle. **Keywords :** Muscle mass index, Metabolic syndrome, elderly

PP26 C-057

RELATIONSHIPS AMONG APPENDICULAR SKELETAL MUSCLE INDEX, LIPID PROFILE, AND HBA1C IN COMMUNITY-DWELLING ELDERLY WOMEN

Hyoun-Joong KONG¹, Eunjin HWANG¹, Jeongeun KIM², Suk Wha KIM³, Jeeyoung HONG¹ (1. Biomedical Research Institute, Seoul National University Hospital, Korea; 2. College of Nursing, Seoul National University, Korea; 3. Department of Plastic Surgery, Seoul National University Hospital, Korea)

Introduction : With the population aging in Korea, interests for sarcopenia and the related diseases are in old age getting higher. This study focused on association among appendicular skeletal muscle index (ASMI), which is the diagnosis index of sarcopenia, HbA1c, which is the management index of diabetes mellitus, and blood lipid profile for community-dwelling elderly women to provide basic knowledge for preventing diseases related to sarcopenia. **Method :** The subjects in this study were 53 low-income elderly women in the K district of Seoul whose average age was 74.11 \pm 7.10 years. After

appendicular skeletal muscle mass (ASMM) was obtained through analyzing body composition by using dual-energy X-ray absorptiometry (DEXA), appendicular skeletal muscle index (ASMI) was calculated (ASMM/Weight¹⁰⁰) for those. And total cholesterol (TC), high-density lipoprotein (HDL), Triglyceride (TG), and HbA1c were examined through blood test. Pearson's correlation analysis between ASMI and HbA1c was done by using SPSS-PC (version 18.0). The level of statistical significance was set for $\alpha = .05$. Results : As a result of research, ASMI showed significant correlation with HDL ($r = .454, p = .001$) and HbA1c ($r = -.337, p = .014$), but failed to show significant correlation with TC ($r = -.007, p = .961$) and TG ($r = -.197, p = .158$). Conclusion : The ASMI in community-dwelling elderly women was indicated to have relationship with HDL, which is useful for their health, and with HbA1c, which is serves as a marker for average blood glucose levels. Hence, a steady increase of muscle volume through exercise and diet is judged to be likely conducive to preventing cardiovascular disease and diabetes. Keywords : Community-Dwelling Elderly, Appendicular Skeletal Muscle Index, HbA1c

PP26 C-058

ALFACALCIDOL CAN IMPROVES MUSCLE STRENGTH IN ELDERLY INDONESIAN WOMEN WHO HAVE LOW HANDGRIP STRENGTH : A RANDOMIZED CONTROLLED TRIAL

In ANUGRAHINI, Siti SETIATI (*Internal Medicine, Faculty of Medicine, University of Indonesia, Indonesia*)

Introduction : The age-related increase in falls is strongly associated with a decline in muscle strength by the mechanism of sarcopenia. Muscle mass decreases 1.2% annually after age 50 and muscle strength declines by 3%. Promising treatment of sarcopenia with analog vitamin D (alfacalcidol) that have muscular effect remains challenging. A double-blinded randomized controlled trial was conducted in order to determine the effect of alfacalcidol on the upper-body muscle strength in Indonesian elderly women in age group of 60 or more who have low handgrip strength. Method : A total 122 elderly women were enrolled to this study. There were 95 subjects fulfilled the eligible criteria. These subjects were randomized into two groups, one group of 47 subjects received alfacalcidol 0.5 mcg/day and the other group received placebo. Each subject was given calcium 500 mg/day. It was determined subjects with handgrip strength equal to or less than 22 kg and measured using handheld dynamometer. Results : After 12 weeks of intervention, 88 subjects had the second muscle strength measurement (7 dropped out). By Mann Whitney analysis, there were significant improvement of muscle strength in the group that received alfacalcidol compared to placebo in handgrip strength (15.50 kg vs. 13.75 kg; $p = 0.003$). Conclusion : Daily doses of 0.5 mcg alfacalcidol significantly improve muscle strength in elderly Indonesian women who have low handgrip strength compared to placebo. Keywords : Alfacalcidol, Muscle strength

PP26 C-059

GERIATRIC SYNDROM INQUIRY IN SENIOR CITIZENS HOSPITALIZED FOR OTHER REASONS IN BASIC ACCOMMODATIONS OF A HIGHLY SPECIALIZED HOSPITAL IN SANTIAGO CHILE

Juana SILVA¹, Carolina PEREZ², Pablo FLORES², Anakena IBACETA³, Sergio CASTRO⁴ (*1. Director, Institute National of Geriatrics, Chile; 2. Research and Teaching Department (DIDE), National Institute of Geriatrics, Chile; 3. Mathematics Department, Universidad Iberoamericana, Chile; 4. Day Hospital, National Institute of Geriatrics, Chile*)

Introduction : Geriatric Syndrom (G.S.) is a clinic condition that can interfere in the evolution of an illness requiring hospitalization. In Chile, the National Institute of Geriatrics has instituted a model of geriatric care with geriatric specialists doing the Integral Geriatric Evaluation (I.G.E) OBJECTIVES: To detect G.S. in Senior Citizens (S.C.) hospitalized for other reasons in basic beds in a highly specialized hospital after doing the I.G.E. Method : By applying existing I.G.E methodology to a group of 605 hospitalized 80 year old and above S.C., showing the most obvious G.S. The information was analyzed on SPSS. Results : Main diagnostics: 24% fractures, 22% cerebral stroke, 13% digestive disorders, 70% showed more than three pathologies. According to Barthel, 57% showed dependency, 86% severe handicapped of ABVD, 15% cognitive deterioration, 54% risk of bed sore. The most frequent G.S. were: sensory disorders 63%, malnutrition 13%. The media stay was 14 days, 80% was released, 12% died. Conclusion : The geriatric specialist and his team is key to detect G.S. and indentified S.C. with fragile clinic profile, group that spend more time in the hospital, uses resources and have greater mortality rate. Discharging patients from a geriatric point of view is of great importance if we consider that 80% are sent home without being checked by a specialist, which can result in a prompt return to the hospital. Our current guidelines for admitting patients into hospitals are not setup for the geriatric specialist to refer patients to specific care nonetheless suggestions are made in medical profiles. Keywords : Geriatric Syndromes

PP26 C-060

SYSTOLIC BLOOD PRESSURE IS NEGATIVELY ASSOCIATED WITH WALKING SPEED IN KOREAN AGING PEOPLE

Ki Young SON, Belong CHO, Dong Wook SHIN (*Department of Family Medicine, Health Promotion Center, Seoul National University Hospital, Korea*)

Introduction : Arterial blood pressure (BP) is a marker of aging cardiopulmonary system and is related to decrease in physiologic reserve via tissue perfusion alteration. Hypothesis of this study was increase of blood pressure was associated with decrease of physical performance in old aged people. This study aimed to investigate the relationship between BP and walk speed in Korean aging people. Method : The systolic blood pressure (SBP), diastolic blood pressure (DBP) and 4 meter-walking speed were measured on random sample nested in the KLoSA panel, a national representative sample of aging people in Korea. We performed linear regression to evaluate the association between walking speed and blood pressure adjusted for age, sex, leg length. Results : Five hundred and eighteen subjects were included in analysis. Approximately 43% (222/518) of the subjects were male and 65% (338/518) were 60 years or older. Mean SBP/DBP was $131.34 \pm 19.63/82.85 \pm 11.18$ mmHg and mean elapsed time for 4 meter walk was 4.48 ± 1.82 sec. 10 mmHg increase of SBP was significantly associated with 0.075 sec increase of elapsed time for 4 meter walk (95% CI 0.003 ? 0.148 sec). However DBP ($\beta = -0.024$, 95% CI -0.150 ? 0.101) or Mean BP ($\beta = 0.063$, 95% CI -0.036 ? 0.163) did not show significant association. Conclusion : SBP was negatively associated with walking speed in Korean aging people. However DBP or Mean BP did not show this association. Keywords : Blood pressure, Walk speed

PP26 C-061

THE EFFECTS OF A HIGH ENERGY DENSE, SMALL VOLUME ORAL NUTRITIONAL SUPPLEMENT ON COMPLIANCE IN THE DAILY CLINICAL PRACTICE OF A GERIATRIC WARD

Karien LOMBARD¹, Mirjam KUHN², Carlette ROUWS², Dieneke VAN ASSELT¹ (1. Department of Geriatric Medicine, Medical Center, Netherlands; 2. Nutricia Advanced Medical Nutrition, Danone Research-Centre for Specialised Nutrition, Netherlands)

Introduction : Compliance is key for optimizing the clinical effectiveness of oral nutritional supplements (ONS). High energy-dense ONS (≥ 2 kcal/ml) have been shown to improve compliance in clinical trial settings (Hubbard Clin Nutr 2012). Data on compliance in daily clinical practice are largely lacking. The aim of the present observational study was to evaluate the effect of a high energy dense, small volume ONS on compliance in daily clinical practice. **Method :** Undernourished (or at risk of under nutrition) geriatric inpatients received two servings of either a high energy dense, small volume ONS (125ml, 2.4 kcal/ml: Nutridrink Compact Energy, Nutricia) or a standard ONS (200ml, 1.5 kcal/ml: Nutridrink) as part of their daily routine care. Compliance (kcal/day and % of prescribed volume) was assessed via weighing dispensed and returned bottles. Data were analysed via Mixed Model for Repeated Measures. **Results :** Forty-seven patients received the high energy dense, small volume ONS and 61 patients received standard ONS during a period of respectively 10 (2 - 28) and 9 (1 - 25) days ($p=0.074$). Compliance was significantly higher with the energy dense, small volume ONS compared to standard ONS (378 ± 14.0 kcal/day vs. 337 ± 13.6 kcal/day, $p = 0.039$, $63.0 \pm 2.34\%$ vs. $56.2 \pm 2.26\%$, $p = 0.039$). Moreover, a trend ($p=0.078$) was observed towards an increasing difference in compliance over time. **Conclusion :** This study showed that compliance with a high energy dense, small volume ONS is significantly higher than with a standard ONS in daily clinical practice at a geriatric ward. **Keywords :** Frailty, oral nutritional supplements, compliance

PP26 C-062

LOWER LEG MUSCLE MASS IS ASSOCIATED WITH AUGMENTATION INDEX BUT NOT WITH BRACHIAL BLOOD PRESSURE IN AN ELDERLY POPULATION

Seung Won LEE¹, Won Joon LEE², Wungrak CHOI³, Yoosik YOUM⁴, Yeong-Ran PARK⁵, Sang Hui CHU⁶, Hyeon Chang KIM² (1. Department of Public Health, Yonsei University College of Medicine, Korea; 2. Department of Preventive Medicine, Yonsei University College of Medicine, Korea; 3. Severance Hospital, Yonsei University Health System, Korea; 4. Department of Sociology, Yonsei University College of Social Sciences, Korea; 5. Division of Silver Industry, Kangnam University, Korea; 6. Department of Clinical Nursing Science, Yonsei University College of Nursing, Korea)

Introduction : Augmentation index (AI), a measure of systemic arterial stiffness, was associated with cardiovascular risk. The aim of this study was to investigate the association between leg muscle mass and the AI and brachial blood pressure in an elderly Korean population. **Method :** This study used data from Korean Social Life, Health and Aging Project (KSHAP) in 2011. A total of 814 people agreed to participate in the KSHAP. Among them, 180 men and 247 women aged 52-95 years completed questionnaire survey, health examinations and AI measurement. Leg muscle mass was measured with bioelectrical impedance method. AI was measured by radial pulse waveform analysis. Brachial blood pressure and anthropometric data were obtained from the participants. The association between leg muscle mass and AI was investigated by multiple linear regression analysis. **Results :** Mean (standard deviation) age was 71.7 (6.9) in men and 70.9 (7.2) in women. In male participants, leg muscle mass was inversely associated with AI when adjusted for age ($\beta = -2.641$, $p = 0.001$), and even after additional adjustment for body mass index,

brachial systolic blood pressure, total cholesterol, HDL cholesterol, fasting glucose, fasting insulin, TUG, smoking and alcohol consumption ($\beta = -1.632$, $p = 0.035$). In women, leg muscle mass was associated with AI when adjusted for age ($\beta = -1.540$, $p = 0.033$) but the association disappeared when fully adjusted ($\beta = -1.017$, $p = 0.198$). However, leg muscle mass was not associated with brachial blood pressure. **Conclusion :** In an elderly Korean population, lower leg muscle mass was independently associated with arterial stiffness but not with brachial blood pressure. **Keywords :** arterial stiffness, augmentation index, muscle mass

PP26 C-063

MUSCULAR DECLINE AND COGNITIVE STATUS: A PILOT STUDY IN ROMANIAN ELDERLY PATIENTS

Sorina Maria AURELIAN¹, Minerva GHINESCU², Andreea ZAMFIRESCU³, Justin AURELIAN⁴, Alexandru A. CAPISIZU⁵, Iulian COVLESCU⁶, Mihai Viorel ZAMFIR⁷, Dan Mircea CHETA⁸ (1. Clinic of Geriatric and Gerontology Hospital Sf. Luca, University Titu Maiorescu, Romania; 2. Family Medicine, University Titu Maiorescu Faculty of Medicine, Romania; 3. Clinic of Geriatric and Gerontology Hospital Sf. Luca, Romanian Association of Young Geriatricians, Romania; 4. Social Medicine, University of Medicine and Pharmacy 'Carol Davila', Romania; 5. Neurology, University of Pharmacy and Medicine 'Carol Davila', Romania; 6. Artificial Brain Study, Vrije Universiteit Amsterdam, Netherlands; 7. Geriatric, Romanian Association of Young Geriatricians, Romania; 8. Diabetology and Nutrition, University of Medicine and Pharmacy 'Carol Davila', Romania)

Introduction : On our knowledge the incidence of frailty and muscular decline is not known in the Romanian elderly population. Sarcopenia is a risk of adverse outcomes such as physical disability, poor quality of life and death. **Objective:** We examine the association between muscular decline, physical performance and cognitive impairment in a specific population (elderly). **Method :** This is a cross-sectional pilot study on 70 randomised patients hospitalized in January-August 2012 at Saint Luke Hospital. We measure the handgrip for muscular force with a MSD dynamometer using Southampton protocol; physical performance was assessed using the short physical performance battery (4-m walk, balance, and chair stands), which yields a summary performance score ranging from 0 to 12 (high) and cognitive status (attention, memory and verbal fluency) with MMSE and Clock Test. The inclusion criteria was age >65 years. Exclusion criteria were diagnosis of dementia, MCI, Parkinson disease, hypo- and hyperthyroidism or neoplasm diagnosed in the prior 10 years. **Results :** We have a heterogeneous group men and women (60% vs. 40%). After adjustment for sex, age and BMI, we used a bivariate analysis with Pearson correlation coefficient. We observed that MCI is correlated with low physical performance ($p < 0.01$) but we didn't obtain any significant correlation between handgrip strength and MCI. We see also a high prevalence of MCI (30%). **Conclusion :** A screening of physical performance and MCI is necessary in development of the Romanian public health for the elderly and to prevent frailty and dependence on this target population. **Keywords:** elderly, sarcopenia, cognitive decline.

PP26 C-064

ENGLISH VERSION OF THE NEWLY-DEVELOPED CGA INITIATIVE 'DR. SUPERMAN' FOR ELDERLY OUTPATIENTS

Toshihiko IWAMOTO (Geriatric Medicine, Tokyo Medical University, Japan)

Introduction : Comprehensive geriatric assessment (CGA) is a keystone for improving and maintaining the quality of life (QOL) of elderly patients. However, CGA consists of a variety of assessments in physical, psychosocial and functional abilities, and in environmental resources and problems. Therefore, CGA with multiple components and time-consuming consultation can lead to difficulty in providing primary care. Recently, we have developed a concise screening test for CGA named, "Dr. SUPERMAN". **Method :** We used this to examine 110 outpatients with various chronic diseases. The name "Dr. SUPERMAN" is a mnemonic and an acronym: "Dr", representing physical examination; "S", sensation; "U", understanding of speech (communication); "PER", pharmacy and key person; "M", 3 M's indicating the geriatric syndrome of disturbances of mentality, mobility and micturition; "A", ADL; and "N", nutrition. Several questionnaires for each item were adopted using the appropriate gold standards and statistics described elsewhere. **Results :** It required 5-15 minutes to complete the test in 110 outpatients (83.5±5.6 y, 43 men). The representative geriatric problems revealed in each item were as follows: cognitive decline (55%), depressive status (38%), gait & balance disturbance (79%), swallowing difficulty (19%), urination disturbance (52%), any disruption in ADL (51%), and nutritional problems (23%). **Conclusion :** "Dr. SUPERMAN" showed a convenient screening test for CGA, with the systematic items kept in mind by mnemonics. "Dr. SUPERMAN" is also easy to perform in primary care, and is completed within approximately 10 minutes. **Keywords :** Comprehensive Geriatric Assessment, screening, geriatric syndrome

PP26 C-065

RELATIONSHIP BETWEEN DYSPHAGIA AND NUTRITIONAL STATUS IN FRAIL OLDER PEOPLE: IMPLICATIONS FOR SARCOPENIC DYSPHAGIA

Yoshitoshi KURODA (Department of Rehabilitation, St. Francis Hospital, Japan)

Introduction : Dysphagia and malnutrition are frequently observed in older people admitted to hospital. However, the relationship between dysphagia and nutritional status has not been sufficiently investigated. **Method :** We retrospectively investigated 63 patients with dysphagia admitted to our hospital in 2012. The subjects consisted of 29 men and 34 women with a mean age of 85.7 years (range 70-100 years). Functional assessment included a graded water swallowing test (GWST), a food intake level scale (FILS), and a physical activity scale. Nutritional assessment included serum albumin, mid-upper arm circumference (MUAC), and calf circumference (CC). **Results :** GWST was significantly correlated with MUAC ($r = 0.40$) and CC ($r = 0.49$) but not with serum albumin ($r = 0.21$). FILS was significantly correlated with MUAC ($r = 0.35$) and CC ($r = 0.35$) but not with serum albumin ($r = 0.22$). Physical activity was significantly correlated with MUAC ($r = 0.26$) but not with CC ($r = 0.22$) or serum albumin ($r = 0.16$). **Conclusion :** Dysphagia in the subjects was related to the MUAC and CC but not with serum albumin, indicating that the relationship between dysphagia and nutritional status was not straightforward. The most likely explanation for these results is that the general reduction in lean body mass, including the swallowing muscles, was responsible for the association between the anthropometric and the swallowing measures, suggesting the presence of sarcopenic dysphagia. **Keywords :** dysphagia, nutrition, sarcopenia

PP26 C-066

LOW PULMONARY FUNCTION IS ASSOCIATED WITH SARCOPENIA IN KOREAN ELDERLY

Young-Sang KIM¹, Kwang-Min KIM², Moon Jong KIM¹ (1. Dept. of

Family Medicine, CHA Bundang Medical Center, CHA university, Korea; 2. Dept. of Family Medicine, Ajou University Medical Center, Korea)

Introduction : Sarcopenia is an important factor of functional impairment related to aging. It is not well known whether decrease in pulmonary function is related to age-related muscle mass decline. **Method :** Representative Korean elderly men (594) and women (738) were included in this study from the Fourth Korean National Health and Nutritional Examination Surveys. Body composition was measured with dual-energy X-ray absorptiometry in each body part. Sarcopenia was defined by weight-adjusted method and by Newman's residual method. The results of pulmonary function tests consist of forced vital capacity (FVC), forced expiratory volume in 1s (FEV1), and their ratio. **Results :** Mean age was 71 in both men and women. Height and weight adjusted appendicular skeletal muscle mass (ASM) was positively correlated with pulmonary function. According to simple comparison by t-test, sarcopenic men had lower FVC, FEV1, and FEV1/FVC, while sarcopenic women did not. After adjusting age, smoking, history of pulmonary disease, exercise, and body fat proportion, sarcopenic women had lower FEV1/FVC; sarcopenic men had lower FEV1 and FEV1/FVC. **Conclusion :** Sarcopenic elderly had lower pulmonary function in both men and women. Further research is needed to clarify whether age-related muscle mass loss precedes pulmonary function decline. **Keywords :** sarcopenia, pulmonary function, elderly

PP26 C-067

IMPACT OF MODERATE COGNITIVE IMPAIRMENT ON PHYSICAL CHARACTERISTICS IN ACTIVE SENIORS

Charlotte H. PION¹, Sebastien BARBAT-ARTIGAS¹, Marc BELANGER², Mylene AUBERTIN-LEHEUDRE² (1. Department of Biology, University of Quebec at Montreal, Canada; 2. Department of Kinanthropology, University of Quebec at Montreal, Canada)

Introduction : Cognitive impairment can often result in health problems among elderly. Physical activity (PA) appears to be an effective intervention to slow this phenomenon. The objective of this study is to examine functional differences between active seniors with or without moderate cognitive impairment (MCI). **Method :** 288 active elderly men and women were divided into 2 groups according to their score on the Montreal Cognitive Assessment (MoCA): MCI (MOCA <26; n=102) and Non-MCI (MOCA ≥27; n=186) groups. Body composition (fat free mass and fat mass by DEXA; muscle strength by handgrip and leg extension), functional capacities (SPPB), cognitive characteristics (MoCA, Stroop and TMT) and their PA levels were compared between the 2 groups. $P < 0.05$ were significant (SPSS 17.0). **Results :** The 2 groups were significantly different at the cognitive level scores except for the Stroop A and B1 Stroop and orientation's the MoCA orientation scores. No difference was observed between groups for age, BMI or gender. No difference in physical and functional characteristics, PA duration and the number of steps (>180min/wk, ≥7500 steps/day) was observed between the 2 groups. **Conclusion :** Regardless of cognitive status in elderly, a moderately active lifestyle seems to preserve a favorable body composition and functional independence. **Keywords :** successful aging, cognitive impairment, functional capacity

PP26 C-068

FRAIL ELDERLY AND HEALTH SELF PERCEPTION: RESULTS FROM A LOW INCOME AND LOW EDUCATED ELDERLY IN RIO DE JANEIRO, BRAZIL

Janiciene SOUZA¹, Fayanne SCHAUSTZ¹, Roberta BARROS²,

Annibal TRUZZI¹, Fernanda BORGES³, Luiz Mauricio PLOTKOWSKI², Marisa SANTOS² (1. Nursing, Centro de Estudo e Pesquisa do Envelhecimento, Brazil; 2. Medicine, Centro de Estudo e Pesquisa do Envelhecimento, Brazil; 3. Nutrition, Centro de Estudo e Pesquisa do Envelhecimento, Brazil)

Introduction : Poor health self-perception (HPS) has been related with higher morbidity, mortality and functional decline in the elderly. There is conflicting evidence linking poor HSP and advanced age. This cross-sectional study aims at investigating the association between age and HSP. Method : We included 300 elderly people from a primary care center from April to December 2012. The majority of the sample were female (59%), with a mean age of 70 years (SD=7.0), 42% had lower education, 82% belonged to D/E socioeconomic class. Frail elderly (SOF index) comprised 32.6% (n=90) of the sample. The individuals were categorized into three age groups: 60 to 69 (group 0), 70-80 (group 1) and above 80 years-old (group 2). Results : 276 people answered the question about HPS. Most of the participants reported their health as regular (44.9%), good (39.5%), and poor (15.6%). Frail elders showed a poorer HSP (p < 0.01). Conclusion : There is a strong association between frailty and poor HSP in the elderly. Keywords : Frailty, Health self perception

PP26 C-069

SARCOPENIA AND FRAILTY IN JAPANESE ELDER PATIENTS WITH OBSTRUCTIVE SLEEP APNEA SYNDROME (OSAS) UNDERGOING CONTINUOUS POSITIVE AIRWAY PRESSURE (CPAP) THERAPY

Jun TAKEDA¹, Kazuyoshi SENDA², Shosuke SATAKE³, Masataka SHIBASAKI¹, Mitsunori NISHIKAWA¹, Haruhiko TOKUDA⁴, Hisayuki MIURA², Hidetoshi ENDO³, Kenji TOBA⁵ (1. Department of Pulmonary Medicine, National Center for Geriatrics and Gerontology, Japan; 2. Division of Home Care Promotion, National Center for Geriatrics and Gerontology, Japan; 3. Department of Geriatric Medicine, National Center for Geriatrics and Gerontology, Japan; 4. Department of Clinical Laboratory, National Center for Geriatrics and Gerontology, Japan; 5. Director of the Hospital, National Center for Geriatrics and Gerontology, Japan)

Introduction : OSAS is prevalent among obese adults. However, information about body composition in Japanese elder patients with OSAS is scarce. We investigated sarcopenia and frailty in elder OSAS patients using body composition analysis with dual-energy X-ray absorptiometry (DEXA). Method : Clinically stable 53 patients with OSAS undergoing CPAP (age: 73.4 +/- 4.9 years; male: 42; Apnea-hypopnea index: 43.4 +/- 15.4; BMI: 24.7 +/- 3.0 kg/m²; Epworth Sleepiness Scale: 8.9/24 +/- 5.7) were underwent a comprehensive geriatric assessment. Results : While 15 patients were diagnosed with sarcopenia by Baumgartner Criteria, 6 sarcopenic patients were diagnosed by the European Working Group on Sarcopenia in Older People Criteria. Mean appendicular skeletal muscle mass index (ASMI) was 7.32 +/- 0.87 kg/m². Mean Body fat mass was 25.9 +/- 8.1%. With DEXA, 28 were diagnosed as obesity including 5 patients with sarcopenic-obesity and 7 patients with BMI <25. With Fried frailty criteria, 9 were classified as frail and 23 as pre-frail. Four sarcopenic-obesity patients were pre-frail and one is frail. ASMI is associated with frailty and QOL. Frailty is associated with QOL and not with parameters in sleep study. Conclusion : Among the elder OSAS patients with more than acceptable CPAP adherence, sarcopenia was observed in 28% by Baumgartner Criteria and obesity in 53% with DEXA. Frail elder OSAS patients were 17% and pre-frail were 43%. Frailty progresses with decrease in muscle. Elder sarcopenic OSAS patients need early detection with body composition

analysis and efficacious nutritional support combined with exercise added on conventional CPAP therapy. Keywords : Obstructive Sleep Apnea Syndrome, Sarcopenia, Frailty

PP26 C-070

EFFECTS OF AROMA THERAPY ON WRIST ACTIVITY DURING DAY AND NIGHT FOR PATIENTS WITH DEMENTIA

Taiki KOMATSU (School of Health Science, Department of Physical T, Tokyo University of Technology, Japan)

Introduction : Currently, the number of patients with dementia in Japan is about 2 million. In 2030, it is estimated to be approximately 3.5 million. Recently, aroma therapy has received great interest for reducing Behavioral and psychological symptoms in dementia (BPSD). Method : Subjects were 1 patient with dementia of Lewy bodies (DLB) and 3 patients with Alzheimer's disease of dementia (DAT). Two types of essential oils which were developed jointly by Kinki university and @aroma Co., Ltd.(Tokyo, Japan) were used. One is based on tea tree which is expected to have an awakening effect, the other one is based on lavender which is expected to have a sedation effect. Results : Physical activity and total duration of awake during the daytime were significantly increased during the third, fourth, and fifth weeks compared to the first week for all subjects. Total duration of sleep time during night was increased during the third, fourth weeks for all subjects. Conclusion : Our results indicate that aroma therapy might be useful to reduce sleep problems for patients with dementia of DLB and DAT. Keywords : Aroma Sleep disorder Dementia

PP26 C-071

CHARACTERISTIC OF PHYSICAL FUNCTIONS AND HEALTH-RELATED INDEXES IN COMMUNITY-DWELLING OLDER AGED ABOVE 75 YEARS WITH HISTORY OF CANCER

Hikaru IHIRA¹, Atsushi MIZUMOTO¹, Keisuke YASUDA¹, Keitarou MAIKNO¹, Yoko MIYABE¹, Hirofumi OHNISHI², Sigeyuki SAITO¹, Tomomi AKANUMA³, Seiji YASUMURA⁴, Takao SUZUKI⁵, Taketo FURUNA¹ (1. School of Health Science, Sapporo Medical University, Japan; 2. Department of Public Health, School of Medicine, Sapporo Medical University, Japan; 3. Bibai City Office, Japan; 4. Department of Public Health, School of Medicine, Fukushima Medical University, Japan; 5. National Institute of Longevity Science, National Center for Geriatrics and Gerontology, Japan)

Introduction : We sought to examine whether physical functions and health-related indexes in community-dwelling older aged above 75 years with history of cancer different from that without diagnosed cancer. Method : This was a cross-sectional analysis of 272 community-dwelling older adults (160 women and 112 men; age: 75 to 95 years; mean age: 80.0 years), participated in the first wave of the 'Population-based and Inspiring Potential Activity for Old-old Inhabitants (PIPAOI)' We measured physical functions such as grip power, knee extension power, standing balance, 5m walking time, pelvic walking time and timed up-and-go test. The health-related indexes were also evaluated by a self-report questionnaire. Participants were asked to physician, nurse and physical therapist by interview whether it be diagnosed as cancer until now. Results : Twenty-seven older adults (9.9 % of the whole; mean age 80.4 years) have been diagnosed as cancer in the past. There was a significant deterioration in 5m walking time, pelvic walking time, exercise habit, frequency of outdoor, self-confidence for exercise and self-confidence for activity among participants with history of cancer (P<0.05). In addition, it was shown that older with history of cancer were more fall history and

have a good appetite than non-history of cancer ($P < 0.05$). Conclusion : It is confirmed characteristic of physical functions and health-related indexes in older with history of cancer. The results suggest that it is important to maintain the physical function in community-dwelling Japanese older aged above 75 years with history of cancer. Keywords : walking speed, appetite, fall history

PP26 C-072

PATIENT'S COGNITION TOWARD THE DISCLOSURE OF CANCER DIAGNOSIS

In Hee CHUN¹, Kyungsook PARK² (1. Graduate School of Nursing, Chung-Ang University, Korea; 2. Redcross College of Nursing, Chung-Ang University, Korea)

Introduction : The purpose of this study was to examine the actual condition and the general cognition toward the disclosure of diagnosis among cancer patients. Method : A survey using a structured questionnaire was conducted with 200 cancer patient from October 18, 2011 to November 19. The data was analyzed with SPSS(version 18.0) for frequency analysis and χ^2 test. Results : 88.2% of cancer patients were agreed to the disclosure of cancer diagnosis. Cancer patients had preferences for a doctor to notify the disclosure of their cancer diagnosis (90.8%) and immediate notification of the cancer diagnosis (89.7%). The sequences of disclosing cancer diagnosis were following; the patient and the care-giver notified at the same time (47.2%), the patient notified first (32.3%) and the care-giver notified first (20.5%). Cognition toward disclosure of cancer diagnosis was statistically significant only with age ($p = .003$). Conclusion : These result suggested that cancer patient wanted to notify their cancer diagnosis by doctor, as soon as cancer diagnosis confirmed, before notifying to their family, and to know accurate cancer related information. Therefore, principals and guidelines in disclosing cancer diagnosis are essential to increase the quality of cancer patient care. Keywords : Cancer Diagnosis, Disclosure, Cognition

PP26 C-073

ELDERLY PATIENTS FOLLOWING FRACTURED NECK OF FEMUR SURGERY HAVE INADEQUATE PAIN CONTROL: PRELIMINARY RESULTS FROM A RANDOMIZED-CONTROLLED TRIAL

Ashley Clifford HARDING¹, Ashley Clifford HARDING² (1. Rehabilitation and Aged Care, Gosford Hospital, New South Wales Health, Australia; 2. Rehab and Aged Care Division, Gosford Hospital, Australia)

Introduction : The aim of this research was to review the adequacy of pain management in elderly patients following surgical repair of a fractured neck of femur taking part in the REVITAHIP study. Adequate pain management reduces length of stay, promotes recovery and mobility. Method : We analysed of 200 patients involved in the REVITAHIP, who presented to a major teaching hospital with a hip fracture requiring surgical intervention between January 2011 and December 2012. Evaluation of pain was attended within a five-day period using the Wong-Baker faces, or 0-10 visual analogue (numeric) scale (VAS). Results : Of 200 patients, 175 met the inclusion criteria of the study and were assessed for current pain levels post operatively. A mean age of 81.2 ± 9.1 years was established and of the group assessed, 19% carried a diagnosis of mild dementia. In this group, consent was gained from the next of kin. 66% of patients come from a home environment with the remaining 33% from hostels or nursing homes. 18% had a VAS > 5 , 33% had a score of 1 or zero. However almost half (49%) complained of pain between 2 and 4. It was also found that patients with dementia used less analgesia compared with

those patients that had a mini-mental of $> 25/30$. Conclusion : Post-operative pain management for patients with hip fracture are not adequate. This has implications for both nurses and medical staff as adequate analgesia can decrease anxiety and promote mobility, and has the potential to reduce post-operative complications (e.g. delirium) in elderly patients. Keywords : Analgesia Fractured Femur

PP26 C-074

COMPARISON OF HIP FRACTURE MORTALITY BEFORE AND AFTER INTRODUCING AN ORTHOGERIATRICS UNIT AT HELEN JOSEPH HOSPITAL, JOHANNESBURG

India BUTLER¹, Lindy SINCLAIR¹, Brent TIPPING¹, Andrew BOULLE² (1. Division of Geriatrics, Department of Medicine, University of Witwatersrand, South Africa; 2. School of Public Health and Family Medicine, University of Cape Town, South Africa)

Introduction : Hip fractures in elderly patients have a high in-hospital mortality. A comprehensive geriatric intervention has been shown to reduce the mortality rate. There is little evidence of the role of comprehensive geriatric intervention in management of acute hip fractures in Africa. Geriatric services only became available in state hospitals in Gauteng province, South Africa in early 2012. Our objectives were to assess the outcomes in older patients with hip fractures before and after the introduction of an Acute Orthogeriatrics Unit at Helen Joseph Hospital, a state facility for indigent patients in Johannesburg, South Africa. Method : Chart review for one year before and then 9 months after commencement of the geriatric intervention. The risk ratio was calculated comparing surgery and mortality pre and post the intervention, and was estimated for mortality adjusted for admission characteristics in a binomial regression model. Results : A total of 110 patients were reviewed, 50 (45%) received the geriatric intervention. Intervention patients were older (median 83 vs 78 years, $p = 0.11$) but were otherwise comparable to the pre-intervention group. The intervention patients were more likely to undergo surgery (86% vs 50%, RR 1.5, 95% CI 1.2-1.9, $p < 0.00$) and less likely to die (12% vs 22%, RR 0.5, 95% CI 0.2-1.3) especially if female (5% vs 22%, OR 0.19, 95% CI 0.3-1, $p = 0.05$). Conclusion : Geriatric intervention reduced in-hospital mortality and resulted in a higher proportion of patients receiving surgery. While the small number of patients studied requires caution in interpreting the results, the findings are suggestive of the effectiveness and feasibility of such an intervention even where resources are relatively scarce. Keywords : hip fracture mortality africa

PP26 C-075

PREDICTING OUTCOME AFTER HIP FRACTURE: USING FRAILITY INDEX TO INTEGRATE COMPREHENSIVE GERIATRIC ASSESSMENT RESULTS

Manju KRISHNAN¹, Ruth E HUBBARD², Eamonn EELES³, Antony JOHANSEN⁴ (1. Cardiff Trauma Unit, University Hospital of Wales, Cardiff, United Kingdom; 2. Centre for Research in Geriatric Medicine, University of Queensland, Australia; 3. Dept. Medicine and Geriatrics, Prince Charles Hospital, Australia; 4. Cardiff Trauma Unit, University Hospital of Wales, United Kingdom)

Introduction : Hip fracture is expensive in terms of mortality, hospital length of stay (LOS) and consequences for independence. Poor outcome reflects the frailty of the patients who typically sustain this injury, but the impact of different comorbidities and impairments is complex to understand. We consider this in a prospective cohort study designed to examine how patients' Frailty Index (FI) predicts outcome. Method : We assessed sequential patients admitted with low trauma hip fracture, excluding only those unfit for surgery. National Hip

Fracture Database data was supplemented with a 51 point FI derived from Comprehensive Geriatric Assessment (CGA) findings. Results : We describe 178 patients; mean age 81 years, 73.5% female. Mean FI was 0.34 (SD=0.16), and logistic regression identified AMT score and FI as the strongest predictors of poor outcome. When patients were stratified by FI, 56(31.5%) were in low frailty group (FI≤0.25), 58(32.5%) in intermediate (FI>0.25-0.4), and 64(36%) in high FI group (FI>0.4). All patients in low FI group returned to their original residence, 80% by 30 days (mean 21.6 days) with no inpatient deaths. Mean LOS for intermediate group was 36.3 days compared with 67.8 days in the high FI group (p <0.01). 30-day mortality was 3.4% for the intermediate group, compared with 17.2% for the high FI group (p<0.001). Conclusion : Individual CGA findings proved disappointing as outcome predictors, while the FI proved effective in integrating assessment results to make useful predictions of LOS, of the likelihood of successful return home, and of mortality in the first 30 days. Keywords : Frailty Index, Hip Fracture, Length of stay

PP26 C-076

COMPARISON OF THE EPIDEMIOLOGIC AND CLINICAL CHARACTERISTICS OF THE ACUTE OSTEOPOROTIC COMPRESSION FRACTURE BETWEEN ELDERLY MALE AND FEMALE

Sung Han OH (*Neurosurgical Department, Bundang Jaesaeng General Hospital, Korea*)

Introduction : To compare the epidemiologic and clinical characteristics of elderly male patients with female patients who underwent percutaneous vertebroplasty or kyphoplasty for acute osteoporotic compression fractures. Method : Retrospectively, we analyzed total 233 patients (male 33, female 200) according to the epidemiology, bone mineral density(BMD), body mass index(BMI) and fracture segments using Fisher's exact test and T-test as a statistical analysis. Results : The secondary osteoporosis was more frequently found in the elderly male patients compared with the female patients (p=0.025). Particularly, alcohol abuse and/or smoking were more possible independent factors causing secondary osteoporosis in male patients compared with female patients (p=0.001). More than 65% of all patients had some degree of trauma history and fall was a major event in both groups. Mostly their body weights were within normal range in both groups. In male patients, T-score (standardized normal score) of BMD was much lower in the lumbar bodies than femur neck (p=0.000). Above 75% of the fracture segments were in the thoracolumbar junction in both groups. There were no differences in the involvement of multiple segments and old fractures between two groups. The compression rate was not significantly higher in the male group than female group. Conclusion : It is essential for the healthy elderly life to find and correct the risk factors of fall. To drink in moderation and quit smoking are correctable habits for the secondary osteoporosis. Keywords : Compression fracture , Osteoporosis

PP26 C-077

OSTEOPOROSIS AND TREATMENT WITH PARENTERAL IV ZOLENDRONATE IN A COMMUNITY HOSPITAL IN SINGAPORE

Diana CHAN¹, David YONG² (*1. Medical Services, Ang Mo Kio-Thye Hua Kwan Hospital, Singapore; 2. Medical Services, Changi General Hospital, Singapore*)

Introduction : The incidence of osteoporosis and fractures is set to rise in a rapidly ageing population where it is projected that 20% will be aged 65 years and above in 2030 in Singapore. Ang Mo Kio-Thye hua kwan hospital(AMKH) admits mostly elderly patients 30% of which

are for fractures requiring rehabilitation. We wanted to find out among high risk patients for osteoporosis how many would go for the BMD. We also wanted to find out what would be the uptake of treatment amongst those diagnosed to have osteoporosis. We also wanted to see if there were any side effects of oral versus IV treatment. Method : All patients aged 50 years and above admitted for past or present history of fragility fractures and those with clinical risk factors were considered for BMD. Those who qualified for treatment were given a choice of treatment-oral bisphosphonates(Fosamax)or IV Aclasta. Patients were assessed from Sept 2011-July 2012. Results : 118(73%) of inpatients opted to have BMD. 53% were found to have osteoporosis. 40(88%) of these patients opted for ACLASTA. 5 patients developed fever which resolved over 48 hours. There were no side effects seen in those on oral Fosamax. Conclusion : BMD is a good and validated tool for diagnosis of osteoporosis Aclasta may be safely given with a high percentage of acceptance in the community hospital setting. Keywords : BMD, osteoporosis, zolendronate

PP26 C-078

ASSOCIATION OF FONG AND THSD7A GENES WITH THE PREVALENCE OF VERTEBRAL FRACTURE IN 2427 CONSECUTIVE AUTOPSY CASES

Heying ZHOU (*Tokyo Metropolitan Geriatric Hospital, Japan*)

Introduction : We previously reported a couple of osteoporosis-susceptible genes, formiminotransferase N-terminal sub-domain containing gene (FONG) and thrombospondin, type 1, domain containing 7A (THSD7A), in which we identified common SNPs, rs7605378 (FONG) and rs12673692 (THSD7A); the former was associated with a predisposition to osteoporosis and the latter with bone mineral density. To further elucidate the importance of these polymorphisms in the pathogenesis of osteoporosis, we examined their association with the incidence of vertebral fracture. Method : DNA extracted from the renal cortex of 2427 consecutive Japanese autopsies (1331 men, mean 79 years, and 1096 women, mean 82 years) were included in the study. The presence or absence of femoral fracture during each subject's lifetime was determined by thorough examination of the clinical records as well as autopsy reports. Results : After adjustments for sex and age at autopsy, logistic regression analysis revealed that homozygotes for the risk allele of rs7605378 (A-allele) or that of rs12673629 (A-allele) possess an increased risk of vertebral fracture. The subjects simultaneously homozygous for the both risk alleles of rs7605378 (AA genotype) and rs12673629 (AA genotype) showed significantly higher risk of vertebral fracture (OR 2.401, 95% CI 1.305 to 4.416, P = 0.0048) as compared with those who bear at least one non-risk allele of both rs7605378 (AC/CC genotypes) and rs12673629 (AG/GG genotypes). Conclusion : Japanese subjects homozygous for the risk alleles of rs7605378 and rs12673629 may have higher risk of vertebral fracture. Keywords : osteoporosis; vertebral fracture

PP26 C-079

EFFECTIVENESS OF A SINGLE LOADING DOSE OF VITAMIN D IN ELDERLY PATIENTS FOLLOWING HIP FRACTURE SURGERY: BASELINE CHARACTERISTICS FROM THE REVITAHIP STUDY

Jenson C. MAK¹, Ashley HARDING¹, Rebecca MASON², Ian CAMERON³ (*1. Department of Geriatric Medicine, Gosford Hospital, Australia; 2. Department of Physiotherapy, Bosch Institute University of Sydney, Australia; 3. Rehabilitation Studies Unit, University of Sydney, Australia*)

Introduction : Hypovitaminosis D is particularly common among older

people with a proximal femoral (hip) fracture and has been linked with poorer lower extremity functioning, falls, and fractures. There is evidence that disability severity and fall rates may be reduced by adequate vitamin D replacement. However, the ideal regimen for vitamin D administration to have these benefits in older people who have been in the hospital has not been established. The REVITAHIP study aims to determine whether the administration of a loading dose of Vitamin D (with daily supplementation) improves walking speed, morbidity and mortality of elderly people (aged over 65 years) following surgery for a hip fracture. Method : A double-blind placebo-controlled trial was conducted across three catchment areas, providing analysis of over 250 patients who received either a placebo, or an active dose of 250000IU of vitamin D (within 7 days of surgery), followed by daily calcium (1000mg) and vitamin D (800IU) daily for six months in both groups. Results : We will present the baseline characteristics of the study population in terms of medical, functional, psychological and social domains. Conclusion : Reference: 1) Mak JCS, Mason RC, Klein L, Cameron ID, Improving Mobility and Reducing Disability in Older People Through Early High-Dose Vitamin D Replacement Following Hip Fracture: A Protocol for a Randomized Controlled Trial and Economic Evaluation. *Geriatric Orthopaedic Surgery & Rehabilitation*. May 2011;2:94-99, doi: 10.1177/2151458511406723. Keywords : hip fracture, vitamin D, randomized controlled trial

PP26 C-080

THE IMPACTS OF DIETARY HABIT AND CARDIOVASCULAR RISK FACTORS ON BONE MINERAL DENSITY IN KOREAN MIDDLE-AGED WOMEN

Hye Jin LEE, Kyung-Hea LEE (*Dept. of Food and Nutrition, Changwon National University, Korea*)

Introduction : The aim of this study was to research the relationship between bone mineral density (BMD) and cardiovascular risk factors in Korean middle-aged women. Method : This study consisted of 117 women aged 45-60 years who visited a Changwon Hanheart hospital for medical examination from July to September, 2012. The subjects were divided into the following three groups by lumbar t-score. Normal group (t-score > -1), Osteopenia group (-2.4 ≤ t-score ≤ -1), Osteoporosis group (t-score < -2.5). All data were analysed using the SPSS statistics version 20.0 program. Results : In the Normal group, Weight (p < 0.001), Waist circumference (p < 0.05) and Body mass index (p < 0.01) were significantly higher than other groups. However, other variables did not show a significant difference between the three groups. In the correlation analysis result between bone mineral density and cardiovascular risk factor, bone mineral density was a significant negative association with Age (r = 0.240, p < 0.01) and a significant positive association with Weight (r = 0.396, p < 0.01), Waist circumference (r = 0.276, p < 0.01) and Body mass index (r = 0.352, p < 0.01). However there is no significant association with Fasting glucose and serum lipids. In the correlation analysis result between BMD and health associated factors, BMD was a positive significance with Activation level (r = 0.192, p < 0.05) and a negative significance with Anxiety/Depression (r = -0.192, p < 0.05). However, there is no significant association with Dietary habit, one of most important hypothesis in this study. Conclusion : In conclusion, increased BMD was a significant association with increased BMI and Waist circumference, and no significance with other clinical indicators. We think the more detailed studies on the impact of dietary habit and Cardiovascular Risk Factors in BMD changes are needed in order to secure the health of Korean middle-age women. Keywords : Bone Mineral Density, Dietary Habit, Cardiovascular Risk Factors

PP26 C-081

ASSOCIATION BETWEEN HELICOBACTER PYLORI INFECTION AND RISK OF OSTEOPOROSIS IN ELDERLY TAIWANESE FEMALES WITH UPPER GASTROINTESTINAL DISEASES

Malcolm KOO¹, Shih-Chun LIN², Kun-Wei TSAI² (*1. Department of Medical Research, Buddhist Dalin Tzu Chi General Hospital, Taiwan; 2. Department of Geriatrics, Buddhist Dalin Tzu Chi General Hospital, Taiwan*)

Introduction : Helicobacter pylori (H. pylori) infection could lead to chronic local and systemic immune response. The resulting increase in pro-inflammatory cytokines could affect the bone resorption and might increase the risk of osteoporosis. This study aimed to investigate the possible association between H. pylori infection and risk of osteoporosis in elderly female patients with upper gastrointestinal diseases. Method : A retrospective computerized patient record review study was conducted in a regional teaching hospital in southern Taiwan. Elderly (age 65 and over) female subjects diagnosed with diseases of esophagus, gastric or duodenal ulcer during January 1, 2008 to December 31, 2010 were identified. The association between H. pylori infection and osteoporosis was evaluated using logistic regression analysis. Results : A total of 365 patients (mean age 77.3, SD 7.6 years) were included in the analysis and 77 (21.1%) had H. pylori infection and 70 (19.2%) had been diagnosed with osteoporosis. Results from logistic regression analysis revealed that osteoporosis was significantly associated with H. pylori infection (OR = 2.00, 95% CI = 1.12-3.59). The association did not vary after adjusting for age, body mass index, alcohol consumption, or the use of proton pump inhibitor. Conclusion : Identifying at-risk populations is important for both prevention and treatment of osteoporosis. In this retrospective patient medical record analysis of elderly Taiwanese female patients with upper gastrointestinal diseases, osteoporosis was found to be associated with H. pylori infection. Further studies using prospective design with information on potential confounding factors is needed to confirm the association. Keywords : Helicobacter pylori, osteoporosis, elderly

PP26 C-082

SARCOPENIA IS SIGNIFICANTLY ASSOCIATED WITH BONE MINERAL DENSITY IN KOREAN ELDERLY MEN

Yong Jun CHOI¹, Kwang-Min KIM², Yunhwan LEE³, Yoon-Sok CHUNG¹ (*1. Department of Endocrinology and Metabolism, Ajou University School of Medicine, Korea; 2. Department of Family Medicine, Ajou University School of Medicine, Korea; 3. Department of Preventive Medicine and Public Health, Ajou University School of Medicine, Korea*)

Introduction : This study was conducted to investigate the relationships among muscle mass, muscle strength, physical performance and bone mineral density (BMD) in Korean elderly men. Method : 161 elderly males aged ≥ 50 years were enrolled from Ajou University Health Promotion Center. Grip strength, gait speed, weight, and height were measured. BMD and appendicular skeletal muscle mass (ASM) were also measured using dual energy X-ray absorptiometry (DXA). We used the height-adjusted ASM (ASM/height²) for muscle mass and the cutoff values of sarcopenia as 6.58 kg/m² according to the result from our previous study. Results : The prevalence of sarcopenia and osteopenia in this study was 23% and 48%, respectively. Among sarcopenic subjects, 67.5% were osteopenic. Osteopenic subjects were more sarcopenic compared to normal subjects (32.5% vs 14.5%, P = 0.007). ASM/height² was significantly associated with BMD of spine, total hip, and femur neck

(spine: $r=0.268$, $P=0.001$; total hip: $r=0.357$, $P<0.001$; femur neck: $r=0.287$, $P<0.001$). Gait speed was associated with BMD of total hip and femur neck (total hip: $r=0.164$, $P=0.039$; femur neck: $r=0.169$, $P=0.033$). Grip strength was associated with only femur neck BMD ($r=0.181$, $P=0.047$). BMD of spine and hip were significantly associated with ASM/height² after adjustment for age. Femur neck BMD was also associated with ASM/height² even after adjustments for age and weight. Gait speed showed independent associations with BMD of total hip and femur neck even after adjustments for age, weight and height. Conclusion : BMD is significantly associated with measures of frailty in Korean elderly men. Keywords : Sarcopenia , Osteopenia, Frailty

PP26 C-083

FACTORS ASSOCIATED WITH TREATMENT OF OSTEOPOROSIS IN POSTMENOPAUSAL WOMEN

Young-Jee JEON¹, Ji-Wan KIM², Chung-Reen KIM³ (1. Family Medicine, Inje University Haeundae-Paik Hospital, Korea; 2. Orthopaedic Surgery, Inje University Haeundae-Paik Hospital, Korea; 3. Rehabilitation Medicine, Dong-Eui Medical Center, Korea)

Introduction : Many studies have reported risk factors related to osteoporosis or osteoporotic fractures, but few have assessed factors related to osteoporosis treatment in Korea. Here, we investigated the treatment rate of osteopenia and osteoporosis after diagnosis and determined factors related to osteoporosis treatment in Korea. Method: This retrospective analysis included postmenopausal women who had visited the health promotion center and been diagnosed with osteoporosis (19.5% of 375) or osteopenia (45.9% of 375). Telephone surveys were performed 1 y after diagnosis. Participants were stratified according to whether they had received osteoporosis treatment (lifestyle modification such as exercise and calcium/vitamin D supplementation for osteopenia and medical treatment such as bisphosphonate and hormone therapy for osteoporosis). We employed logistic regression to determine factors associated with treatment using clinical risk factors as covariates in a FRAX model. Results : Receipt of preventative treatment against osteoporotic fracture was reported by 108 of 172 (62.8%) women with osteopenia and 20 of 73 (27.4%) with osteoporosis. Only consultation with an osteoporosis clinic was significantly related to receiving osteoporotic treatment for osteopenia (odds ratio (OR), 5.01; 95% confidence interval (CI), 2.01-12.00) and osteoporosis (odds ratio (OR), 4.91; 95% confidence interval (CI), 1.16-20.75). In the osteopenic group, age, smoking, parental fracture history, previous fracture history, and secondary osteoporosis affected osteoporosis clinic consultation. No variables affected osteoporosis clinic consultation in the osteoporotic group. Conclusion : Recommending consultation at an osteoporosis clinic after health check-up for both osteopenia and osteoporosis patients is important for the prevention and treatment of osteoporosis. Keywords : Bone density, osteoporosis, drug therapy, postmenopause, risk factors

PP26 C-084

INCIDENCE OF SECOND HIP FRACTURE AND COMPLIANT USE OF BISPHOSPHONATE

Young-Kyun LEE¹, Yong-Chan HA², Kyung-Hoi KOO¹ (1. Department of Orthopaedic Surgery, Seoul National University Bundang Hospital, Korea; 2. Department of Orthopaedic Surgery, Chung-Ang University College of Medicine, Korea)

Introduction : Bisphosphonate has been used to prevent osteoporotic fracture, and is recommended for secondary prevention after hip fracture. However, little is known regarding secondary prevention after first hip fracture. Our purpose was to determine the incidence of

second hip fracture and to evaluate whether compliant use of bisphosphonate can reduce the risk of second hip fracture. Method : Eight hundred twenty six patients who sustained the first hip fracture from May 2003 to October 2011 were retrospectively evaluated. The incidence of second hip fracture was compared between compliant users of bisphosphonate and non-users. Results : Seventy-one (8.6%) patients suffered a second hip fracture at mean 30.0 months (SD 24.6, range 1 to 90 months) after the initial hip fracture. The cumulative incidence of second hip fracture was 5.1% (42/826) at 2 year and 8.6% (71/826) at 8 years. The incidence of second hip fracture was 4.2% (12/283) in compliant users and 10.9% (59/543) in non-users ($p = 0.001$) (Figure 1). Conclusion : Compliant use of bisphosphonate is effective in prevention of second hip fractures. Keywords : second hip fracture, bisphosphonate, compliance

PP26 C-085

KNOWLEDGE ON OSTEOPOROSIS IN GUARDIANS OF HIP FRACTURE PATIENTS

Young-Kyun LEE¹, Yong-Chan HA², Kyung-Hoi KOO¹ (1. Department of Orthopaedic Surgery, Seoul National University Bundang Hospital, Korea; 2. Department of Orthopaedic Surgery, Chung-Ang University College of Medicine, Korea)

Introduction : Treatment gap between the treatment guideline and real clinical practice of osteoporosis has been worldwide found. Although insufficient knowledge of guardians on osteoporosis might be one important obstacle to diagnose and treat osteoporotic patients, there was no study on the knowledge of guardians. We evaluated the guardians' knowledge on osteoporosis compared with the knowledge of orthopedic doctors, using a self-administered questionnaire, modified Facts on Osteoporosis Quiz (FOOQ). Method : In March and April 2012, the knowledge of osteoporosis was measured in 40 guardians of hip fracture patients and 40 orthopedic surgeons using a modified FOOQ. Results : In terms of treatment and prevention of osteoporosis, the modified FOOQ score of the guardians have inadequate knowledge and understanding about the osteoporosis, compared with orthopedic doctors. ($p<0.001$). Conclusion : The level of guardians' knowledge on osteoporosis should be considered and improved to achieve satisfactory osteoporosis treatment in hip fracture patients. Keywords : Osteoporosis , Knowledge , Hip Fracture

PP26 C-086

PREVALENCE OF DYSPHAGIA AND ASPIRATION RISK IN KOREAN ELDERLY POPULATION: RESULTS FROM THE KOREAN LONGITUDINAL STUDY ON HEALTH AND AGING (KLOSHA)

Eun Joo YANG, Mi Hyun KIM, Jae-Young LIM, Nam-Jong PAIK (Rehabilitation Medicine, Seoul National University Bundang Hospital, Korea)

Introduction : Oropharyngeal dysphagia is a very frequent condition among older people. The clinical screening methods should be used to identify older people with oropharyngeal dysphagia and to identify those patients who are at risk of aspiration. We investigate the prevalence of dysphagia with the standardized swallowing assessment (SSA) and the ability of a SSA to reliably exclude the risk of aspiration among older people. Method : This study was conducted as a part of the Korean Longitudinal Study on Health and Aging (KLoSHA) that was designed as a population-based, prospective cohort-study in a population aged >65 years living in a satellite city of Seoul in Korea. We recruited 195 men and 220 women and assessed with the SSA for the evaluation of swallowing function and the 3-ounce water swallow test for determining aspiration status. Results :

One hundred out of 412 assessable patients (24.2%) had their swallow problem by SSA. SSA by one occupational therapist gave a sensitivity of 46.5%, a specificity of 80.8%, positive predictive value (PPV) of 33.7% and a negative predictive value (NPV) of 87.8% for risk of aspiration evaluated by 3-ounce water swallow test. Multiple logistic regression revealed the optimum element of the SSA was a voice quality after adjusting age, sex and comorbidity status. Conclusion : Dysphagia is a common problem that lowers quality of life for the elderly. The Standardized Swallowing Assessment met the criteria for a screening tool among older people. Keywords : Dysphagia, Screening, elderly

PP26 C-087

KNEE EXTENSOR STRENGTH AS PROGNOSTIC FACTOR FOR MORTALITY IN KOREAN OLDER CANCER SURVIVORS

Eun Joo YANG¹, Jee Hyun KIM², Nam-Jong PAIK¹, Jae-Young LIM¹
(1. Department of Rehabilitation, Seoul National University Bundang Hospital, Korea; 2. Department of Internal Medicine, Seoul National University Bundang Hospital, Korea)

Introduction : To examine the associations between muscular strength, markers of overall and central adiposity, and mortality in community-dwelling older cancer survivors in Korea. Method : This study was conducted as a part of the Korean Longitudinal Study on Health and Aging (KLoSHA) that was designed as a population-based, prospective cohort-study in a population aged >65 years living in a satellite city of Seoul in Korea over a 5 year period. Korean men and women 65 years and older with a history of cancer (n = 74) were enrolled. Isokinetic muscle strength of the knee extensors, as determined by peak torque per body weight (newton meter per kilogram) was measured. Adiposity was assessed by body mass index (BMI), percent body fat, and waist circumference. Results : Of the 74 enrolled patients, the survivors (n=62) differed by 56.9 (Standard Deviation (SD) 8.9) from the reference values for those that died (n=12). The effect of the prognostic factors was analyzed via Cox models. Patients with higher baseline knee extensor strength had not higher overall survival significantly (hazard ratio [HR]=0.74, p=0.600). The associations of BMI, percent body fat, or waist circumference with cancer mortality did not persist after further adjusting for muscular strength (all P > or = 0.1). Conclusion : The knee extensor strength was not a prognostic factor for mortality in the sample studied. However, the cancer survivors had significantly higher strength initially than those who died. Keywords : Cancer survivor, mortality, muscle strength

PP26 C-088

UNSUPERVISED VIRTUAL REALITY-BASED EXERCISE PROGRAM IMPROVES HIP MUSCLES STRENGTH AND BALANCE CONTROL IN THE ELDERLY

Jungjin KIM, Jaebum SON, Minyoung LEE, Bumchul YOON
(Department of Health Science / Physical Therapy, College of Health Science, Korea University, Korea)

Introduction : Virtual reality (VR) is an emerging technology that provides a sense of reality through visual and auditory feedback. We aimed to explore the effectiveness of VR exercise in terms of supervision and feedback in older adults. Method : Ambulatory older adults (n=32) from a local community participated in this study. The VR group (n=18; mean, SD; 68.28, 3.74y; 4 men) completed the VR-based exercise program, whereas the remaining subjects in the control group (n=14; mean, SD; 66.21, 3.87y, 1 man) were asked to continue their daily routine for 8 weeks. Hip muscles strength was measured

using a multimodal dynamometer, and ground reaction force using the backward stepping test and the results of the crossover stepping test were recorded using a force platform. Results : The VR group showed significant improvement in hip muscles strength of the extensors, flexors, adductors, and abductors after 8 weeks (all P<= .001). However, no significant improvement was observed in the control group. The VR group had significantly greater ground reaction force on the backward stepping test (with eyes opened and closed) (all P<.005) and the crossover stepping test (with eyes opened and closed) (all P<= .001) compared with those at baseline. However, no significant improvement was observed in the control group. Conclusion : The VR-based exercise program includes the role of supervisor and feedback, which is important for older adults. Therefore, a VR-based exercise program may be a useful tool to improve decreased physical function in older adults as a home-based exercise. Keywords : Virtual reality; Frail elderly; Rehabilitation

PP26 C-089

QUALITY OF LIFE IN ELDERLY HYPERTENSIVE PATIENTS: EFFECT OF EXERCISE TRAINING

Jose Maria Thiago BONARDI, Leandra Goncalves LIMA, Rodrigo Fenner BERTANI, Giulliard Oliveira CAMPOS, Paulo PADOVAN, Julio Cesar MORIGUTI, Eduardo FERRIOLLI, Nereida Kilza Costa LIMA (Medical Clinic, Faculty of Medicine Ribeirao Preto, Brazil)

Introduction : Instruments to assess quality of life (QOL) have been created to evaluate the impact of interventions on health, including Short Form of Quality of Life Questionnaire for Arterial Hypertension (MINICHAL) that emerges as the more specific instrument used in hypertension. Studies show a strong correlation between exercise and life satisfaction. Objective: To evaluate the effect of aerobic training and aerobic and resistance training in the quality of life of hypertensive older individuals. Method : Forty-four subjects were randomized into three groups: aerobic (A), aerobic and resistance (AR) and control (C). The volunteers were previously undergone cardiac evaluation and they were interviewed with the MINICHAL questionnaire. After 10 weeks of protocol, they were interviewed with the same questionnaire. The MINICHAL is divided into two areas: mental state (MS) and somatic manifestations (SM), and the higher the score, the worse QOL. Statistic analysis: Student's paired 't' test and Fisher's exact test. Results : Mean age was 68.5 ± 5.1 years. Comparing mean values for MS and SM before and after training we observed 6.5/2.3 vs 3.5/1.2 (p=0.0001) and 3.8/2.0 vs 2.1/1.8 (p=0.001) for A; 4.9/2.1 vs 3.1/1.9 (p=0.0001) and 2.5/2.7 vs 1.1/1.9 (p=0.005) for AR. The total score pre and post training for the A and AR were, respectively, 10.4/4.0 vs 5.6/3.4 (p=0.0001) and 7.5/3.5 vs 4.3/2.5 (p=0.0001). Control group had higher scores in MS and in total questionnaire after 10 weeks. Conclusion : We observed a significant improvement in quality of life in individuals who underwent A and AR during ten weeks of training. Supported by FAPESP and CNPq. Keywords : Quality of Life, Exercise Training, Elderly

PP26 C-090

BLOOD PRESSURE AT REST, AFTER ATTEMPTS TO OBTAIN THE MAXIMUM LOAD AND AFTER THE ONE REPETITION MAXIMUM ASSESSMENT IN OCTOGENARIANS IN THREE RESISTANCE EXERCISES

Rodrigo Fenner BERTANI, Jose Maria Thiago BONARDI, Giulliard De Oliveira CAMPOS, Paulo Roberto PADOVAN, Julio Cesar MORIGUTI, Eduardo FERRIOLLI, Nereida Kilza Da Costa LIMA (Clinica Medica Geriatrica, FMRP-USP, Brazil)

Introduction : The increasing number of older individuals requires a

special attention in order to provide adequate levels of physical health. Therefore, resistance exercises are increasingly encouraged. The one repetition (1 RM) assessment is the gold standard for prescribing resistance exercises, but it is speculated that this may raise the blood pressure (BP). We observed the BP at rest (we included only volunteers with BP lower than 160/100 mmHg), immediately after each attempt to obtain the maximum load, and after the assessment in three resistance exercises. Method : Twenty-one individuals (seven men) with a mean age of 83.1/2.9 years were evaluated. It was used a BP automatic monitor OMRON model HET-742INT to obtain measurements. The 1RM assessment was performed within five attempts in the exercises Chest Press, Leg Press and Back Row. Immediately after each trial was measured BP. After the test were performed four BP measurements. Statistic analysis: One way ANOVA to compare different times. Results : The resting BP was 132/68 mmHg. After attempts on the exercise Chest Press, BP was 141/66 mmHg; after the completion of the Leg Press, BP was 144/69 mmHg; after Back Row, it was obtained an average of 142/68 mmHg; and after the three exercises, BP was 136/71 mmHg. Conclusion : There was no significant elevation of resting BP to the time immediately after the attempts, and after the assessment (Chest Press: $p=0.7$; Leg press: $p=0.35$; Back Row: $p=0.58$). These findings showed that there was low risk of high BP in the 1RM assessment in these octogenarians. Keywords : 1RM, elderly, resistance training

PP26 C-091

EFFECT OF SIX WEEKS CIRCUIT HYDRAULIC RESISTANCE TRAINING ON OSTEOPOROTIC ELDERLY IN NEW TAIPEI CITY: A PRELIMINARY INVESTIGATION

Tsung-Ching LIN¹, Tzyy-Yuang SHIANG², Ming-Fang HSU³, Shu-Fen CHIU¹, Hsiu-Ling CHOU⁴ (1. Department of Physical Medicine and Rehabilitation, Far Eastern Memorial Hospital, Taiwan; 2. Graduate Institute of Exercise Science, National Taiwan Normal University, Taiwan; 3. Department of Healthcare Administration, Asia University, Taiwan; 4. Department of Nursing, Taipei Veterans General Hospital, Taiwan)

Introduction : Osteoporosis is a common health problem in elderly population. Kyphotic posture and decreased fitness are also often being found. Previous studies suggested that increased physical activity might be beneficial for the elderly. Hydraulic resistance circuit training is an effective, safety exercise for the elderly and we want to realize the training effect on osteoporotic elderly. Method : Ten participants (3 male and 7 female, Age: 77.89±7.72 year-old) were recruited from the rehabilitation clinics. They participate in a 18-hour (1hour/time, 3 times/week for 6weeks) exercise program with seven hydraulic resistance training equipment: chest press, leg abduction, arm curls, deltoid press, leg press, back press, and knee extension. Between each resistance training session, there was a stepping for subject to do aerobic stepping. The outcome measurements including: body composition and senior fitness tests. After six-week intervention, the serial evaluation was performed and using paired t-test to compare the difference and significant level was 0.05. Results : During the assessment after 6week training, the back muscle strength had a significant improvement ($t=2.521$, $p=0.036$), and the circumference of waist and hip were both decreased (decreased 2.71cm and 0.96cm respectively). After six weeks intervention, the physical fitness performance in back strength and body composition both had a significant improvement. Conclusion : If this safe and effective circuit hydraulic resistance training method can be promoted to community or more place, osteoporotic elderly were expected to gain more health physical fitness performance and independent. The cost of health care on osteoporosis may be decreased. Keywords : Exercise; Osteoporosis;

Fitness

PP26 C-092

RELATIONSHIP BETWEEN MUSCLE STRENGTH AND ACQUISITION OF NONWEIGHT-BEARING GAIT WITH AXILLARY CRUTCHES IN ELDERLY ORTHOPEDIC PATIENTS

Yoshitsugu OMORI¹, Shotaro SASAKI¹, Masuo SASA¹, Setsu IJIMA² (1. Dept. of Rehabilitation Medicine, St.Marianna University School of Medicine Yokohama City Seibu Hospital, Japan; 2. Graduate School of Comprehensive Human Sciences, University of Tsukuba, Japan)

Introduction : Nonweight-bearing gait (NWB) with axillary crutches is important method to ambulate in orthopedic patients. Although the functions of the upper extremities are important in supporting the body weight, little is known about the relationship between upper extremity muscle strength and NWB ability. The purpose of this study was to investigate the relationship between muscle strength and acquisition of NWB with axillary crutches in elderly orthopedic patients. Method : The subjects were eleven inpatients with musculoskeletal disorder of the one lower limb (mean age; 68.7±6.7 years). Isometric knee extension strength, grip strength and the safety of NWB ability with axillary crutches were evaluated. The safety of NWB ability was evaluated while the subjects were walking on 200m distance when a week after the beginning of physical therapy. The subjects were classified into two groups according to their NWB ability: those who were able to walk safely (Group1) and those who were unable to walk safely (Group2) when a week after the beginning of physical therapy. For analytic purpose, knee extension strength and grip strength/body mass ratio was calculated. Age, height, body mass index (BMI), knee extension strength and grip strength were analyzed. Results : The median of the grip strength in the Group1 (n=6) was 0.67±0.15 and Group2 (n=5) was 0.38±0.11 kgf/kg, respectively, showing significant difference ($p=0.01$). No differences were observed between groups for age, height, BMI, knee extension strength. Conclusion : There was a significant difference of grip strength by NWB ability with axillary crutches. Therefore, the grip strength is an important factor for determining the acquisition of NWB with axillary crutches. Keywords : axillary crutches, muscle strength, nonweight-bearing gait

PP26 C-093

SYSTEMATIC REVIEW OF TELEMEDICINE AND MOBILE HEALTH TECHNOLOGY FOR CHRONIC NON CANCER PAIN

Barrie RAIK¹, Xuefeng NI², Wei WANG¹, Usman RAZA¹, M. Cary REID¹ (1. Medicine/Geriatrics, Weill Cornell Medical College, USA; 2. VIP Health, Peking Union Medical College Hospital, China)

Introduction : Chronic pain is a major geriatric health problem usually treated with medication and non-pharmacologic modalities. Telemedicine involves using technology to communicate over space and time with providers and patients. Examples of uses: to teach pain management strategies through web-portals, using monitoring symptoms with mobile devices or using computer based systems for giving feedback. However, studies evaluating telemedicine for pain management remain inadequately defined. Method : A database search for articles with keywords: mobile health technology, telemedicine, hand held devices, chronic pain, adults, elderly was conducted. Citation abstracts were reviewed by two investigators. Eligibility criteria: English-language publication, evaluate mobile health technologies, adults with non-malignant pain. Exclusion criteria: review articles, online surveys, online discussion forums only. Studies

meeting criteria were abstracted and analyzed for 4 outcomes: feasibility, efficacy, patient acceptance, and health care utilization. Results : Identified 1317 articles, 35 of which met the inclusion criteria. 49% focused on internet training, the others on smartphone applications or videoconferencing. 66% were randomized trials. Mean sample size was 124 (6-593), average study duration 6 months (5 days-18 months), and mean subject age 47 (18-86). Most studied chronic musculoskeletal pain. 85% reported that telemedicine was effective in pain management or could effectively monitor symptoms. Patient satisfaction and pain relief were found in over half the studies. Conclusion : Studies of telemedicine in chronic pain are of fair quality and rarely include sufficient geriatric patients. Larger scale studies with well defined outcome measures are needed to confirm that these telemedicine techniques succeed in helping patients with chronic pain and their care providers. Keywords : Chronic pain, telemedicine, review, mobile technology

PP26 C-094

ASSOCIATION BETWEEN RELATIVE MUSCLE MASS AND FALL EFFICACY IN COMMUNITY-DWELLING ELDERLY

Hyoun-Joong KONG¹, Eunjin HWANG¹, Jeongeun KIM², Suk Wha KIM³, Jeeyoung HONG¹ (1. Biomedical Research Institute, Seoul National University Hospital, Korea; 2. College of Nursing, Seoul National University, Korea; 3. Department of Plastic Surgery, Seoul National University Hospital, Korea)

Introduction : Falls are common in frail older adults and often result in injuries and hospitalization. It is well known that the fall is affected by muscle weakness, gait disturbance, balance abnormality and so on. This study focused on associations among appendicular skeletal muscle index (ASMI), balance ability and fall efficacy in community-dwelling elderly to provide basic knowledge for preventing diseases related to falling. Method : Subjects were 94 low-income elders (30 males and 64 females) in the K district of Seoul whose average age was 74.11±7.10 years. After appendicular skeletal muscle mass (ASMM) was obtained through analyzing body composition by using dual-energy X-ray absorptiometry (DEXA), appendicular skeletal muscle index (ASMI) was calculated (ASMM/Weight₁₀₀) for those. Dynamic balance was measured using a foot and gait analyzer (Gateview AFA-50, alFOOTs, Seoul, Korea). For fall efficacy measures, the Korean Falls Efficacy Scales (FES-K) was used and the activity fall efficacy and the daily life falls efficacy were calculated. Pearson's correlation analysis between ASMI, balance and fall efficacy was done using SPSS-PC (version 18.0). The level of statistical significance was set for $\alpha=0.05$. Results : As a result of research, ASMI showed significant correlation with the activity fall efficacy ($r=0.302$, $p=0.003$) and the daily life falls efficacy ($r=0.362$, $p=0.000$), but failed to show significant correlation with sway velocity ($r=0.094$, $p=0.369$) and stability score ($r=-0.047$, $p=0.653$) related with balance. Conclusion : For community-dwelling elders, relative muscle mass was indicated to have association with fall efficacy. Hence, various researches for increase of muscle volume through exercise and diet are needed. Keywords : Community-Dwelling Elderly, Fall Efficacy, Appendicular Skeletal Muscle Index

PP26 C-095

CHARACTERISTICS OF SARCOPENIC PATIENTS IN GERIATRIC OUTPATIENTS CLINIC IN INDONESIA

Lazuardhi DWIPA, Muhamad APANDI (Internal Medicine, Hasan Sadikin General Teaching Hospital, Padjadjaran University, Indonesia)

Introduction : The epidemiologic nature of sarcopenia has been studied

in various countries and the prevalence of sarcopenia was found to be fairly substantial in both men and women, with the prevalence increasing rapidly with aging. But there has been no epidemiologic study concerning sarcopenia and its characteristics in Indonesia. Method : This is an epidemiological study which aims to describe the characteristics of geriatric patients with sarcopenia in outpatients of geriatric clinic in Hasan Sadikin General Teaching Hospital in Bandung, Indonesia that were taken between August to November 2012. Results : A total of 74 patients were evaluated consisted of 29 male (39%) and 45 female patients (60%) with an average age of 71.9 (± 6.15) years old. Sarcopenia was found in 26 patients (35%) with mostly women (76%). Nine patients (34.6%) were considered as Sarcopenic Obesity and 6 sarcopenic patients (23%) with low BMI. Most of sarcopenic patients had relatively good Activity Daily Life (ADL), relatively normal cognitive function and no depression but with mild sleeping problem. Based on dietary recall most of them were below appropriate daily intake with low intake of calcium and protein and had sedentary lifestyle. Among the sarcopenic patients osteoarthritis was the most common problem (57.7%). Conclusion : The incidence of sarcopenia is quite high and it should receive special attention, especially in the future to conduct an epidemiological study with a larger scale so that it can better describe the magnitude of the problem nationwide. Studies to develop intervention measures need to be done to address this problem. Keywords : Sarcopenia, Skeletal Muscle Index, Muscle strength, Sarcopenic Obesity, BMI

PP26 C-096

EFFECT OF TPN (TOTAL PARENTERAL NUTRITION) ENFORCEMENT ON THE LENGTH OF HOSPITAL STAY IN GERIATRIC ATHEROSCLEROTIC ARTERIAL DISEASE WITH ABOVE OR BELOW KNEE AMPUTATION

Young Woo CHUNG¹, Won Chae JANG², Sang Young CHUNG³, Soo Jin Na CHOP³, Kwang Ik JUNG⁴ (1. Orthopedic surgery, Jangsung Hyewon Hospital, Korea; 2. Cardiovascular Surgery, Jangsung Haewon Hospital, Korea; 3. Vascular Surgery, Chonnam National University Hospital, Korea; 4. Department Rehabilitation, Gwangju Veterans Hospital, Korea)

Introduction : Malnutrition increase the incidence of wound infection and complications, extend the length of hospital stay, and increase mortality. The geriatric patients with atherosclerotic arterial disease, may require amputation the knee joint. We tried to find out what correlation there is in the length of hospital stay after amputation and enforcement period in patients who underwent TPN in patients suffering from debilitating disease. Method : From January 2004 to December 2012, we analyzed retrospective review in geriatric atherosclerotic arterial disease with knee amputations in Chonnam National University Hospital. Pearson correlation using the Spearman two tail Test was performed. Results : Patient aged 65 to 74 years were 17, 75 to 84 years were 16 patients and four patients were over the age of 85. 20 patients amputated above the knee, 17 patients amputated below the knee. 8 patients didn't use TPN, 7 patients used TPN under 7 days, 11 patients used TPN from 7 days to 14 days, 2 patients 14 days~21 days, over 22 days were 3 patients. Positive correlation about hospital stay and applied period of TPN was maintained even in the presence of the of the disease corrected with age and associated disease but not affected by occurrence of complications. Conclusion : TPN (total parenteral nutrition) is needed in geriatric atherosclerotic arterial disease with above or below knee amputation, there is positive correlation between TPN applied period and hospitalization period after amputation, so we were able to verify that shortening the length of hospital stay by TPN enforcement therapy. Keywords : TPN (total parenteral nutrition), geriatric atherosclerosis, knee amputation

PP26 C-097

USEFULNESS OF SPAIR IMAGE, FRACTURE LINE AND THE ADJACENT DISCS CHANGE ON MAGNETIC RESONANCE IMAGE IN THE ACUTE OSTEOPOROTIC COMPRESSION FRACTURE

Sung Han OH (*Neurosurgical Department, Bundang Jaesaeng General Hospital, Korea*)

Introduction : Osteoporotic compression fracture is an increasing issue in this community. Although the T1-weighted and T2-weighted signal intensity including morphological changes have high specificity and sensitivity for the acute osteoporotic compression fractures, we added T2- Spectral Adiabatic Inversion Recovery (SPAIR) sequence for more clear delineation of this abnormality. Besides, we have branched out to evaluate the fracture line, “fluid sign” and adjacent discs change on magnetic resonance image. Method : Retrospectively, this study was conducted on 85 patients (120 fracture segments) who had been diagnosed with acute osteoporotic compression fracture. They all had been underwent MRI including T1WI, T2WI and T2-SPAIR image. Results : In this study, the incidence of high signal intensity on T2-SPAIR image was very high (0.9917). The “fluid sign” was seen in 56.7% on the SPAIR image. The fracture lines were more observed on the T2WI than T1WI (P=0.0062). The adjacent discs change on T2WI and T2-SPAIR image were higher than T1WI (P<0.001). Conclusion : T2-SPAIR image is very useful and gives additional information to detect the acute osteoporotic compression fractures. The “fluid sign” is another suggestive finding of the acute osteoporotic compression fractures when considered other studies 9,14). T2WI is more useful to find the fracture line. We thought T2WI is helpful to detect the location of fracture. Abnormal signal intensity on the adjacent discs may provide additional information for the acute osteoporotic compression fractures. We are studying to compare this result with infective and malignant fractures about fluid sign and adjacent discs changes on MRI. Keywords : Adjacent discs, Osteoporotic compression fracture , T2-SPAIR

PP26 C-098

GENE EXPRESSION PROFILE IN AGED MUSCLE ATROPHY MODEL

Ipppei YAMATO¹, Masaichi YAMAMURA¹, Takaaki KINOUE², Tomoichi OHKUBO³, Kayo YASUDA³, Masayuki TANAKA³, Hideki HAYASHI³, Michio TSUDA¹ (*1. Basic Medicine, Tokai University School of Medicine, Japan; 2. Basic Clinical Science and Public Health, Tokai University School of Medicine, Japan; 3. Education and Research Support Center, Tokai University School of Medicine, Japan*)

Introduction : Sarcopenia, muscle weight and strength decrease accompanying aging, affects quality of life of old people. Additionally, ailment, such as stroke or injuries, accelerates muscle atrophy, so it has been an important social issue in ageing society to prevent not only sarcopenia but muscle atrophy derived from diseases. In this study, we experimented on old rat model to simulate sarcopenia, and analyzed the gene expression profile in the model utilizing immobilization. Method : Male Fisher rats, young rats aged 20 weeks and older rats aged 80 weeks, were used in this study. 10days before the experiment day, right hind-limbs of all rats were immobilized in a plaster cast (left contra-lateral hind-limbs were analyzed as controls). On the experiment day, all rats were anesthetized and muscles (extensor digitorum longus muscle: EDL, and Soleus muscle: SM) were removed and weighed. Muscles were prepared by documented method and were analyzed for gene expression pattern difference on DNA arrays (Agilent Technology Inc.). Results : 10days immobilization resulted in

significant decrease of muscles weight in right (immobilized) muscles. This was more pronounced in SM than in EDL. This was also observed in DNA array analysis. Conclusion : The results were of great interest to find further solution of prevention of disuse and sarcopenia in the elderly. Keywords : sarcopenia, disuse atrophy, immobilization, gene expression

PP26 C-099

INFLUENCE OF WHITE MATTER HYPERINTENSITIES ON PRESENT AND FUTURE COGNITION: 3-YEAR FOLLOW-UP STUDY OF WHITE MATTER HYPERINTENSITIES IN COMMUNITY-DWELLING ELDERLY KOREANS

Chang In LEE¹, Joon Hyuk PARK¹, Ki Woong KIM² (*1. Department of Psychiatry, Jeju National University Hospital, Korea; 2. Department of Psychiatry, Seoul National University Bundang Hospital, Korea*)

Introduction : The purposes of this study were to investigate influence of white matter hyperintensities (WMH) volume on neurocognitive function in the baseline and the 3-year follow-up study. Method : 228 subjects were recruited among community-dwelling elderly Koreans in baseline study. Diagnostic assessment using Mini International Neuropsychiatric Inventory (MINI), neurocognitive test using CERAD-K Neuropsychological Assessment Battery, and brain magnetic resonance imaging (MRI) were conducted. WMH was rated by the modified Fazekas scale and the volume of WMH was also calculated by an automated quantification method. Subjects were classified as having WMH(+) if they had a score of 2 or more on either deep white matter hyperintensities or subcortical gray matter ratings. Results : 122 subjects participated in the baseline study (response rate: 53.5%) and 54 subjects were followed up in the 3-year follow-up study (follow-up rate: 53.5%). The frequency of WMH(+) was 38.5% and the mean volume of WMH was 11.3±11.3 mL in baseline study. For 3 years, the change of WMH volume was 2.4±3.2 mL. Log WMH volume (OR=5.78, 95 CI=1.04-31.72) in the baseline study was associated with poor performances on Boston naming test (p=0.015, ANOVA) and Korean version of Mini-Mental State Examination (MMSE-KC) (p=0.048, ANOVA) in the baseline study, and on Boston naming test (p=0.037, ANOVA) in the 3-year follow-up study. Conclusion : WMH is a crucial predictor for future present and future cognitive dysfunctions in parallel with the concept of subcortical dementia. Keywords : white matter hyperintensities, cognition

PP26 C-100

COMORBIDITY AND SOCIOECONOMIC RISK FACTORS FOR COGNITIVE DISORDERS IN LATER LIFE

Gabriel Ioan PRADA¹, Ioana ALEXA², Raluca NACU¹, Eliza TAPELEA¹, Speranta PRADA¹, Bogdan PALTINEANU¹, Irina IGNAT¹, Ioana FITA¹ (*1. Clinical Department, 'Ana Aslan' National Institute of Gerontology and Geriatrics, Romania; 2. Clinical Department of Geriatrics, 'Gr. T. Popa' University of Medicine and Pharmacy, Romania*)

Introduction : We evaluated influence of comorbidity and socioeconomic factors upon cognitive disorders in older people. Method : 1163 older patients consecutively admitted to our clinics between 2008 and 2012 were investigated. Gender distribution: 68% women, 32% men; age range 65 to 95, mean age 80 years. The sample was divided into three age groups: young-old (65-74 years), old-old (75-84 years) and very old (85-95 years). Parameters followed up: gender, age, level of education, place of residence (urban/rural), household income, marital status, comorbidity, cognitive function at admission. Three tests were used for screening cognitive disorders:

Mini Mental Status Examination (MMSE), Clock Drawing Test and Five Words Test. Results : We considered two cognitive disorders: mild cognitive impairment (MCI) and dementia. Higher risk of MCI in men than women: Odds Ratio 1.47. Adjusting for age and education Odds Ratio was higher 1.67, adjusting for marital status Odds Ratio was 1.71 in favor of men. Adjusting for disease burden we obtained 1.54 in favor of men. Higher risk of dementia for women, Odds Ratio 1.61. Adjusting for age and education Odds Ratio increased to 2.2 in favor of women; adjusting for marital status value decreased to 1.3. Adjusting for comorbidity, risk of developing dementia in women as compared to men was 1.9. Odds of having dementia was higher in rural as compared to urban patients 1.3. Conclusion : Risk of MCI was higher in men, with low education and without spouse. Risk of dementia was higher in women, with lower education and higher comorbidity and from rural area. Keywords : cognitive disorders, socioeconomic factors, comorbidity

PP26 C-101

THE ASSOCIATION OF ALCOHOL CONSUMPTION WITH VERBAL AND VISUOSPATIAL MEMORY IN OLDER ADULTS

Haewon BYEON¹, Yunhwan LEE², Soon Young LEE³, Kang Soo LEE⁴, So Young MOON⁵, Hyanghee KIM⁶, Chang Hyung HONG⁷, Sang Joon SON⁸, Seong Hye CHOI⁹ (1. Dept. of Speech-Language Pathology & Audiology, Nambu University, Korea; 2. Department of Preventive Medicine and Public Health; Institute on Aging, Ajou University School of Medicine, Korea; 3. Department of Preventive Medicine and Public Health, Ajou University School of Medicine, Korea; 4. Department of Psychiatry, CHA Kangnam Medical Center; CHA University School of Medicine, Korea; 5. Department of Neurology; Institute on Aging, Ajou University School of Medicine, Korea; 6. Graduate Program in Speech-Language Pathology; Department of Rehabilitation Medicine, Yonsei University College of Medicine, Korea; 7. Department of Psychiatry; Institute on Aging, Ajou University School of Medicine, Korea; 8. Department of Psychiatry, Myongji Hospital, Kwandong University College of Medicine, Korea; 9. Department of Neurology, Inha University School of Medicine, Korea)

Introduction : The purpose of this study was to examine the association of alcohol consumption with verbal memory and visuospatial memory in older Koreans. Method : The subjects were 1,572 aged persons (489 male, 1,083 female) of aged 60 to 90 years who participated in the Clinical Research Center for Dementia of South Korea, who completed the neuropsychological assessment and health survey between May 2008 and April 2012. Alcohol consumption was classified as abstainer, mild to moderate drinker (1-7 drinks/week), and heavy drinker (≥ 8 drinks/week). Measurements for verbal memory included immediate recalls, delayed recall, and recognition from the Seoul Verbal Learning Test, while visuospatial memory included the Rey Complex Figure Test. Memory impairment was defined as less than 16 percentile (-1 standard deviation) on the delayed recall performance for each memory. Hierarchical logistic regression analysis was used to examine the association of drinking status and memory impairment. Results : Adjusting for covariates (age, sex, education years, family history of dementia, depression, baseline Mini-Mental State Examination score, smoking, exercise, high density lipoprotein cholesterol, hypertension, diabetes mellitus and stroke), moderate drinking was independently associated with a lower likelihood of verbal memory impairment (OR=0.65, 95% CI: 0.48-0.88). No significant association, however, was observed between alcohol consumption and visuospatial memory impairment. Conclusion : These findings may suggest the possibility that light to

moderate alcohol consumption in the elderly would reduce the risk of verbal memory impairment. A longitudinal study is warranted to empirically investigate the causal relationship between drinking habit and memory impairment in the elderly. Keywords : alcohol consumption, verbal memory, visuospatial memory

PP26 C-102

IMPROVEMENT OF WORKING MEMORY BY BI-FRONTAL TRANSCRANIAL DC STIMULATION IN HEALTHY OLDER ADULTS

Sang-Hee LEE, Gi-wook KIM, Kang-Won KIM, Yun-Gyu SONG, Sung-Hee PARK, Jeong-Hwan SEO, Myoung-Hwan KO (Department of Physical Medicine and Rehabilitation, Research Institute of Clinical Medicine of Chonbuk National University - Biomedical Research Institute of Chonbuk National University Hospital, Korea)

Introduction : Noninvasive transcranial direct current stimulation (tDCS) can modulate the cortical excitability and has been applied for improvement of brain functions. We investigated the effects of dual bi-frontal tDCS in healthy older adults aged more than 65 years by means of verbal and visual working memory tasks. Method : Forty-two healthy older adults (14 males, 28 females, and 65~78 years old) were enrolled in this study. They were randomly divided into three groups; bi-frontal, left unilateral frontal, and sham. Subjects underwent anodal tDCS over bilateral prefrontal cortex (F3, F4 in 10-20 EEG system) or anodal tDCS over left prefrontal cortex (F3), or sham. DC was delivered for 30 minute at 2 mA with 25 cm²saline-soaked sponge electrodes. Cathode electrode was applied on left arm. Before and after tDCS, subjects were performed 2-back verbal working memory and visuospatial memory tasks. The improvement rate of the accuracy and the reaction time were analyzed. Results : After bilateral prefrontal stimulation, accuracy of the verbal WM increased (pre-stimulation: 51.5 \pm 11.9, post-stimulation: 60.4 \pm 11.1, P=0.003), whereas after unilateral prefrontal stimulation, accuracy of the verbal WM increased (pre-stimulation: 50.2 \pm 10.8, post-stimulation: 57.0 \pm 10.8, P=0.002) and after sham tDCS it remained unchanged (pre-stimulation: 49.2 \pm 9.1, post-stimulation: 45.4 \pm 8.9, P=0.08). The response time was not significantly improved in the three conditions. In visuospatial WM tasks, accuracy and response time were not significantly improved in bilateral, unilateral, sham stimulation conditions. Conclusion : We suggest that tDC-induced changes in prefrontal excitability have beneficial effects to improve the age-related cognitive impairment in healthy elderly population. Keywords : Working Memory, Bi-frontal Transcranial DC Stimulation, Healthy Older Adults

PP26 C-103

THE TREATMENT OF AGE- ASSOCIATED MEMORY IMPAIRMENT IN 168 CASES AND DEMENTIA IN 136 CASES WITH THE REINHARDT AND SEA CUCUMBER PART IAAMI

Yongxing MA, Chuanfu WANG, Yue-Di GU (Department of Aging, Antiaging and Cognitive Function, Shanghai Institute of Gerontology and Geriatrics, Affiliated Huadong Hospital, Shanghai Medical College, Fudan University, China)

Introduction : To observe the efficacy of Reinhardt and Sea Cucumber Capsule (R.S.C.£Sea animal products) in treatment of Age-Associated Memory Impairment(AAMI). Method : Double blind trial were performed in 168 cases of AAMI in the aged and preaged with MQ£90(WMS).The dosage of R. S.C. and placebo were all 4 capsules(0.28g£Øcap)tid for 3 months. The effect were evaluated with MQ(WMS). Results : The mean value of MQ (WMS) before and after treatment were 81.35 \pm 7.51 and 90.64 \pm 8.98(P£0.001) in 83 cases

treated with R.S.C. and 84.34±6.80 and 88.60±7.40 (P<0.001) in 85 cases in placebo group respectively. significant difference of mean value of MQ increment between R.S.C. 9.30±6.46 and placebo 4.31±5.29 (t=5.49, P<0.01) were observed. The total effective rate of the R.S.C. and placebo were 62.65% and 23.53% respectively (P<0.001). No significant side effects were observed. Conclusion: R.S.C. is rather effective and safe to improve memory and cognitive function in the elderly. Key words: Reinhardt and Sea Cucumber Capsule (R.S.C.). Keywords: Age-Associated Memory Impairment (AAMI) Aged

PP26 C-104

AGING CHANGES OF MEMORY AND COGNITIVE FUNCTION IN 3234 COHORT 65-98 YEARS SUBJECTS

Yongxing MA, Yue ZHU, Qingwei RUAN, Pei-Fang LU, Zhanshun WANG (Department of Aging, Antiaging and Cognitive Function, Shanghai Institute of Gerontology and Geriatrics, Affiliated Huadong Hospital, Shanghai Medical College, Fudan University, China)

Introduction: To study the "Physiological" and "total" aging changes of memory (MQ) and cognitive function (MMSE) in the presaged young old (65-74 years old) and old-old (75-98 years old) in 3234 cohort persons in the aged. Method: To survey the MQ(WMS) and MMSE in 3234 cohort object of various age groups (2666≥65 years old; 1741≥75), and divided the whole objects as normal cognitive function (MQ≥100, MMSE 28-30; 867 persons), AAMI (MQ<100, MMSE 28-30; 860 persons); MCI (MQ<100, MMSE 24-27; 782); dementia (MQ<100, MMSE≤23; 157). To observe the "physiological" (NCF 867+AAMI 860=1727) and "total" population (NCF 867+AAMI 860+MCI 782=2509) memory (WMS) and cognitive (MMSE) aging changes excluding dementia. Results: WMS in "physiological" group: mean performance score of various aged groups ranged 83.54±15.05~82.12±13.74, MQ 99.01±13.05~98.05±12.64. WMS in "whole" group: mean performance score of various aged groups is lower than that in "physiological" group by 7.5. MMSE: All the median of various aged group is 29, higher than that of "whole" group 28. We defined the abnormal cutting point of various aged group as the "MMSE total score -1.5SD" in the group in order to distinct the MCI (MMSE 24-27) from normal cognitive function with MMSE 28-30. The results of this calculation in various aged groups indicated that the cutting points of MMSE in distinction from NCF is ≤27. The significant aging decline changes in memory and cognitive function was observed. The WMS value in "physiological" group may be consider as the normal reference value in various age group of the old-old and longevous. It is suggested that the WMS criterion for AAMI may be defined as performance < 83.5. MQ < 100. MMSE total score ≤ 27 may be considered as the abnormal value in distinction from NCF, and MMSE ≤ 23 as cutting point for dementia. Keywords: MMSE, memory function, cognitive function

PP26 C-105

AVAILABLE TREATMENT IN DEMENTIA: OUR EXPERIENCE IN USING COMBINED THERAPY WITH CHOLINESTERASE INHIBITORS AND MEMANTINE

Andreea ZAMFIRESCU¹, Ana CAPISIZU², Sorina Maria AURELIAN³, Ioana OMER⁴, Ana Maria STROIE⁵, Aurel ROMILA⁶ (1. Clinic of Geriatrics, Hospital for Chronic Diseases 'Sf. Luca', Bucharest, Romania, Romania; 2. Clinic of Geriatrics, University of Medicine and Pharmacy 'Carol Davila', Romania; 3. Geriatrics and Gerontology, University 'Titu Maiorescu', Romania; 4. Psychology, 'Sf. Luca' Chronic Diseases Hospital, Romania; 5. Geriatrics, Hopitalier Bretagne Atlantique, France; 6. Psychiatry,

University of Medicine and Pharmacy 'Carol Davila', Romania)

Introduction: Dementia is one of the most important health challenges facing aging populations worldwide. Lately failure of new generation drugs in phase 3 clinical trials, reveal us the need to optimize the use of existing treatment: cholinesterase inhibitors (ACEI) and memantine. Our aim was to identify the characteristics of patients and disease (stage and type of dementia) that might be associated with a better response to existing therapy. Method: A randomized prospective study was conducted including 203 participants diagnosed with Alzheimer's disease (AD), vascular (VaD) or mixed dementia, divided in 4 groups: treated with ACEI (48), memantine (20), combined therapy with cholinesterase inhibitors and memantine (67) and no specific medication (68). Cognitive evaluation included baseline: MMSE, Clock Drawing Test, GDS (Global Deterioration Test, Reisberg), R-ACER (Romanian version of Adenbrooke's Cognitive Evaluation Revised), ADL/IADL (Activities of Daily Living / instrumental ADL), NPI (neuropsychiatric inventory). Follow up for 18 months consisted in re-evaluations at each 3 months. Results: The group that received combined therapy with cholinesterase inhibitors and memantine (33% of participants) consisted mainly in patients with moderate to severe dementia and had better mean evolution for cognitive tests (MMSE, R-ACER) than both single therapy groups, whereas compared to the placebo group it had a statistical power (p<0.001). Significant changes were also obtained in ADL and in reducing agitation in the groups with single memantine or combined therapy. Conclusion: In patients with moderate to severe AD receiving combined treatment with a cholinesterase inhibitors and memantine, we found better outcomes on cognition, behavior and activities of daily livings. Keywords: dementia, cholinesterase inhibitors, memantine.

PP26 C-106

COGNITIVE EFFECTIVENESS OF THE COMBINATION OF MEMANTINE PLUS VITAMIN D IN PATIENTS WITH ALZHEIMER DISEASE

Cedric ANNWEILER¹, Francois R HERRMANN², Bruno FANTINO¹, Bernard BRUGG³, Olivier BEAUCHET¹ (1. Neuroscience and Geriatrics, Angers University Hospital, France; 2. Geriatrics, Geneva University Hospitals, Switzerland; 3. UMR 7102 NPA, UPMC Universite Paris 6, France)

Introduction: Cognitive decline in Alzheimer disease (AD) is temporarily delayed by memantine, thereby highlighting only partial neuroprotection. Our objective was to determine whether the use of memantine combined with vitamin D, a steroid hormone showing neuroprotective properties, could be more effective than the use of memantine alone or vitamin D alone on cognitive performance in older patients with AD. Method: Forty-three Caucasian outpatients (mean, 84.7±6.3 years; 34.9% male) free of anti-dementia drugs and vitamin D supplements, with a de novo diagnosis of AD, were prescribed either memantine alone (n=18), vitamin D alone (n=17), or memantine plus vitamin D (n=8) for 6 months on average. Cognitive change was assessed using MMSE. Age, gender, baseline MMSE score and duration of treatment were used as covariables. Results: Groups were comparable at baseline. The increase in MMSE score of +4.0±3.7 points amongst participants using memantine+vitamin D was higher than amongst participants using memantine alone (0.0±1.8 points, P=0.011) or vitamin D alone (-0.6±3.1 points, P=0.009). Using memantine+vitamin D was associated with an improvement of MMSE score when compared to the participants using memantine alone (adjusted=-3.89, P=0.009) or those using vitamin D alone (adjusted=-4.77, P=0.002). The mixed regression showed a

significant interaction of visit*memantine plus vitamin D treatment (P=0.001) compared to the use of vitamin D only or memantine only. Conclusion : The combination of memantine plus vitamin D in AD patients was associated with a statistically and clinically relevant gain in cognition after 6 months of treatment, underlining synergic beneficial effects of the combination of memantine plus vitamin D. Keywords : Alzheimer's disease; treatment; memantine; vitamin D; neuroendocrinology; older adults

PP26 C-107

DERIVATION AND VALIDATION OF A SHORT FORM OF THE MINI-MENTAL STATE EXAMINATION (SMMSE) FOR THE SCREENING OF DEMENTIA IN OLDER ADULTS WITH A MEMORY COMPLAINT

Cedric ANNWEILER¹, Gladys HAUBOIS², Laure DE DECKER³, Cyrille LAUNAY², Gilles ALLALI⁴, Olivier BEAUCHET¹
(1. Neuroscience and Geriatrics, Angers University Hospital, France; 2. Geriatrics, Angers University Hospital, France; 3. Geriatrics, Nantes University Hospital, France; 4. Neurology, Geneva University Hospitals, Switzerland)

Introduction : Early detection of dementia is recommended in older adults but is faced in clinical practice with the length and complexity of current neuropsychological tools. Our aim was to validate a Short form of the Mini-Mental State Examination (SMMSE) as a screening test for dementia in older ambulatory individuals followed in a memory clinic for a memory complaint. Method : A total of 202 cognitively healthy individuals, 100 with Mild Cognitive Impairment and 304 with dementia visiting a memory clinic for a memory complaint were prospectively included in this cross-sectional study. They were randomized into derivation (n=303) and validation (n=303) groups. The SMMSE score was built from 6 memory items of MMSE, with a score ranging from 0 to 6 (i.e., best performance). Results : The ROC curve showed an AUC of 0.98 for the derivation group and 0.97 for the validation group without differences between curves (P=0.254). The cut-off between sensitivity and specificity of SMMSE score for clinically diagnosed dementia was ≤4. SMMSE performance for the diagnosis of dementia was high in derivation and validation groups, respectively sensitivity at 93.1% and 93.8 %, specificity at 93.8% and 90.5%, PPV at 94.3% and 90.1%, NPV at 92.5% and 94.0%, likelihood ratio of positive test at 14.9 and 9.8, and of negative test at 0.07 and 0.07. Conclusion : SMMSE was a good screening test for dementia in older individuals followed in memory clinic for a memory complaint. The next step should be the confirmation of its discriminative value in older primary care patients. Keywords : Short form of MMSE; memory complaint; screening; dementia; derivation/validation; older adults

PP26 C-108

XYLOCOSIDE G REDUCES AMYLOID-β INDUCED NEUROTOXICITY THROUGH INHIBITING NF-κB SIGNALING PATHWAY

Dehua CHUI¹, Yan YU², Pengfei TO³, Liying PIAO⁴
(1. Neuroscience Research Institute & Department of Neurology, Third Hospital, Peking University, China; 2. Neuroscience Research Institute & Department of Neurobiology, Health Science Center, Peking University, China; 3. The State Key Laboratory of Natural and Biomimetic Drugs, Health Science Center, Peking University, China; 4. Neurobiology & neurology & Neuroscience research Institute, Health Science Center, Peking University, China)

Introduction : Amyloid-_β (A_β) peptide, which can invoke a cascade of inflammatory responses, is considered to play a causal role in the

development and progress of Alzheimer's disease (AD). Xylocoside G (XG) is an active compound isolated from a traditional Chinese medicinal plant, *Itoa orientalis*. Method : We have previously reported that XG has neuroprotective effects, of which the mechanism is yet unknown. In this study, we investigated the possible mechanisms underlying neuroprotection of XG against A_β-induced toxicity in SH-SY5Y cells and primary neurons. Pretreatment with XG significantly attenuated the cell viability reduction induced by A_β exposure in a dose dependent manner which was testified by 3-[4, 5-Dimethylthiazol-2-yl]-2, 5-diphenyltetrazolium bromide (MTT) and Lactate dehydrogenase (LDH) release assay. In addition, pretreatment with XG countered the effect of A_β on Bax and Bcl-2 expression and repressed A_β-induced caspase-3 activation, suggesting that the neuroprotective effect of XG is associated with apoptosis regulation. Results : Neuroinflammation has been implicated in A_β-induced neuronal death. XG significantly attenuated A_β-stimulated release of inflammatory factors such as tumor necrosis factor-_α (TNF-_α), interleukin-1_β (IL-1_β) and prostaglandin E₂ (PGE₂). It also downregulated the expression of cyclooxygenase-2 (COX-2) in SH-SY5Y cells. Further molecular mechanism studies demonstrated that XG inhibited A_β-induced NF-_κB p65 translocation, which was probably the result of inhibition of JNK phosphorylation but not ERK or p38 MAPK pathway by XG. Conclusion : This is the first study to demonstrate that XG protects SH-SY5Y cells against A_β-induced inflammation and apoptosis through down-regulating NF-_κB signaling pathways. Keywords : Xylocoside G (XG); Amyloid-_β (A_β); NF-_κB

PP26 C-109

MAGNESIUM MODULATES AMYLOID-BETA PRECURSOR PROTEIN TRAFFICKING AND PROCESSING

Dehua CHUI¹, Jia YU², Liying PIAO³, Guosong LIU⁴
(1. Neuroscience Research Institute, Department of Neurology, Peking University Third Hospital, Health Science Center, Peking University, China; 2. Neuroscience Research Institute, Department of Neurobiology, Health Science Center, Peking University, China; 3. Neurobiology, Neurology and Neuroscience Research Institute, Health Science Center, Peking University, China; 4. Tsinghua-Peking Center for Life Sciences, School of Medicine, Tsinghua University, Beijing, China)

Introduction : Alzheimer's disease (AD), the most common form of dementia, is characterized by the presence of excessive deposits of aggregated amyloid-_β (A_β), which is derived from the amyloid-_β precursor protein (A_βPP) following processing by α - and γ -secretase. Metal elements are implicated in the pathophysiology of AD. Magnesium affects many biochemical mechanisms vital for neuronal properties and synaptic plasticity, and magnesium levels were reported decreased in various tissues including brain of AD patients. However, the exact role of magnesium in the neurodegenerative process of AD remains elusive. Method : In this study, we investigated the effects of physiological (0.8 mM, as normal control), low (0-0.4 mM), and high (1.2-4.0 mM) concentration of extracellular magnesium ([Mg²⁺]_o) on APP processing and A_β secretion. Results : We show the effects of varying [Mg²⁺]_o on APP processing is time- and dose-dependent. After 24 hr treatment, high [Mg²⁺]_o increased C-terminal fragment- α (CTF) level and soluble α -secretase cleaved APP (sAPP- α) release via enhancing retention of APP on plasma membrane. In contrast, low [Mg²⁺]_o enhanced CTF- β accumulation and A β secretion, and reduced cell surface APP level. Varying [Mg²⁺]_o did not alter protein contents of full length APP (flAPP). However, decreased total intracellular magnesium level by magnesium deprivation over 24 hr impaired cell viability. Normal APP processing could be restored when magnesium was adjusted back to physiological

concentration. Conclusion : These data demonstrate that APP processing can be modulated by magnesium and at high [Mg²⁺]_o, APP processing favors alpha-secretase cleavage pathway. Our findings suggest that supplementation of magnesium has a therapeutic potential for preventing AD. Keywords : Alzheimer's disease (AD); magnesium; amyloid-beta precursor protein (APP)

PP26 C-110

VITAMIN D DEFICIENCY AND COGNITIVE FUNCTION

Christophe GRAF¹, Cecile ROSSI¹, Sandra GIANNELLI¹, Francois R. HERRMANN², Dina ZEKRY¹ (1. Geriatrics, Geneva University, Switzerland; 2. Geriatrics Department, Geneva University Hospitals, Switzerland)

Introduction : The understanding of the role of vitamin D in maintaining good health has considerably increased in the recent years. There is a growing evidence that vitamin D has not only a beneficial effect to prevent osteoporosis and the risk of falls in the elderly, but also may reduce incidence of cancers, infections, autoimmune, cardiovascular and neurologic diseases. In addition, there is ample biological evidence to suggest an important role for vitamin D in brain development and function. However, the observational studies conducted in humans are still inconclusive, given the different assessment to diagnose cognitive impairment that have been used, most of them were cross-sectional, and did not take into account confounding factors. Method : The aim of this prospective study is to examine the association between 25-hydroxyvitamin D (25(OH)D) levels and cognitive performance in Alzheimer's disease, vascular and mixed dementia (Alzheimer's disease plus vascular). A comprehensive standardized neuropsychological battery was carried out by the same neuropsychologist at least one week after inclusion, with formal clinical criteria used to determine the etiology and severity of clinical dementia 15. Cerebral imaging was also carried out. Results : Data come from a previous study with a yearly follow-up concerning 431 patients randomly selected (mean age: 85 years; 74% female), and discharged from the acute geriatric unit of Geneva University Hospitals. The prospective design allows to examine the predictive value of 25(OH)D on mild cognitive impairment conversion to dementia. Conclusion : The clinical implication of this study could lead to important new possibilities for treatment and prevention. Keywords : vitamin D, dementia, MCI

PP26 C-111

PROSPECTIVE SURVEILLANCE DATA OF HUMAN PRION DISEASE IN CHUGOKU AND SHIKOKU REGION IN JAPAN

Kota SATO, Yoshio IKEDA, Koji ABE (Neurology, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Japan)

Introduction : Genetic prion diseases in Japan were reported to have a characteristic distribution of phenotypes, which was quite different from that of Western countries. Especially in Chugoku and Shikoku region in west Japan, there is a great frequency of genetic prion disease with PRNP mutations at codon of V180I (71.4% of all genetic prion diseases in these regions). Our aim is to compare the clinical features of the genetic prion disease with V180I mutation and sporadic prion disease in these regions based on the Japanese prion surveillance data. Method : From April 1999 to February 2011, 134 patients with sporadic prion diseases and 28 patients with genetic prion diseases were registered in these regions. All sporadic prion diseases and genetic prion disease with V180I mutation were analyzed for their clinical features, including onset age, resident area, frequencies of symptoms, 14-3-3 protein, PSWC of EEG, and abnormal hyper

intensity of MRI. Results : The frequency of V180I mutation in these regions was 71.4%, and it is significantly larger than that of Japan. Patients with V180I mutations were significantly higher age of onset (78±7 y.o.) than sporadic prion disease (p<0.01, 69±11 y.o.), and had tendencies of low frequency of myoclonus (55% vs 80%), elevation of 14-3-3 protein in CSF (60% vs 82%), and PSWC of EEG (0% vs 70%), and high frequency of HIA in DWI (100% vs 73%). Conclusion: The profiles of genetic prion diseases in Chugoku and Shikoku regions were different from the rest region in Japan. Especially patients with V180I mutation dominated in genetic prion disease. Keywords: Creutzfeldt-Jakob disease, Genetic prion diseases

PP26 C-112

TELEPHONE CONSULTATIONS IN A DEMENTIA DIAGNOSIS AND TREATMENT UNIT

Maria Isabel FORT, Begona BODEGAS, Francisco Javier AFONSO, Milagrosa BLANCA, Anna FERRE, Anna MAS, Lourdes ISPIERTO (Dementia Unit, Badalona Serveis Assistencials, Spain)

Introduction : The Dementia Unit, Badalona Serveis Assistencials is a reference unit for the diagnosis and treatment of dementia in patients of all ages. The aim of this study was to determine the characteristics of telephone consultation and its utility in the assessment and resolution of clinical problems without attendance at the unit. Method : We recorded all calls answered by a nurse specializing in dementia for one year. The number of calls, the reason, the caller, the age, the patient's diagnosis and the intervention carried out were collected. Patients aged >80 years and <80 years were compared. Data analysis was performed with SPSS Win15.0. Results : There were 576 calls from 347 patients with a mean age of 81.2 years (range 42-99), of whom 210(63.5%) were female. 368(63.9%) calls were made by patients' children and 83(14.4%) by a partner. 162(28.1%) had Alzheimer disease, 118(20.5%) mild cognitive impairment and 107(18.6%) vascular dementia. 178(30.9%) calls were due to psychiatric symptoms or behavioural disorders, 150(26.0%) for other clinical problems and 154(26.7%) for information and advice. The intervention included pharmacological treatment in 215(37.3%) cases and counselling and information in 125(21.7%). In patients aged >80 years, there were a higher proportion of females, calls from patients' children, Alzheimer disease, clinical problems and a greater need for treatment adjustment. Conclusion : Psychiatric symptoms and behavioural disorders were the most common cause of telephone consultations, which are of utility in providing advice and resolving clinical problems. There were differences in the reason for calling and the intervention made according to age. Keywords : Telephone. Dementia. Ageing

PP26 C-113

PREVALENCE OF VASCULAR RISK FACTORS IN HISPANICS WITH FAMILIAL ALZHEIMER'S DISEASE

Martin MEDRANO¹, Juanly RODRIGUEZ¹, Massiel PAULINO¹, Bienvenido VERAS² (1. School of Medicine, Pontificia Universidad Catolica Madre y Maestra, Dominican Rep; 2. Bioestadística, Hospital Universitario Jose Ma Cabral y Baez, Dominican Rep)

Introduction : APOE-4 is the principal genetic risk factor for those with Alzheimer's Disease (AD), both familial as well as sporadic, which occurs at life's end. Cardio and vascular diseases appear to be associated with an increased risk of AD. To determine the proportion of patients with AD who also have some type of vascular risk factor, such as Arterial Hypertension (AHT), Hypercholesterolemia, Diabetes mellitus type 2 (DM2), and an addiction to tobacco, we used the data base from the Familial Study of Genetic Influence on Alzheimer's

(EFIGA in Spanish), a population-based familial genetic study. Method : Hispanic families from the Dominican Republic and Puerto Rico in which two or more living members have AD were studied. The protocol included: clinical history, medical and neurological examinations, risk-factors interview, neuropsychological test, and APOE genotype test. A Diagnostic Consensus was conducted using NINCDS-ADRDA Alzheimer's criteria. The chi-squared statistical test was used to analyze the data. Results : 1,253 participants were evaluated; 411 (32.8%), were males and 842 (67.2%) females. AHT appeared in 703 of the participants (1%), the odds ratio (OR) was 1.28 (P: 0.6); addiction to tobacco appeared in 251 (20.0%), OR 0.20 (P: 0.3); DM2 appeared in 199 (16%), OR 0.19 (p: 0.2), and Hypercholesterolemia in 75 (6%), OR 0.06 (P: 0.1). Conclusion : In the EFIGA, participants with AHT were found associated with AD, but without statistical significance. Keywords : Alzheimer's Vascular risk

PP26 C-114

EFFECTS OF COSMETIC THERAPY ON SLEEP/WAKE PATTERNS, COGNITIVE FUNCTION, AND PHYSICAL FUNCTION OF FRAIL ELDERLY WOMEN WITH DEMENTIA

Masae TSUTSUMI¹, Toshio KOBAYASHI², Hiroshi NOGAKI¹, Sumie TOMEHATA¹ (1. Graduate School of Medicine, Yamaguchi University, Japan; 2. Graduate School of Biomedical & Health Sciences, Hiroshima University, Japan)

Introduction : Frail elderly women with dementia sometimes lose interest in their appearance. This tendency may cause the reduction of their self-esteem and sociability, and make their life rhythm worse and decrease mental/physical well-being. In this study, we examined effects of cosmetic therapy on sleep/wake patterns, cognitive function, and physical function of frail elderly women with dementia. Method : We investigated four elderly women (aged 73-87 years) who stayed in a long-term care facility located in a prefecture in western Japan. After the agreement to participate in the study was obtained, their sleep/wake patterns were recorded in a sleep log for 10 days by nurses and care workers. For the following 10 days, cosmetic therapy was implemented every day, and sleep/wake patterns were also recorded. We compared their cognitive and physical function examined before and after the implementation. Results : There were no significant changes in sleep/wake parameters such as total sleeping hours, nighttime awakening hours, and daytime awakening hours. However, in the intervention period, their wake-up time tended to be stabilized. Cognitive function was improved in three subjects (from 9 to 14 and from 6 to 10 in HDS-R, from 29 to 33 in NM scale), and physical function was improved in one subject (from 40 to 65 in Barthel Index). These effects were obviously seen in the subjects who showed positive attitude to the cosmetic therapy. Conclusion : These findings indicated that there were some positive effects of cosmetic therapy on life rhythm and mental/physical well-being of frail elderly women with dementia. Keywords : cosmetic therapy, dementia

PP26 C-115

NUTRITIONAL STATUS BY SEVERITY OF DEMENTIA IN KOREAN LONG-TERM CARE FACILITIES

Myonghwa PARK, Sungjin KIM (College of Nursing, Chungnam National University, Korea)

Introduction : The purpose of this study was to evaluate nutritional status by severity of dementia in Korean long-term care facilities. Method : The secondary data analysis was conducted. Subjects were 3,469 elderly with dementia aged 60 years and older who completed Nationwide Survey on Dementia Care in Korea (NaSDeCK). The

demographical and disease related characteristics and nutritional status of participants were analyzed using ANOVA, χ^2 tests and multiple regression analysis. Results : The severity of dementia was categorized into four different levels according to MMSE-DS score. Severe, moderate, mild and very mild dementia were identified in 1,784 (51.4%), 838 (24.2%), 492 (14.2%), 355(10.2%) of the participants respectively. Using MNA classification, 238 (6.9%) participants of this study fulfilled the criteria of being well-nourished, 1,898 (54.7%) were at risk of malnutrition and 1,333(38.4%) were classified as malnourished. The patients with severe dementia scored significantly lower in both total score and subtotal scores of MNA than patients with moderate, mild and very mild dementia. Number of disability, health related quality of life, difficulty in chewing, illness severity, extremity paralysis, and hand grip strength were associated with the nutritional status of patients with dementia. Conclusion : Given the negative impact of nutritional status on mortality and morbidity of elderly with dementia, emphasis should be placed on the importance of effective nutritional intervention for the long-term care facilities in Korea. * This work was supported by Basic Science Research Program through the National Research Foundation of Korea (NRF) funded by the Ministry of Education, Science and Technology (No. 2010-0024922). Keywords : Dementia , nutrition

PP26 C-116

AN OBSERVATIONAL STUDY IN NURSING HOME RESIDENTS WITH ALZHEIMER'S DISEASE TREATED WITH ORAL OR TRANSDERMAL MONOTHERAPY TO EVALUATE COMPLIANCE, TREATMENT OUTCOME AND CAREGIVER SATISFACTION

Pierre JOUANNY¹, Mathieu CECCALDI², Olivier GUERRIN³, Alain BREDIN⁴, Jean-Jacques PERE⁵, Isabelle BOURDEIX⁶ (1. Service de Medecine Geriatrique, CHU d'Amiens - Hopital sud, France; 2. Service de Neurologie et Neuropsychologie, CHU Timone, France; 3. Departement Geriatrie Aigue et Therapeutique, CHU de Nice, Hopital de Cimiez, France; 4. Cabinet de neurologie, Private neurologist, France; 5. Clinical Research, Novartis Pharma S.A., France; 6. Biometry, Novartis Pharma S.A., France)

Introduction : Both patients and caregivers contribute to compliance challenges in AD. Alternative formulations of drug, such as transdermal patches, could be a way to optimize treatment compliance. The objective of the study was to compare treatment compliance, caregiver satisfaction and treatment outcome according to the route of drug administration: oral form (OF) vs transdermal form (TDF). Method : Observational, 24 weeks, multicenter, study in nursing home residents with AD treated with OF or TDF monotherapy. Patients initiating therapy for the first time or who failed to benefit from a previous oral form were eligible. Outcomes measures (week 24) were treatment compliance and caregiver satisfaction based on a caregiver questionnaire, changes in MMSE, Clinical Global Impression (CGI), neuropsychiatric symptoms (NPI) and psychotropic drug use. Results : 83 residents on OF and 80 residents on TDF were analyzed. Scores of the caregiver questionnaire were respectively 8.4/10 and 9.5/10 for compliance (p=0.001) and 7.0/10 and 7.5/10 (p =0.1) for satisfaction. Decrease of psychotropic drug use was significantly better in the TDF group (p = 0.04). There was relevant but not significant numerical difference in favor of the TDF for NPI, especially in the switching population (p =0.07), and for decrease of MMSE scores (OF: -1.2 ; TDF: -0.2; p= 0.09). The percentage of patients stabilized or improved at CGI score was respectively 65.4% and 73.1%. Conclusion : Treatment compliance is a challenge in AD. The rivastigmine patch may prove an effective approach to optimize treatment compliance in AD patients, offering the possibility of greater and more sustained

clinical benefits. Keywords : dementia caregiver compliance

PP26 C-117

DIFFERENCE BETWEEN NURSE AND PROFESSIONAL CAREGIVER IN DEMENTIA CARE AT GERIATRIC HEALTH SERVICE FACILITIES

Sachiko HARA¹, Sakae MIKANE², Saki HASEGAWA¹ (1. Faculty of Medicine, Shimane University, Japan; 2. Faculty of Health and Welfare Science, Okayama Prefectural University, Japan)

Introduction : The geriatric health service facilities in Japan are accommodations for elderly citizens who require rehabilitation with the purpose of shifting to home care. At the facilities, 95% of the residents suffer the dementia, and the nurses and professional caregivers cooperate with each other to cope with the demands of the residents. The purpose of this study was to clarify the difference between the nurses and caregivers in dementia care at the facilities. Method : Questionnaires were distributed to the nurses and caregivers at the facilities, and 380 valid responses were obtained. The dementia care guideline developed by Hara et al. (six fields and 29 items) was used, and the nurses and caregivers were requested to rate each item with five grades to measure the frequency of practicing the dementia care. For each job type (nurse: 1 or caregiver: 0), the model to exercise influence on the six factors (or six fields of the dementia care guideline: "creating an environment where residents can feel safe and at home" etc.) was established, and its goodness was analyzed with the covariance structure analysis. Results : The goodness of the model resulted in CFI = 0.872 and RMSEA = 0.066 and was judged to stay at the generally acceptable level. Only the path coefficient from the job type to "consistent and coordinated care including cooperation with residents' families" satisfied the statistically significant level. Conclusion : The study indicated that the nurses are executing more "consistent and coordinated care including cooperation with residents' families" than the caregivers at the facilities. Keywords : geriatric health service facility, dementia care

PP26 C-118

PREDICTING MODEL OF QUALITY OF LIFE IN INSTITUTIONALIZED ELDERLY WITH DEMENTIA

Sung Ja KIM¹, Kyung Sook PARK² (1. Director, Seoul Seniors Tower (Seoul Tower), Korea; 2. Red Cross College of Nursing, Chung-Ang University, Korea)

Introduction : This study was conducted to construct and to examine the hypothetical model that explains causal relationship between various variables that affect the quality of life in elders with dementia. Method : Variables associated with quality of life in elders with dementia were depression, social support, physical function and major concepts associated with behavioral and psychological symptoms of dementia. Data analysis was conducted to examine the hypothesis and hypothetical model adaptability, using AMOS 7.0. Hypothetical model was constructed based on the results from references and previous studies. Hypothetical examination was conducted based on model adaptability which was analyzed by covariant component analysis, and modified model was presented with additional route, in order to improve the model adaptability. Results : The present study revealed that the most directly significant variable related was depression. Of all 6 hypothesis presented, all 6 routes that were selected by researchers were supportive, and structural model associated with the quality of life in elders with dementia were shown to correspond well with the causal model between measuring instruments from collected data. Conclusion : In conclusion, present study demonstrated that the quality of life in elders with dementia could be explained by

hypothetical examination, and furthermore, this model could be most effective in understanding the quality of life in elders with dementia. Also, it would be very meaningful to utilize the basic framework of the general idea of quality of life in elders with dementia, as a strategy for improving the quality of life in elders with dementia. Keywords : dementia, quality of life, predicting model

PP26 C-119

COHORT PACA-ALZ: ANTIPSYCHOTIC CONSUMPTION IN ALZHEIMER DISEASE (AD), FROM FRENCH GENERAL HEALTH CARE INSURANCE DATA BASE

Sylvie BONIN-GUILLAUME¹, Xavier THIRION², Veronique ALLARIA³, Gaelle MARTIN⁴, Vincent SCIORTINO⁵, Joelle MICALEFF⁶ (1. Medecine Interne Geriatrie, Aix Marseille Univ, Assistance Publique Hopitaux de Marseille, 270 Brd Sainte Marguerite, France; 2. Laboratoire Sante Publique, Aix Marseille Univ, France; 3. Direction Regionale du Service Medical, Assurance Maladie Provence - Alpes - Cote d'Azur-Corse, France; 4. Service Medecine Interne Geriatrie, Aix Marseille Univ, Assistance Publique Hopitaux de Marseille, 270 bd Sainte Marguerite, France; 5. Direction Service Medical, Assurance Maladie Provence - Alpes - Cote d'Azur-Corse, France; 6. CIC-Centre de Pharmacologie Clinique et d'Evaluations Therapeutiques, Aix Marseille Univ, Assistance Publique Hopitaux de Marseille, France)

Introduction : Aim Describe antipsychotic medications delivered to an AD population in South East of France in 2010, from the French General Health Care (GHC) insurance Data Base. Method : In 2008, was created the cohort PACA-Alz that enrolled all subjects affiliated to the GHC insurance Provence-Alpes-Cote d'Azur and Corsica (i.e. 75% of the total population of the area), with an AD diagnosis and/or at least one delivery of Acetylcholinesterase Inhibitors or Memantine. Antipsychotic consumption was exhaustively registered in the data base as there is no under-the-counter delivery for psychotropic drugs in France. Each delivery was considered to be given for one month. Chronic consumption was defined by three or more consecutive deliveries. Results : 34696 patients were included, 73.1% were women; 68.8% of the patients were aged 80 y.o. and over. Twenty-six-per-cent of the population received at least one antipsychotic medication (n=9040); 69.2% were aged 80 y.o. and over; 61.3% had chronic consumption (i.e.16% of the total study population). Risperidone was the most common antipsychotic prescribed (43%). Antipsychotic consumers (P1) were prescribed significantly more other psychotropic drugs than non antipsychotic consumers (P2) (p<0.001); respectively for antidepressant (P1: 54.4% vs P2:43.4%), benzodiazepines (P1: 66.3% vs P2: 37.9%), hypnotics (P1: 37.5% vs P2:20.3%). Most of the time, these psychotropic medications were chronically delivered. Conclusion : Antipsychotic medications are useful for psychiatric symptoms that frequently occurred in AD patients. But these medications are often associated to other psychotropic drugs and chronically delivered. More appropriate use is necessary to avoid adverse side effects. Keywords : Antipsychotic-consumption-Alzheimer disease

PP26 C-120

NON-PHARMACOLOGICAL MANAGEMENT OF WANDERING IN PERSONS WITH DEMENTIA: LITERATURE REVIEW

Yaelim LEE (School of Nursing, University of Pennsylvania, USA)

Introduction : Wandering is a common behavior observed in persons with dementia (PWD). It is accompanied by significant risks to the patient if not well managed, including falls, injuries, elopement, and

even death. It also aggravates the caregiver burden and becomes a concern for patient facilities. Further, wandering is commonly treated with off-label use of various medications, which may not be effective and may cause serious adverse effects. This paper reviews the recent understanding and possible non-pharmacological management of wandering behavior, along with the limitations of recent studies. Method : Electronic data collection included studies from February, 2007 to October, 2012 from the following databases: PubMed and Scopus. Twenty-nine articles from PubMed and nineteen articles from Scopus were found using the search terms including “dementia,” “alzheimer disease,” “wandering,” and “management.” Studies that were published in English and contained information related to the purpose of this paper were selected. Results : A review of the literature published in last five years shows many attempts to explain wandering behavior, including its prevalence, etiology, triggering factors, clinical presentation, and management. Some non-pharmacological management techniques described in the literature include: eliminating possible causes, generating a safe wandering environment, encouraging exercise and activity, supporting care providers, and preparing elopement protocols. However, even though there are many studies addressing possible interventions for wandering behavior, few examine their actual effectiveness. Conclusion : Wandering in older PWD is multifactorial and calls for an interdisciplinary approach. Non-pharmacological management of wandering behaviors should be considered while acknowledging the limited effects and possible risks of pharmacological management. Keywords : dementia, wandering , non-pharmacological management

PP26 C-121

COMMUNITY REHABILITATION: A PILOT STUDY ON GROUP PHYSICAL EXERCISES FOR OLDER ADULTS WITH COGNITIVE IMPAIRMENT

Yi LIN¹, Yi-Ling LIN², Tsai-Chun CHEN¹, Ai-Chen CHUNG³, Pi-Huei TSAI⁴, Hsiao-Yun HU¹, Hui-Ting SHIH¹, Kai-Lin HUNG¹, Tzu-Hsuan CHEN¹, Yi-Ling LI², Ming-Hsia HU¹ (1. Department of physical therapy, National Taiwan University, Taiwan; 2. Department of physical therapy, National Taipei University of Nursing and Health Sciences, Taiwan; 3. Department of physical therapy, Jinwen Rehabilitation Clinic, Taiwan; 4. Department of Social Welfare, Taipei Nangang Seniors Service Center, Taiwan)

Introduction : Exercise for older adults with declining cognition prevents physical function deterioration. This study attempted to assess the effectiveness of a group exercise program for cognitive impairment older adults in a day care center. Method : Fourteen community-dwelling older adults were recruited from a day care center in Taipei. All participants met the inclusion criteria of (1) diagnosis of cognitive impairment, (2) able to walk without physical assistance, and (3) without condition that prevented them from participating in physical exercises. Physical therapist held the program 1 session each week, 40-minute per session for eight weeks. Outcome measures included handgrip strength, Saint Louis University Mental Status Examination (SLUMS), timed up and go (TUG), 6 minutes walking test (6MWT), and Barthel Index were collected before and after the intervention. Results : Average age of the 14 participants was 74.38 years, and the average score of SLUMS was 10.9. Four participants were dropout due to inconvenient transportation. The intention to treat analysis was used to analyze the missing data. There were no significant changes on SLUMS, handgrip strength, TUG, 6MWT, and Barthel Index after eight-week intervention. Four participants improved their walking distance during 6MWT beyond the minimal clinical important change score, ie., 33.5 m (Ries et al., 2009). Conclusion : This study suggests that the group exercise

training is feasible and effectiveness for the community-dwelling older adults with cognitive impairment to maintain physical function, cognition and the function of daily living. Larger scale or a higher dosage of group exercise is suggested for future study. Keywords : cognitive impairment, group exercise, older adults

PP26 C-122

COMPARISON OF 'SERIAL 7S SUBTRACTION' AND "SAM-CHUN-RI-GANG-SAN" BACKWARD

Youngdae KIM , Chang Won WON (Department of Family Medicine, Kyung-hee University Hospital, Korea)

Introduction : There are two variations in the attention subitem of the Mini-Mental State Exam; 'serial 7's subtraction and "Sam-chun-ri-gang-san"backward. When scored on a scale of one to five, they can be used interchangeably, which inevitably brings a considerable difference in the results. Thus, we compared the scores of the 'serial 7's subtraction' and "Sam-chun-ri-gang-san"backward, and analyzed the influence of sociodemographic factors on the differences. Method : We administered the K-MMSE including the two type of attention item ; serial 7's and "sam-chun-ri-gang-san"backward to the 239 community- dwelling elderly people aged 65 or older in the K University Hospital and four Seoul senior centers . we analyzed the differ from June 2012 to July 2012. Results : The score for "sam-chun-ri-gang-san"backward(2.5±2.1) was lower than that of the serial 7's(3.4±1.7) by a mean point of 0.9±1.9. The score of "sam-chun-ri-gang-san"backward was zero in 31.4% of the subjects while only 9.6% scored zero on the serial 7's. The ratio of the same scores between two tasks was 36.0%. Education is primary source of variance on difference score, followed by number of family. There was no significant effect of age, gender when score of difference was analyzed by multiple regression. Conclusion : In study, subjects tended to outperform the serial 7's in general. Upon administering "sam-chun-ri-gang-san"backward instead of serial 7's due to the preference of the patient, we should take into account that the score of "sam-chun-ri-gang-san"backward was mean 0.9 point lower than serial 7's to ensure appropriate interpretation of MMSE score. Keywords : MMSE, serial 7's subtraction, sam-chun-ri-gang-san backward

PP26 C-123

A UNIQUE YOUNGEST PATIENT WITH A SPORADIC CJD IN JAPAN

Yumiko NAKANO¹, Yuko KOZAI¹, Yoshio OMOTE¹, Motonori TAKAMIYA¹, Yoshio IKEDA¹, Koji ABE¹, Masako TABATA², Sato KATSUYA³ (1. Neurology, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Japan; 2. Neurology, Himeji Central Hospital, Japan; 3. Neurology, Nagasaki University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Japan)

Introduction : Creutzfeldt-Jakob disease (CJD) is a degenerative neurological disorder that is usually found in elderly people, and is invariably fatal. Method : A woman developed anorexia at her age of 22. At age 23 she developed a progressive cognitive impairment. 3 months later she developed a walking disturbance, dysarthria and dysphagia. At that time only ribbon-like hyperintensities in MRI-DWI in cerebral cortex was observed. At 24 months after the onset, she admitted to our hospital. Results : On admission, she was lethargic and disoriented. She presented with symptoms such as dysarthria, dysphagia, and bradykinesia. She also presented pyramidal signs, cerebellar ataxia, and she couldn't stand up alone. In laboratory tests, there was no-specific finding and no known mutation in the prion protein gene. EEG showed diffuse slow waves without periodic sharp

wave complexes. MRI revealed exaggerated hyperintensities in cerebral cortex, and CSF examination turned to be 14-3-3 protein elevation. RT-QUIC, indicating an increase of pathological prion protein, revealed positive finding. Thus, clinical, MRI and CSF findings finally led us to diagnosis as prion disease. Conclusion : The age 22 was the youngest onset of sporadic prion disease in Japan, and the present case showed a unique clinical characteristics. Keywords : prion youngest onset

PP26 C-124

“BEHAVIORAL AND PSYCHOLOGICAL SYMPTOMS OF DEMENTIA” RATHER THAN COGNITIVE FUNCTION IN PATIENTS WITH DEMENTIA INCREASES CAREGIVER BURDEN

Hirofumi SAKURAI, Haruo HANYU, Mayu ARAKI, Toshihiko IWAMOTO (*Geriatric Medicine, Tokyo Medical University, Japan*)

Introduction : We hold classes for caregivers on how to understand and manage patients with dementia. The aim of the present study was to assess various factors associated with the burden caregivers bear in coping with patients with dementia. Method : Thirty-three participants from our classes for caregivers were enrolled in this study. They provided written informed consent to participate in this study. Caregivers completed all questionnaires on care, namely, Neuropsychiatric Inventory Questionnaire (NPI-Q), EuroQoL-5 Dimensions (EQ-5D), and the Japanese version of the Zarit Burden Interview (J-ZBI). The patients underwent the Mini Mental State Examination (MMSE) and evaluation of ADL according to the report of Imai et al. Results : 1.The mean MMSE score for patients, and NPI-Q score, EQ-5D score, and J-ZBI score for caregivers were 18.8±5.2, 5.6±4.9, 0.700±0.167, and 27.3±17.8, respectively. 2.The NPI-Q score was significantly correlated with the J-ZBI score (R=0.51, p<0.01). 3.The EQ-5D score was significantly correlated with the J-ZBI score (R=0.44, p<0.05). 4.The number of caregivers was significantly correlated with the J-ZBI score (p<0.05). 5.Age, relationship, cohabitation, and contact time with the caregiver were not significantly correlated with the J-ZBI score. 6.The evaluation scores of the MMSE and ADL of the patients were not significantly correlated with the J-ZBI score. Conclusion : The strong correlations of the BPSD, QOL score, and the number of caregivers with the J-ZBI scores suggest the importance of providing support to patients with BPSD who are receiving medical care for dementia and their caregivers. Keywords : BPSD, Caregiver burden, Dementia

PP26 C-125

DECREASED QUALITY OF LIFE IN SUBSYNDROMAL DEPRESSION

Jae Sung RYU, Moon Doo KIM, Young Sook KWAK, Chang In LEE, Sang Hee KIM, Bong Hee JEON, Na Ri KANG, Joon Hyuk PARK (*Department of Psychiatry and Institute of Medical Science, Jeju National University School of Medicine, Korea*)

Introduction : Depression with fewer symptoms than required for a DSM-IV diagnosis of Major Depressive Disorder (MDD) has consistently been found to be associated with functional impairment. In this study, we aim to estimate the quality of life in elderly patients with Subsyndromal Depression (SSD) compared with Non-depressive elderly (NDE). Method : The Korean version of Mini International Neuropsychiatric Interview were conducted on 194 of outpatients with chief complaint of depression and 108 of normal control group. SSD is defined as having five or more current depressive symptoms with core depressive symptoms (depressive mood or loss of interest or pleasure) during most of the day and nearly every day over at least two weeks.

All patients were estimated with GDS (Revised Korean version of the Geriatric Depression Scale), HDS (The Korean Version of Revised form of Hasegawa Dementia Scale), MMSE-KC (Mini-Mental State Examination in the Korean version of CERAD assessment packet), SMCQ (Subjective Memory Complain Questionnaire) and SF-36 (The Korean Version of Short-Form 36-Item Health Survey). Results : There were statistical difference between SSD group and NDE group in the scores of SF-36 including PCS (physical component summary) and MCS (mental component summary) (t-test, p<0.001). The scores of PCS in the SSD group were lower than those in NDE group with adjustment of age, gender, and education (F=9.274, p=0.003, ANCOVA) and It was the same as the scores of MCS (F=53.166, p<0.001, ANCOVA). Conclusion : SSD, as well as MDD, lowered quality of life including physical and mental aspects compared with NDE. Keywords : Subsyndromal depression, Quality of life, Elderly

PP26 C-126

COGNITIVE IMPAIRMENT IN SUBSYNDROMAL DEPRESSION

Ji Eon KANG¹, Moon Doo KIM², Young Sook KWAK², Chang In LEE², Sang Hee KIM², Bong Hee JEON², Jae Sung RYU², Joon Hyuk PARK² (*1. Department of Psychiatry, Yeonkang Hospital, Korea; 2. Department of Psychiatry and Institute of Medical Science, Jeju National University School of Medicine, Korea*)

Introduction : Depression with fewer symptoms than required for a DSM-IV diagnosis of Major Depressive Disorder (MDD) has consistently been found to be associated with functional impairment. In this study, we aim to estimate the cognitive impairment in elderly patients with Subsyndromal Depression (SSD) compared with Non-depressive elderly (NDE). Method : The Korean version of Mini International Neuropsychiatric Interview were conducted on 194 of outpatients with chief complaint of depression and 108 of normal control group. SSD is defined as having five or more current depressive symptoms with core depressive symptoms (depressive mood or loss of interest or pleasure) during most of the day and nearly every day over at least two weeks. All patients were estimated with GDS (Revised Korean version of the Geriatric Depression Scale), HDS (The Korean Version of Revised form of Hasegawa Dementia Scale), MMSE-KC (Mini-Mental State Examination in the Korean version of CERAD assessment packet), SMCQ (Subjective Memory Complain Questionnaire) and SF-36 (The Korean Version of Short-Form 36-Item Health Survey). Results : There was a significant difference between the SSD group and the NDE group in the performance of MMSE-KC (F=9.3, p<0.001, ANOVA). The scores of MMSE-KC in the SSD group were lower than those in NDE group with adjustment of age, gender, and education (F=4.270, p=0.04, ANCOVA). When cognitive impairment was defined as Z-score of MMSE-KC less than -1.5, Odds ratio of cognitive impairment was 1.86 in SSD (p=0.036), 7.57 in MDD (P<0.001) compared with reference of NDE (Logistic regression analysis). Conclusion : SSD, as well as MDD, lowered cognitive impairment compared with NDE. Keywords : Subsyndromal depression, Cognitive function, Elderly

PP26 C-127

WHITE MATTER HYPERINTENSITIES IS AN INDEPENDENT PREDICTOR OF FUTURE DEPRESSION: 3-YEAR RESULTS FROM EPIDEMIOLOGICAL STUDY OF VASCULAR DEPRESSION IN COMMUNITY-DWELLING ELDERLY KOREANS

Joon Hyuk PARK¹, Chang In LEE¹, Ki Woong KIM² (*1. Department of Psychiatry, Jeju National University Hospital, Korea; 2. Department of Psychiatry, Seoul National University Bundang*)

Hospital, Korea)

Introduction : The purposes of this study were to estimate the prevalence rates of subtypes of late life depression (LLD including (vascular depression and non-vascular depression) in the baseline study, to examine the natural course of LLD and to investigate influence of white matter hyperintensities (WMH) volume on depression in the 3-year follow-up study. **Method :** WMH was rated by the modified Fazekas scale and the volume of WMH was also calculated by an automated quantification method. Patients were classified as having vascular depression if they suffered from any type of depressive disorders and had a score of 2 or more on either deep white matter hyperintensities or subcortical gray matter ratings. **Results :** The prevalence rates of vascular MDD and vascular nMDD were 2.39% (53.6% of MDD) and 4.24% (34.0% of nMDD), respectively, in the baseline study. The relative proportion of vascular depressive disorders to non-vascular depressive disorders increased with aging. Among non-depressive group in the baseline study, subjects with WMH(+) had 13.5 times (OR=13.5, 95% CI=1.10-165.97) risk of developing depressive disorder in the 3-year follow-up study, as compared to those without WMH(+). Log WMH volume (OR=5.78, 95 CI=1.04-31.72) in the baseline study was an independent predictor for depressive disorder in the 3-year follow-up. **Conclusion :** Late life depression is very common and its course is chronic and pleomorphic in community. WMH is a crucial predictor for future depressive disorder, which supports the previous vascular depression hypothesis. Vascular depression is a useful construct for clinical characteristics and impact of late life depression. **Keywords :** vascular depression, white matter hyperintensities

PP26 C-128

PREVALENCE OF MAJOR MENTAL DISORDERS AMONG KOREAN ELDERLY IN A NATIONWIDE COMMUNITY SURVEY

Su Jeong SEONG, Jee Eun PARK, Maeng Je CHO (*Department of Psychiatry and Behavioral Science, Seoul National University Hospital, Korea*)

Introduction : We investigated the prevalence of the DSM-IV major mental disorders among the Korean elderly dwelling in community. **Method :** Nationwide face-to-face household interviews were conducted in 2011. The sampling of the subjects was carried out across 12 catchment areas using a multistage, cluster sampling design. Korean version of the Composite International Diagnostic Interview(K-CIDI) was applied to evaluate mental illness of each subject. **Results :** Among the population aged from 60 to 74(n=928), more than one fifth(22.1%) experienced at least one mental disorder in their lifetime and 13.7% experienced the episode in the past year. Lifetime prevalence rates were 7.3% for alcohol use disorder, 5.4% for nicotine use disorder, 7.6% for anxiety disorder, 7.3% for mood disorder. Men were more likely to have alcohol use disorder, nicotine use disorder and less likely to have mood disorder, anxiety disorder. Those who did not attend any college had a greater risk for alcohol use disorder. Compared to the younger population aged from 18 to 59, elderly had lower 12 month prevalence rates of alcohol use disorder(1.7% to 4.8%), nicotine use disorder(2.8% to 4.2%), anxiety disorder(5.9% to 6.9%). On the contrary, mood disorder was more prevalent in elderly(3.9% to 3.5%), especially in women. **Conclusion :** Major mental disorders were quite common, although the prevalence is lower in elderly than in younger population. The results argue that more concern in clinical practice and mental health policy is needed for mentally ill elderly, especially for those with mood disorders. **Keywords :** Prevalence, Mental disorders, Elderly

PP26 C-129

COMPARISON OF OBESITY /PSYCHOLOGICAL DISORDERS COMORBID BETWEEN MIDDLE AGED AND OLD WOMEN

Soodeh RAZEGHI JAHROMI¹, Maryam ABOLHASANI², Maryam BIDADIAN², Leila KOUTI³ (*1. Geriatric group, Sina Hospital, Tehran University of Medical Sciences, Iran; 2. Obesity Group, Endocrine and Metabolic Research Center, Sina Hospital, Tehran University of Medical Sciences, Iran; 3. school of pharmacy, Ahvaz Jundishapur University of Medical Sciences, Iran*)

Introduction : Epidemiologic data proposed a relationship between obesity and depression in older adults. Findings have suggested a stronger relationship in aged women than men. We conducted this study to evaluate the association between obesity and mood disorders, as well as a range of eating disorders in old women. **Method :** From a total of 1477 clients referred to an outpatient university hospital overweight and obesity clinic in Tehran, Iran, between Jan 2008 and Jan 2012, 212 obese persons (97 persons 60+ and 115 persons 40-59 years of age) were enrolled. Data of demographics, comorbidities, anthropometrics, physical activity level, and diet, as well as, mood and eating disorders were collected. Mood and eating disorders were assessed using diagnostic structural interview based on DSM-IV-TR (Diagnostic Statistical Manual of Mental Disorder- fourth edition-Text version). BMI more than or equal to 30 was considered as obesity. **Results :** The prevalence of dysthymia was significantly lower in older women compared to younger (4.2% vs. 13%, P.value= 0.039). Comparable but not significant results were observed for major depression disorder (13.5% in older individuals vs. 17.7%), Bulimia Nervosa (0% vs. 1.8%), and eating disorders not otherwise specified (2.1% vs. 8%). **Conclusion :** Our findings suggest that obese older women were less suffers from Comorbid dysthymia/obesity compared to younger. **Keywords :** dysthymia, obesity, older adult

PP26 C-130

ASSOCIATIONS BETWEEN CLINICAL AND FUNCTIONAL MEASURES WITH SELF-RESTRICTED DRIVING PRACTICES IN OLDER ADULTS WITH PARKINSON'S DISEASE

Alexander Michael CRIZZLE¹, Anita M. MYERS², Quincy J. ALMEIDA³, Eric ROY⁴ (*1. School of Rehabilitation Science, McMaster University, Canada; 2. School of Public Health and Health Systems, University of Waterloo, Canada; 3. Sun Life Financial Movement Disorders Research and Rehabilitation Centre, Wilfrid Laurier University, Canada; 4. Department of Kinesiology, University of Waterloo, Canada*)

Introduction : The extent to which various symptoms associated with Parkinson's disease (PD) affect driving practices is presently unknown. The primary aim was to determine whether a clinical battery of tests (clinical and functional) were associated with driving practices (exposure and patterns) in a sample of PD drivers compared to age and gender matched controls. **Method :** We installed electronic devices in the vehicles of 27 drivers with PD (mean age 71.6±6.6; Unified Parkinson's Disease Rating Scale (UPDRS) motor score 30.1±8.6); and 20 controls (mean age 70.6±7.9) to monitor their driving over 2 weeks. Participants also completed scales on sleepiness, depression, quality of life, as well as vision (contrast sensitivity), cognition (MoCA) and a brake test. **Results :** The PD group had significantly slower brake response times (p<.05), poorer MoCA and quality of life scores (p<.01), and greater depression (p<.05). Scores on depression, sleepiness, and quality of life were not associated with any driving variables. Slower reaction time, however, was significantly related to

night driving: fewer trips ($r=-.46$; $p<.05$), distance ($r=-.54$, $p<.01$) and duration ($r=-.58$, $p<.01$). Although not significant, MoCA scores were negatively associated with night driving: trips ($r=-.28$), distance ($r=-.25$) and duration ($r=-.24$), as were UPDRS motor scores with night distance ($r=-.21$) and duration ($r=-.16$). Conclusion : These findings suggest that some PD drivers with worse disease severity (based on UPDRS motor scores) may recognize declines in performance (reaction time, cognition and contrast sensitivity) and restrict their driving practices, beginning with night driving. Future studies with larger samples are needed to replicate and extend these preliminary findings. Keywords : Driving behavior, Parkinson's disease, clinical tests

PP26 C-131

VALIDATION OF THE KOREAN VERSION OF THE 8-ITEM MORISKY MEDICATION ADHERENCE SCALE IN PATIENTS WITH PARKINSON'S DISEASE

Jee-Eun CHUNG¹, Ka Eun YOO¹, Ju Yeun LEE², Han-Joon KIM³, Byung Koo LEE¹ (1. College of Pharmacy, Ewha Womans University, Korea; 2. College of Pharmacy, Hanyang University, Korea; 3. Department of Neurology and Movement Disorder Center, College of Medicine, Seoul National University, Korea)

Introduction : This study aimed to validate a Korean translation of the structured 8-item Morisky Medication Adherence Scale(MMAS-8) and examine the psychometric properties of the Korean version of the MMAS-8 among patients with Parkinson's disease. Method : A standard 'forward-backward' procedure was used to translate MMAS into Korean language. An observational cross sectional study was conducted in the movement disorder center of Seoul national university hospital. Internal consistency was assessed using Cronbach's α and the test-retest reliability at 2 week interval using the intraclass correlation coefficient(ICC). Validity was confirmed using a self-reported simple question and Medication Possession Ratio(MPR) to antiparkinson medication. To find MPR, we obtained the prescribing data for 18 months from electronic medical record. Low adherence was defined as MPR <0.8 . Results : From August to October 2012, a total of 104 patients were included: mean age $68.4(\pm 7.6)$ years, 45% men. The mean score of MMAS-8 was $6.22(\pm 1.72)$ and 34.6%, 30.2%, 34.6% of patients had low, medium, high adherence. Internal consistency reliability was moderate($\alpha=0.68$) whereas the test-retest reliability of the Korean MMAS-8 was excellent(ICC=0.95, $p<0.0001$). Regarding validity, the MMAS-8 categories had significant relationship with self-reported question($\chi^2=75.5$, $p<0.0001$). Our analysis showed that a positive correlation between MMAS-8 and MPR scores($r=0.33$, $p=0.001$) and a significant relationship between MMAS-8 and MPR categories($\chi^2=8.09$, $p=0.016$) were found. Conclusion : This study demonstrates that the Korean MMAS-8 scale is a reliable, valid instrument for assessing medication adherence in Parkinson's disease. Keywords : Medication adherence, Morisky medication adherence scale, Parkinson's disease

PP26 C-132

NUTRITIONAL STATUS ASSESSMENT FOR STROKE SURVIVORS

Eun Kyoung KANG¹, Hyun Jung JEON², Jin A. PARK², Su Jin CHOI², Gi Ho JO³ (1. Rehabilitation Medicine, Seoul Bukbu Hospital, Kangwon National University Hospital, Korea; 2. Clinical Nutrition Team, Seoul Bukbu Hospital, Korea; 3. Rehabilitation Medicine, Seoul Bukbu Hospital, Korea)

Introduction : Dysphagia and subsequent malnutrition develop

frequently in stroke patients. We aimed to assess the nutritional status in stroke patients who were just admitted to a rehabilitation center. Method : From October 2011 to October 2012, 127 stroke patients (63 male, age 68.0 ± 10.5 years) were enrolled at a single rehabilitation center. Nutritional status was graded and assessed with regard to the patient's subjective appetite (using a 3 point scale), weight loss (<5 , >5 kg), gastrointestinal problem (absence, presence), diet type (enteral tube feeding, dysphagia diet, regular diet), albumin level (<2.9 , $2.9-3.3$, >3.3 mg/dL), and total cholesterol level (<130 , $130-160$, >160 mg/dL). Total score was classified as Patient 1 (P1, high risk for malnutrition state), P2 (moderate) or P3 (low). And their dysphagia were classified as Diet 1 (D1, tube feeding), D2 (modified diet) or D3 (regular diet). Results : Six-teen patients (12.6%) were classified as P1, 38 patients (29.9%) as P2 and 73 patients (57.5%) as P3. Twenty-nine patients (22.8%) were classified as D1, 27 patients (21.3%) as D2 and 71 patients (55.9%) as D3. Eleven patients (8.7%) were classified into both P1 and D1. Correlation between dysphagia and nutritional status was significant (Spearman's $\rho = -0.505$, $P=0.001$). Conclusion : Nutritional status and dysphagia should be assessed earlier in patients with stroke at admission to rehabilitation center because they may influence on rehabilitation outcome. Keywords : stroke, nutrition

PP26 C-133

MAGNETIC RESONANCE ANGIOGRAPHY IN PATIENTS WITH MOYAMOYA SYNDROME ASSOCIATED WITH ATHEROSCLEROTIC OCCLUSION OF THE MIDDLE CEREBRAL ARTERY

Kwang Deog JO, Wooyoung JANG, Moon Kyu LEE (Department of Neurology, Gangneung Asan Hospital, University of Ulsan College of Medicine, Korea)

Introduction : Magnetic resonance imaging and angiography (MRA) has been used to diagnose and follow-up for moyamoya disease. However, MRA studies of the moyamoya syndrome associated atherosclerosis have not been investigated. We aimed to evaluate 3-T MRA in patients with moyamoya syndrome associated with atherosclerotic occlusion of the middle cerebral artery (MCA). Method: We analyzed 15 consecutive patients (7 males and 8 females) who had unilateral ($n=14$) or bilateral ($n=1$) steno-occlusive lesions in the MCA with basal moyamoya vessels demonstrated by digital subtraction cerebral angiography. Patients ranged in age from 35 to 85 years (mean age, 54.3 years). All patients underwent 3-T three-dimensional time-of-flight MRA. The steno-occlusive severity of the MCA was evaluated according to modified Houkin's grading system (MRA score) and the visibility of moyamoya vessels (moyamoya vessel score) was graded according to a 4-point scale. Results : The steno-occlusive lesions were found in the proximal (87.5%) or mid-portion (12.5%) of the MCA. MRA scores confined to the MCA were grade 3 (invisible) in 9 patients (56.3%) and grade 2 (discontinuity of M1 signal) in 7 patients (43.8%). The moyamoya vessel scores were grade 2 in 3 patients (18.8%), grade 1 in 12 patients (75%), and grade 0 in one patients (6.3%). Conclusion : The MRA findings in patients with atherosclerotic moyamoya syndrome showed the lesions most frequently affect the proximal portion of the MCA with severe degree of steno-occlusion and poorly visible basal moyamoya vessels. Keywords : Moyamoya syndrome, Middle cerebral artery, Atherosclerosis

PP26 C-134

THE EFFICACY OF REPETITIVE BILATERAL ARM TRAINING WITH RHYTHMIC AUDITORY CUEING FOR PATIENTS WITH STROKE

Seong Won KIM¹, Tae Hyun KIM² (1. Yonsei PMR Clinic, Korea;

2. Saint Paul's School, USA)

Introduction : To evaluate the effect of repetitive bilateral arm training with rhythmic auditory cueing (BATRAC) on functional motor performances of the hemiplegic upper limb. **Method :** Twenty four subjects with stroke (12 males, 12 females) were enrolled and classified into two groups, experimental and control group. The control group received conventional rehabilitation therapy while the experimental group received additional BATRAC. The motor function of patient's upper extremity was assessed by Fugl-Meyer Motor Function Assessment (FMA), Manual Function Test (MFT), and Functional Independence Measure (FIM) before the treatment, at 4 weeks and at 6 weeks after beginning of the treatment. **Results :** There were no differences in FMA between two groups before the treatment and the continual improvements in the function at 4 weeks and at 6 weeks after beginning of the treatment ($p \leq 0.05$). Furthermore, the experimental group revealed higher performances in FMA than control group ($p \leq 0.05$). However, there were no differences in FIM and MFT before the treatment and in the improvements of function after the treatment between two groups ($p \leq 0.05$). **Conclusion :** BATRAC improves motor performance of the paretic upper extremity and will be useful as an additional tool of improving motor function in patients with stroke. **Keywords :** stroke, hemiplegic, BATRAC

PP26 C-135

GROWTH HORMONE DEFICIENCY IN ELDERLY PATIENTS WITH ISCHEMIC STROKE

Myung Jun SHIN¹, Jae Hyeok CHANG¹, Yong Beom SHIN¹, Sunkug JHO², Sungnyun KIM² (1. Department of Rehabilitation Medicine, Pusan National University School of Medicine, Korea; 2. Rehabilitation/Clinical Aging Research Institute, Busan Medical Center, Korea)

Introduction : Pituitary dysfunction is a known complication of traumatic brain injury and subarachnoidal hemorrhage. However there are few data about pituitary dysfunction as a complication of ischemic stroke. **Method :** This study was designed as a retrospective observational study. The subjects were clinically hemiplegic individuals with a subacute ischemic stroke under 6 months in rehabilitation units in Pusan National University Hospital. We excluded the patients with decompressive cranioplasty and previous endocrine diseases such as hypopituitarism. Finally, Ten females over 65 years (mean age; 74.83 ± 6.40 years, Group A) and 11 postmenopausal females (mean age; 56.67 ± 4.93 years, Group B) were enrolled. We measured pituitary hormones, stroke severity and functional ability. **Results :** In group A over 65 years old, five patients (50%) presented with some degree of pituitary dysfunction with decreased IGF-1, which of less than 175 mcg/L is a good clinical marker for growth hormone deficiency. Abnormal IGF-1 levels were found in 5 patients (45%) of group B. Functional abilities such as MMSE and mRS(modified Rankin scale) was not different between group A and B. **Conclusion :** These results showed no significant prevalence of pituitary dysfunction in elderly patients with ischemic stroke. However, we suggest that patients who suffer from ischemic stroke should undergo pituitary testing, when considering the high prevalence of growth hormone deficiency of this study. **Keywords :** stroke, growth hormone, elderly patients

PP26 C-136

SALIVARY INTERLEUKIN (IL)-6 IN ELDERLY PEOPLE WITH STOMATITIS APHTOUS AND GINGIVITIS ASSOCIATED TO THE OCCURRENCE OF COGNITIVE IMPAIRMENT

Dewi PRIANDINI¹, Tri Budi RAHARDJO², Eef HOGERVORST³, Gus Permana SUBITA⁴, Irawati ISMAIL⁵ (1. Oral Medicine, Faculty Dentistry Trisakti University, Indonesia; 2. Centre For ageing studies, Universitas Indonesia, Indonesia; 3. School of Sports and Health Sciences, Loughborough University, United Kingdom; 4. Oral Medicine, Faculty of Dentistry Universitas Indonesia, Indonesia; 5. Psychiatry, Faculty Medicine Universitas Indonesia, Indonesia)

Introduction : Oral health is often poor in many elderly and has been associated with many health conditions, possibly due to infection. The aging process in itself also increases the vulnerability of elderly people to infections and is also associated with increased levels of interleukin (IL)-6. Stomatitis Aphthous and Gingivitis are a well-known oral infection which seems to be mediated principally by the immune system and by bacteria contain several components that can enhance the pro inflammatory cytokines, including (IL)-6. However, the relation between stomatitis aphtous and gingivitis with cognitive impairment in the elderly is not well understood. **Method :** In 133 respondents sample of those over 60 years old was collected in rural Borobudur in Central Java Indonesia. Each subject underwent detailed oral and dental examination, with a focus on oral infections in accordance with the Axell method, Medical examination and medical history was assessed by using standardized questions from the Cambridge Mental Disorder of the Elderly Examination (CAMDEX). salivary IL-6 was determined by use of enzyme-linked immunosorbent assay (ELISA). Statistical analysis was performed by use of descriptive statistics. **Results :** Significant differences in salivary IL-6 for stomatitis aphtous were found ($P < 0.05$) as well as respondents with gingivitis. Gingivitis was significantly associated to the occurrence of cognitive impairment ($p < 0.05$). **Conclusion :** We might conclude that elevated salivary IL-6 levels for stomatitis aphtous and gingivitis which showed higher levels but only Gingivitis related to cognitive impairments. However this was not maintained in regression analyses. **Keywords :** Salivary Interleukin (IL)-6, Stomatitis Aphthous, Gingivitis, Cognitive impairment

PP26 C-137

CLINICAL FEATURES OF THE ELDERLY PATIENTS CONSIDERED BY THE CHIEF COMPLAINTS

Jong Lull YOON¹, Ji Sang PARK² (1. Dept. of Family Medicine and Geriatrics, Hallym University College of Medicine, The Korean Geriatrics Society, Korea; 2. Dept. of Family Medicine, Hangang Sacred Heart Hospital, Hallym University, Korea)

Introduction : With the rapidly increasing older population, there are more rapidly increasing elderly patients who need medical services. By the physiologic senescence, clinical features of older patients are quite different from younger ones. This study purposed to make basic characteristic data of geriatric in-patients from analyses of chief complaints resulted in admission. **Method :** The subjects were inpatients in the department of family medicine of one general hospital from March 2009 to July 2011. They were divided in two group by age 65, and their medical records were reviewed. **Results :** The number of subjects were 82 patients over 65 years old in total of 106 inpatients. The number of female patients were 4.5 times more than male. The older patients had 3.7 underlying disease in average. The most common disease was hypertension, and others were diabetes, dyslipidemia, osteoporosis, depression as in order. The average count of drug taken by them were 7.1. The drugs included antihypertensive drugs, hypoglycemic agents, antilipidemic agents, H2 blockers, and antiplatelet agents. The most common chief complaints induced to admission were general weakness(23.1%), poor oral intake(10.9%), fever(7.3%), dizziness(6%). The common diagnoses at discharge were

pneumoniae(9.7%), gastritis & gastric ulcers(8.5%), urinary tract infections(7.3%). Conclusion : Many elderly patients had multiple pathologies and have taking many drugs. We can find out that their chief complaints were quite non-specific which could not be matched appropriate with final diagnoses. This results suggest that physicians should be well-knowlegeable with clinical features of older patient for proper diagnosis and management. Keywords : older patients, chief complaint, diagnosis

PP26 C-138

ASSOCIATIONS BETWEEN GERIATRIC SYNDROMES AND RISKS OF MORTALITY IN ELDERLY: RESULTS OF A NATIONAL LONGITUDINAL STUDY IN TAIWAN

Chi Chang HUANG¹, Chia Ming CHANG¹, Jenq Daw LEE², Deng Chi YANG¹ (1. Department of Internal Medicine, National Cheng Kung University Hospital, Taiwan; 2. Department of Finance, Shih Chien University, Taiwan)

Introduction : This study was designed to evaluate the associations between clustered geriatric conditions and risks of mortality in the elderly in Taiwan. Method : Data were collected from the Taiwan Longitudinal Study in Aging (TLSA) in 2003. Basic characteristics, including age, sex, education, marital status, institutional care, residence, comorbidities, geriatric conditions and information of mortality were analyzed. Geriatric conditions were asked or assessed: 1) recurrent falls within a year 2) functional limitation (dependency in either one of six ADLs); 3) low body mass index (BMI) (< 18.5 kg/m²); 4) cognitive impairment (SPMSQ score ≤ 7); 5) depressive mood (10-item CES-D scale ≥ 10). Results : A total of 2744 subjects aged ≥ 65 years were included in the analysis, 634 of them were died. Univariate analysis of each item which showed p<0.05 was further analyzed by different models. After multi-variate analysis, subjects aged ≥ 85 years were highest associated with mortality (OR:5.42 95%CI= 3.53-8.33). Other characteristics, such as male, illiterate, still smoking, malignancy, low BMI, impairment of ADL were also significantly associated with elder mortality. Regular adequate drinking among elderly seemed to have protective effect (OR:0.55 95%CI= 0.33-0.90). Combined effects of geriatric syndromes also predicted high risk of mortality (N=1, OR: 1.42, 95%CI=1.08-1.86; N=2 OR:1.95, 95%CI=1.33-2.86; N=3, OR:3.51,95%CI=1.90-6.50; N=4, OR:3.95,95%CI=0.83-18.78). The accumulative predict effects were more obvious among elderly aged between 65~85 year. Conclusion : Geriatric syndrome information is important to understanding the risks of mortality for elderly. When taking care of the elderly, the geriatric conditions and its accumulative effects must be assessed. Keywords : geriatric syndromes, mortality. Taiwan

PP26 C-139

GAIT SPEED AND COGNITIVE IMPAIRMENT IN COMMUNITY-DWELLING OLDER PEOPLE

Eun Sook HAN¹, Yunhwan LEE², Jinhee KIM² (1. Department of Preventive Medicine and Public Health, Ajou University School of Medicine, Institute on Aging, Ajou University Medical Center, Seoul National University Bundang Hospital, Korea; 2. Department of Preventive Medicine and Public Health, Ajou University School of Medicine, Institute on Aging, Ajou University Medical Center, Korea)

Introduction : Gait speed is known to be a strong predictor of incident walking disability and emerging studies indicate cognitive function is associated physical functioning in older adults. The aim of this study was to examine the relationship between gait speed and cognitive impairment in community-dwelling elderly people. Method : Data were from the baseline survey of the Living Profiles of Older People in

2008, with 10,226 participants aged 65 years and older living in the community in South Korea. Cognitive impairment was assessed with the Korean Version of the Mini-Mental State Examination (MMSE-KC). Gait speed was measured in a 2.5 m walk. Covariates included sex, ages, educational status, disability in activities of daily living (ADL), instrumental ADL, comorbid diseases, smoking, and alcohol drinking. Logistic regression analysis was used to examine the association between gait speed and cognitive impairment, adjusting for all covariates. Results : Among the participants, the prevalence of gait impairment was 37.8% and cognitive impairment was 25.9%. The mean age of the participants was 73.2 (±6.0) years. In gait impaired group, MMSE-KC score was 21.1 (±5.6), lower than the 23.8 (±4.0) among those who were not impaired. Cognitive impairment was significantly associated with gait impairment (odds ration [OR] = 1.36, 95% confidence interval [CI]: 1.22-1.51), even after controlling for all covariates. Among the MMSE-KC dimensions, immediate recall, delayed recall, and naming were significant correlated with cognitive impairment. Conclusion : Cognitive impairment was associated with gait impairment in community -dwelling older adults. This study suggests that gait speed may be an indicator of cognition in elderly. Keywords : gait speed, cognitive impairment

PP26 C-140

ASSOCIATION BETWEEN HDL-CHOLESTEROL LEVEL AND PHYSICAL PERFORMANCE IN AN ELDERLY KOREAN POPULATION: THE KOREAN URBAN AND RURAL ELDERLY STUDY

Hansol CHOI¹, Hyeon Chang KIM², Yumie RHEE³, Yoosik YOUM⁴, Chang Oh KIM³ (1. Department of Public Health, Yonsei University College of Medicine, Korea; 2. Department of Preventive Medicine, Yonsei University College of Medicine, Korea; 3. Department of Internal Medicine, Yonsei University College of Medicine, Korea; 4. Department of Sociology, Yonsei University, Korea)

Introduction : There is a growing body of research showing that high-density lipoprotein (HDL) cholesterol has been considered as a reliable marker of frailty and poor prognosis in an elderly population. The aim of this study was to evaluate the association of HDL-cholesterol level and physical performance in an elderly Korean population. Method : This study used data from the Korean Urban and Rural Elderly (KURE) study. In 2012, a total of 927 people (65 years or older) agreed to participate in KURE study. HDL-cholesterol levels were measured from overnight fasting blood samples. Physical performance was assessed by 3-m timed up & go (TUG) and 5-times chair rise test (CRT). After excluding people missing CRT (n=35) value, cross-sectional analyses were conducted for 892 participants (294 men and 598 women). Results : In men, HDL-cholesterol level was significantly associated with TUG (r=-0.121, p=0.038) but not with CRT (r=-0.013, p=0.826) in an age-adjusted model. But the association was not significant after additional adjustment for body mass index, total cholesterol, diabetes mellitus and blood pressure. In women, HDL-cholesterol level was significantly associated with CRT (r=-0.104, p=0.016) but not with TUG when fully adjustment. Conclusion : Our findings suggest that high level of HDL-cholesterol is associated with better physical performance in an elderly Korean population. Keywords : HDL-cholesterol, physical performance, cohort study

PP26 C-141

PREVALENCE AND PATTERNS OF MULTIMORBIDITY IN ONTARIO'S AGING HOME CARE POPULATION

Joshua J. ARMSTRONG¹, Mu ZHU², John HIRDES¹, Paul STOLEE¹ (1. School of Public Health and Health Systems, University of

Waterloo, Canada; 2. Department of Statistics and Actuarial Sciences, University of Waterloo, Canada)

Introduction : Driven by rapidly growing populations of older adults, there is a mounting interest in the study of multimorbidity. Multimorbidity is the coexistence of multiple chronic diseases and it is associated with aging, negative health outcomes, and increased service health care utilization. The prevalence of multimorbidity in older adults has been reported to range between 55 to 98% yet little research has focused directly on developing our understanding of the common chronic disease patterns that develop. With electronic health databases growing rapidly through the everyday use of information systems, investigations into frequent patterns of chronic diseases can be conducted through the application of novel data mining techniques. Association rule mining (ARM) can be applied to health information from older home care clients to discover the most common patterns of chronic diseases in Ontario's home health care system. **Method :** ARM was performed using the arules package in R on clinical assessment data from long-stay (>60 days) home care clients over the age of 65 in Ontario, Canada. Data was collected using the mandated RAI-HC data system (N=298 262; year range = 2005-2010). **Results :** The prevalence of multimorbidity for those over the age of 65 was 78%. The ARM analysis resulted in identifying the top 20 2-way combinations of chronic diseases and the top 5 3-way combinations for Alzheimer's disease, dementia not AD, and hypertension. **Conclusion :** Our findings illustrate that multimorbidity is prevalent in the home care population and that common patterns of chronic diseases can be identified through the application of innovative data mining techniques. **Keywords :** multimorbidity, home care, data mining

PP26 C-142

A CLINICAL EVALUATION OF THE CLINICAL UTILITY OF GENETIC RISK SCORES

Wonsuk YOO¹, Brian A. FERRENCE² (1. Dept. of Community Health and Preventive Medicine, Morehouse School of Medicine, USA; 2. Translational Research and Clinical Epidemiology and Centre for Evidence Based Medicine, Wayne State School of Medicine, University of Oxford, USA)

Introduction : Substantial uncertainty exists as to whether combining multiple disease-associated single nucleotide polymorphisms (SNPs) into a genotype risk score (GRS) can improve the ability to predict the risk of disease in a clinically relevant way. **Method :** We calculated the ability of a simple count GRS to predict the risk of a dichotomous outcome using a variety of clinical risk prediction metrics, under both a log additive (multiplicative) and linear additive model of combined effects. We then compared the results of these simulations with the observed results of published GRS measured within multiple epidemiologic cohorts. **Results :** If the combined effect of each disease-associated SNP included in a GRS is log additive (multiplicative on the risk scale), then a count GRS score should be useful for risk prediction with as few as 10-20 SNPs. Adding additional SNPs to the GRS under this model dramatically improves risk prediction. By contrast, if the combined effect of each SNP included in a GRS is linearly additive on the risk scale, a simple count GRS is unlikely to provide clinically useful risk prediction. Adding additional SNPs to the GRS under this model does not improve risk prediction. The combined effect of SNPs included in several published GRS measured in several well-phenotyped epidemiologic cohort studies appears to be more consistent with a linearly additive effect. **Conclusion :** A simple count GRS is unlikely to be clinically useful for predicting the risk of a dichotomous outcome. Adding additional SNPs to a count GRS is not likely to substantially improve its predictive

power. **Keywords :** SNPs, genotype risk score, risk prediction

PP26 C-143

COFFEE CONSUMPTION AND MORTALITY: A META-ANALYSIS OF PROSPECTIVE COHORT STUDIES

Youjin JE¹, Youngyo KIM¹, Edward GIOVANNUCCI² (1. Department of Food and Nutrition, Kyung Hee University, Korea; 2. Departments of Nutrition and Epidemiology, Harvard School of Public Health, USA)

Introduction : Recent meta-analyses of prospective studies showed reduced risks of type 2 diabetes, cardiovascular diseases and some types of cancer among coffee drinkers. Long-term coffee consumption may prolong people's lifespan by preventing the incidence and/or progression of chronic diseases, but no comprehensive review and meta-analysis of coffee consumption and total mortality has been conducted. **Method :** To provide a quantitative assessment of this association, we conducted a meta-analysis of prospective cohort studies published up to December 2012 through a search of MEDLINE and EMBASE databases and the reference lists of the retrieved articles. Information on participant characteristics, measurement of coffee consumption and outcomes, adjustment for potential confounders and estimates of associations was extracted. **Results :** We identified sixteen cohort studies of coffee consumption and total mortality, including 944,384 participants, and calculated pooled relative risks (RRs) with 95% confidence intervals (CIs) using a random-effects model. The pooled RR of total mortality was 0.85 (95% CI, 0.80-0.90; p <0.001) for the highest (≥6 cups per day), 0.87 (95% CI, 0.81-0.93; p < 0.001) for the second highest (≥3-5 cups per day), and 0.92 (95% CI, 0.88-0.97; p =0.001) for the third highest (1-2 cups per day) category of coffee consumption compared with the lowest coffee consumption category (0 or less than 1 cup per day). The inverse associations did not differ substantially by gender, adjustment factors, and follow-up times. No evidence of publication bias was found (Begg's p-values > 0.10). **Conclusion :** Our findings suggest that regular coffee consumption is associated with a reduced risk of total mortality. **Keywords :** coffee, mortality, death, cohort studies, meta-analysis

PP26 C-144

A SYSTEMATIC REVIEW OF THE EXERCISE IN DEMENTED SENIORS

Chu-Lin CHANG, Kuei-Min CHEN (College of Nursing, Kaohsiung Medical University, Taiwan)

Introduction : Exercise intervention has been utilized widely in older adults. It can prevent the occurrence of chronic illness disease, improve the mental and physical health, and maintain the life quality. In recent years, exercise program intervention for demented senior has been studied by some researche. Because of the increasing incidence of dementia, a systematic review of exercise intervention in older adults with dementia is warranted. **Method :** Using a systematic review, we searched for articles published between 2007 and 2012 in the database of MELINE, PubMed, CINAHL, ProQuest, Cochrane Library and CEPS with the keywords: 'exercise', 'physical activity' and 'dementia'. An initial 102 articles were initially retrieved. After filtering based on inclusion criteria and excluding duplicates, we found 7 articles with contained either randomized clinical trials or controlled clinical trials for further analysis and synthesis. **Results :** In all 7 articles, exercise program intervention can prevent the decline of cognitive function, improve the physical health, and reduce the mood disorder in demented seniors. **Conclusion :** The result of review helpful for medical staff to learn the exercise intervention and the

operational information for demented seniors in clinical practice. It can also provide information for future study and prospect of exercise intervention in demented seniors. Keywords : exercise, physical activity, dementia

PP26 C-145

BALANCE AND MOBILITY AFTER PHYSICAL-EXERCISES IN DIZZY OLDER ADULTS

Hsiao-Yun HU¹, Ming-Hsia HU¹, Li-Chou CHEN¹, Ai-Wen HUANG², Heui-Fen LIN³, Shiun-Jeng LIN⁴, Shu-Fang HSIAO³, Yi-Ho YOUNG⁵
(1. School of Physical Therapy, National Taiwan University, Taiwan; 2. Graduate Institute of Early Intervention, Chang Gung University, Taiwan; 3. Physical Therapy Department, National Taiwan University Hospital, Taiwan; 4. Physical Therapy Department, Endeavor Rehabilitation Clinic, Taiwan; 5. Department of Otolaryngology, National Taiwan University Hospital, Taiwan)

Introduction : The etiologies of many old patients with dizziness are unclear and are attributed to presbyastasis. The study aims to investigate the effect of physical exercises designed by physical therapist in improving balance and functional mobility in dizzy older adults. Method : Patients diagnosed with presbyastasis and received more than 6 months of medication treatment without satisfactory alleviation of symptoms were referred from the Department of Otolaryngology in National Taiwan University Hospital. A total 34 patients were included and randomly assigned to the training or the control group. Each subject received 12 1-hour sessions of individualized vestibular exercises training including vestibular habituation exercises, multisomatosensory balance and reconditioning exercises. General physical fitness exercise principles were provided to the control group. All patients were tested during pretest, posttest and at 1 month follow up test for their static and dynamic balance, one-leg stance test, timed up and go test (TUGT), cadence and gait speed during the TUGT, and motion sensitivity score. Results : The training group showed significant improvement in anterior-posterior weight shifting amplitude, decreased motion sensitivity score, reduced time to reach peripheral targets and reduced time to finish TUGT. In training group, 1/3 of participants reported successful weaning from medication and 1/3 reduced the medication dosage. Conclusion : Twelve hours of exercises improved the dynamic balance and functional mobility in dizzy older adults diagnosed with presbyastasis. Physical therapy exercise programs for dizzy older adults may supplement medication for reducing dizzy symptoms and improving balance and mobility. Keywords : dizzy, older adult, balance exercise

PP26 C-146

EFFECTIVENESS OF EXERCISE INTERVENTION PROGRAM FOR DEPRESSION AMONG ELDERLY: A COMPREHENSIVE REVIEW

Moon Ki CHOI, Ju Hee LEE (Department of Nursing Science, College of Nursing, Yonsei University, Korea)

Introduction : Depression is an important issue because of its high prevalence among elderly as well as impact on quality of life. Previous studies reported that various exercise intervention programs improved older adults' mental health. However, there is a lack of examined evidence to support the effectiveness of it for depression in older adults. The purpose of this study is to examine the effectiveness of the interventions for decreasing depression of older adults by synthesizing individual studies. Method : A comprehensive review was conducted from 2006 to 2012 using electronic search via the PubMed, MEDLINE, and CINAHL database. Following keywords were used for this search: depression, exercise, and elderly. The inclusion criteria

for inclusion were 1) a randomized controlled trials studies providing exercise intervention, 2) elderly with over 60 years old, and 3) English or Korean language. Results : A total of 10 randomized controlled trials were included for this study. Most of the trials were conducted by health care professionals such as medical doctor(6), registered nurse(2) and physiotherapist(1), and only one trial was conducted by a psychological counselor. Of the 10 trials, 5 trials included elements of endurance, strength, stretching and balance. In 2 trials the exercise intervention was classified as Yoga. Others included Qigong, folk dance and resistance exercise, respectively. Only 4 trials showed statistically significant effect in improving depression among elderly, while 6 trials did not. Conclusion : The effect of exercise on depression in elderly could not be confirmed, so our findings strongly suggest that studies of exercise intervention for elderly are in need. Keywords : depression, exercise, elderly

PP26 C-147

THE EFFECT OF DUAL-TASK TRAINING ON GAIT IN ELDERLY WOMEN

Sun-Shil SHIN¹, Duk-Hyun AN² (1. Department of Physical Therapy, Graduate School of Public Health, Inje University, Korea; 2. Department of Physical Therapy, College of Biomedical Science and Engineering, Inje University, Korea)

Introduction : Many activities of daily living require maintaining balance during the concurrent performance of two or more tasks. Older people who perform poorly based on dual-tasks are at increased risk for falls. The purpose of the study was to investigate the effect of dual-task to balance program on gait in elderly Korean women, as well as to suggest a more effective balance exercise method. Method : For this study, twenty elderly Korean women who walked independently were recruited from community dwelling. The dual-task balance training group (experimental group, n=10) stood on the Aero-step, and incorporated ball bouncing, catching, and throwing, while simple training group (control group, n=10) merely stood on the Aero-step. Participants received 45 minute training sessions, 2 times a week for 6 weeks. Gait variables (velocity, cadence, step length, stride length) were recorded with a GAITRite walkway at self-paced speed walking. Results : Velocity, cadence, step length, and stride length of the dual task balance training group were significantly improved more than that of the control group (p < .05). All selected gait variables of the dual task group were significantly improved after training (p < .05). Conclusion : We compared the effects of dual-task and simple-task conditions on gait in elderly women. The results of this study showed that the dual-task balance training group improved walking ability more than that of the simple balance training group. Further studies should investigate dual-task balance training with kinematic and kinetic data, and muscle activation based on various pressure value of Aero-step. Keywords : Dual Task, Balance, Elderly

PP26 C-148

FACTORS RELATED TO DROPOUT FROM A VOLUNTARY EXERCISE GROUP ARE DIFFERENT AMONG COMMUNITY-DWELLING ELDERLY OF DIFFERENT AGE GROUPS

Takuya UEDA¹, Yoshitaka SHIBA², Shuichiro WATANABE¹
(1. Graduate School of gerontology, J.F.Oberlin University, Japan; 2. School of Allied Health Sciences, Kitasato University, Japan)

Introduction : Continuation of exercise is important among elderly individuals. Few studies have investigated factors related to dropout from a voluntary exercise group (the group). We aimed to examine differences in factors related to dropout from the group after 3 years

among community-dwelling elderly of different age groups. Method : The subjects were 67 community-dwelling elderly (age, 71.4 ± 5.3 years) who belonged to the group and participated in the baseline survey. We conducted an interview survey and physical function measurement at baseline. Three years later, we investigated whether the subjects were a part of the group. We classified subjects into the 60- to 69-year group and the >70-year group. We used multiple logistic regression for analyzing variables. Results : Three years later, 48 people (71.6%) continued to participate in the group. In the 60- to 69-year group, no factor was related to dropout. However, in the >70-year group, we extracted factors related to dropout: one leg standing time (OLS; odds:0.96, 95%CI:0.92-0.99) and Fall Efficacy Scale International score (odds:1.07, 95%CI:1.00-1.16). We also found 6 reasons related to dropout: pain (n=5), illness (n=3), other exercise (n=3), death (n=3), injury (n=2), loss of interest (n=1), and unknown (n=2). Conclusion : Factors related to dropout from the group were different between the 60- to 69-year group and the >70-year group. We found that OLS and fall efficacy were related to dropout from the group. These findings suggest that to prevent pain and illness, it is important to continue to participate in the group. Keywords : community-dwelling elderly, dropout, exercise

PP26 C-149

ASSOCIATION OF PRE-TREATMENT FUNCTIONAL STATUS [MEASURED BY INSTRUMENTAL ACTIVITIES OF DAILY LIVING (IADL)] AND RECEIPT OF NABPACLITAXEL \leq 2 MONTHS IN PATIENTS WITH METASTATIC BREAST CANCER (MBC)

Anthony CHOI¹, Suzette BLANCHARD², George SOMLO¹, Joanne MORTIMER¹, Thehang LUU¹, Timothy SYNOLD¹, Vani KATHERIA¹, Arnold ROTTER³, Carol WONG³, Rupal RAMANI¹, Kurt HANSEN¹, Arti HURRIA¹ (1. Medical Oncology and Therapeutics Research, City of Hope Comprehensive Cancer Center, USA; 2. Information Sciences, City of Hope Comprehensive Cancer Center, USA; 3. Radiology, City of Hope Comprehensive Cancer Center, USA)

Introduction : IADLs are activities required to maintain independence in the community, such as shopping and preparing meals. nab-paclitaxel is a common treatment for MBC. The goal of this analysis was to evaluate the association between pre-treatment IADL score and discontinuation of nab-paclitaxel at \leq 2 months from treatment initiation. Method : Thirty-nine evaluable patients (mean age 60; range 30-81) with MBC received 1st or 2nd line chemotherapy with nabpaclitaxel 100mg/m² weekly for 3 of 4 weeks. IADL score [range 0 - 14 (higher score, more independent)] was measured pre-treatment and at 2 months. Recursive partitioning implemented with the R package tree was used to assess if pre-treatment IADL score was predictive of time on study \leq 2 months, and was extended to include patient age. Results : IADL score was available for all evaluable participants; 31% (12/39) received \leq 2 months of treatment [reasons for discontinuation: progression (83%), toxicity (17%)]. Only 16% (4/25) with an IADL score >12.5 discontinued treatment at \leq 2 months compared to 57% (8/14) with an IADL score <12.5 . In patients with an IADL scores <12.5 , 100% (6/6) age < 63 discontinued treatment at \leq 2 months vs 25% (2/8) age >63 . There was little longitudinal change in IADL (from >12.5 to <12.5) from pre-treatment to 2 months: 17% in participants who came off study at \leq 2 months vs 8% in those who continued >2 months. Conclusion : There is an association between pre-treatment IADL score and receipt of \leq 2 months of nab-paclitaxel treatment that is worthy of further study. Keywords : Functional status, Metastatic breast cancer

PP26 C-150

THE ROLE OF PREOPERATIVE INCENTIVE INSPIROMETRY IN ELDERLY PATIENTS

J. LEE¹, S. SHIN¹, H. LEE¹, J. KIM¹, J. HAN², H. SHINN², R. UMID³,

D. ERKINJON³, (1. Surgery of Inha University College Of Medicine, Korea; 2. Anesthesiology of Inha University College Of Medicine, Korea; 3. Surgery of Inha University College Of Medicine, Uzbekistan)

Introduction : The effect of preoperative incentive inspirometry (IS) for protection of pulmonary complications in elderly patients who had abdominal surgery is still controversial. Our objective was to ascertain the role of preoperative IS in elderly patients. Method : We selected 417 adult patients older than 65 years who were hospitalized from March, 2010 to June, 2012 for any type of abdominal surgery procedures. The X-rays on POD 3, fever for two days of post operation, duration of hospitalization, whether ICU care was received or not, and mortality rate of 177 patients with preoperative IS were compared with other 240 patients who IS was not used for. Results : The rates of fever, atelectasis and both in preoperative IS group are 20.34%, 38.42%, 9.60%; they were significantly greater than the rates of the group with no IS.(9.17%, 17.08%, 1.67%) But there are no significant differences in ICU care, mortality and hospitalization period between the two groups.(2.82% vs 1.67%, 1.69% vs 1.25, 15.11days vs 14.30days). Conclusion : It can be thought that the preoperative IS has no effect on pulmonary complications because there were lower rates of fever, atelectasis and both in the group without IS. However, it can be the result of selection bias from retrospective study. Moreover, we can assume that the use of IS can decrease pulmonary complications during hospitalization and help overcoming the early complications for there was no significant differences in ICU care, mortality, hospitalization period between the two groups. We recommend the prospective study to ascertain the role of IS. Keywords : incentive inspirometry, pulmonary complication, elderly patients

PP26 C-151

ANEMIA IS ASSOCIATED WITH MORTALITY AND PHYSICAL FUNCTION IN COMMUNITY-DWELLING KOREAN ELDERLY : 5-YEAR LONGITUDINAL PROSPECTIVE STUDY

Seung Yeol LEE¹, Soo-Mee BANG², Ki Woong KIM³, Nam-Jong PAIK⁴, Jae-Young LIM⁴ (1. Department of Rehabilitation Medicine, Seoul National University Bundang Hospital, Korea; 2. Department of Internal Medicine, Seoul National University Bundang Hospital, Seoul National University College of Medicine, Korea; 3. Department of Neuropsychiatry, Seoul National University Bundang Hospital, Seoul National University College of Medicine, Korea; 4. Department of Rehabilitation Medicine, Seoul National University Bundang Hospital, Seoul National University College of Medicine, Korea)

Introduction : The purpose of this study is to recognize the associations of anemia with mortality and poorer physical function at 5-year follow-up period in Korean elders. Method : We used the baseline and 5-year longitudinal follow up data from a populationbased cohort study focused on older Koreans, the Korean Longitudinal Study on Health and Aging (KLoSHA). A total 638 persons aged 65 years older who were completed the 5-year follow up assessment were included. Primary outcome was determined using short physical performance battery (SPPB) score and mortality. Poor outcome group (PG) included elders who were expired during the follow up or whose SPPB score were below 10 at follow-up period. Good outcome group (GG) were those with a good physical performance (SPPB score \geq 10) score at follow-up period. Anemia was defined according to World Health Organization criteria as a hemoglobin concentration below 12 g/dL in women and below 13 g/dL in men. Results : The prevalence of anemia was 7.0% in GG and 17.6% in PG. Hemoglobin levels, skeletal

muscle mass, muscle strength, physical activity score, depressive symptoms (GDS-K), cognitive function (MMSE-K), pain related dysfunction (WOMAC-K) and comorbidity (CCI) at baseline data were significantly different between two groups. In the multivariate logistic regression analysis, age of 75 or more, presence of anemia and cognitive dysfunction (OR [CI] 3.16 [1.80-5.57], 2.74 [1.19-6.30], and 0.88 [0.81-0.96], respectively) at baseline were significant factors affected on poor outcome. Conclusion : We found anemia and cognitive dysfunction were associated with poor outcome; mortality and poorer physical function in community-dwelling Korean elders. Keywords : Anemia, Mortality, Longitudinal Study

PP26 C-152

CRITERIA TO DETERMINE APPROPRIATENESS OF HOSPITAL ADMISSIONS AMONG RESIDENTS OF LONG-TERM CARE FACILITIES: A SYSTEMATIC REVIEW

Anna RENOM GUITERAS¹, Lisbeth UHRENFELDT², Gabriele MEYER¹, Eva MANN³ (1. School of Nursing Science, Faculty of Health, Witten/Herdecke University, Germany; 2. Horsens Hospital Research Unit, Department of Public Health, University of Aarhus, Denmark; 3. Institute of General Practice, Family Medicine and Preventive Medicine, Paracelsus Medical University, Austria)

Introduction : Residents of long-term care facilities have a high risk of hospital admission. Estimates of the frequency of inappropriate admissions vary throughout studies. This report aims to review the criteria used to assess appropriateness of hospital admissions among this population. Method : Systematic review of the studies published in PubMed and CINAHL® between January 2000 and October 2011, covering seven languages. Quantitative studies using any criteria for assessing appropriateness of hospital admission of long-term care residents were included. Data were extracted by two pairs of independent researchers. Results : Twenty-six articles were included; six dealt with admission to emergency departments, seven with admission to hospital wards, five with both, and eight did not provide this information. The proportion of admissions considered as inappropriate ranged from 2% to 77%. Throughout the studies, 15 different criteria were used; all were based on expert opinion; six criteria had been developed considering published literature or interpretation of patient data additionally. Criteria covered several aspects: medical diagnoses (n=11), acute symptoms (n=8), resident's characteristics (n=6), resident's or family's wishes (n=5), existence of a care plan (n=2), availability of resources (n=9). Six criteria assessed only one aspect and two criteria assessed all the aspects; five judged appropriateness based on a balance of aspects. Conclusion : Most criteria are not comprehensive and do not take individual aspects into account. Some are comprehensive but their generalisability is unknown. Further research is needed in order to develop evidence-based, comprehensive and generalisable criteria for assessing appropriateness of hospital admission among residents of long-term care facilities. Keywords : residential facilities, patient transfer, hospitalization

PP26 C-153

SURVIVAL ANALYSIS: HANDGRIP STRENGTH AND CANCER STAGING IN THE ELDERLY CANCER PATIENTS

Shu-Yuan LIU, Chia-Hui CHEN (Nursing, National Taiwan University, College of Medicine, Taiwan)

Introduction : Cancer has been the first leading cause of death for the past 30 years in Taiwan. Survival is one of the most concerned issues for patients and their families. Literature has suggested that handgrip strength might be an important prognostic factor for mortality,

especially in the elderly, but clinical data are limited. Method : The purpose of this study was to examine the predictive power of handgrip strength in the elderly cancer population. As part of a trial study evaluating the effect of a nursing intervention on postsurgical functional decline, 95 elderly cancer patients (>65 years) who were diagnosed with gastric and pancreatic cancer and scheduled for an abdominal surgery were enrolled from August 2007 to April 2009. Their handgrip strengths were taken prospectively at three time points: admission (preoperative baseline), discharge, and three-month after discharge. Whether handgrip strength is a prognostic factor for survival were analyzed using Cox Regression with cancer staging served as a covariate. Results : The results shown that for every 1 kg increase in preoperative handgrip strength, the all-cause mortality decreased approximately 5% (95% confidence interval 0.90 to 0.99; P<.05). Conclusion : The findings suggested that while cancer staging remains to be the strongest prognostic factor, the preoperative handgrip strength is an independent prognostic factor for all-cause survival in the elderly cancer patients with diagnoses of gastric and pancreatic cancer. If verified, handgrip strength measure will be a simple, yet effective parameter that is clinically accessible to predict survival so treatment decisions can be well-informed and justified. Keywords : Elderly, cancer, handgrip, cancer staging, prognostic factor for survival

PP26 C-154

DEVELOPMENT OF SPECIAL SYSTEM AND SOFTWARE FOR STRUCTURED FUNCTIONAL ASSESSMENTS IN LONG-TERM CARE IN THE CZECH REPUBLIC

Martina JEDLINSKA¹, Iva HOLMEROVA¹, Hana VANKOVA¹, Eva JAROLIMOVA¹, Dana HRADCOVA¹, Zoltan SZABO², Radim KRUPICKA², Kristyna SOUKALOVA³ (1. Faculty of Humanities, Charles University, Czech; 2. Faculty of Biomedical Engineering, Czech Technical University in Prague, Czech; 3. Faculty of Health Studies, University of Pardubice, Czech)

Introduction : The issue of Long-Term Care is a major health and economic problem, in the context of demographic trends and the changing morbidity pattern, mainly due to longer life survival of chronically ill and people with severe disability. The Czech Republic is among the countries which miss nationwide data about long-term care, e.g. some relevant data such as dependence in activities of daily living, frailty and their risk factors. These data are necessary for quality long-term care, its planning and delivery. Method : The project NT/13705 aims to create a battery of tests for the functional evaluation in Long-Term Care and the creation of software for data mining, which allows easier user-accessible data acquisition and analysis. The project's goal is to effectively overcome barriers with usage of a simple electronic system for data collection, typically resulting from the Czech environment of providing long-term care (lack of quality computer technology, low computer-literacy of workers in direct care) for creation of starter conditions for a quality data gathering in this area. Results will be linked with the system of quality control and evaluated at national level. Results : The methods of the project and the experience of the first two years of the project 2012; 13th will be presented in the paper. Conclusion : The project has crucial importance for the coordination of long-term care in the Czech Republic as well as improvement of the quality care at individual workplaces. The financial support of the IGA grant of the Czech Ministry of Health No NT 13705 is acknowledged. Keywords : Long-Term Care, data mining

PP26 C-155

PROFILES OF GERIATRIC PATIENTS IN A COMMUNITY

HOSPITAL: A PILOT PROJECT OF AN INDIVIDUALIZED CASE MANAGEMENT SYSTEM AMONG 80 YEAR OLDS AND OLDER

Carine FEDERSPIEL¹, Jean-Paul STEINMETZ² (1. Geriatric Rehabilitation Unit, Department of Research and Development, ZithaKlinik, ZithaSenior, Luxembourg; 2. Department of Research and Development, ZithaSenior, Luxembourg)

Introduction : According to Eurostat, the proportion of the population aged 80 years and more increased by approximately 37% over the last decade. This increase of the most elderly is associated to amplifications of geriatric syndromes leading to hospitalizations. Research demonstrates that up to two thirds of the patients aged 80 to 90 years face functional decline during hospitalizations, entailing a dependency in activities of daily living, increasing morbidity and mortality. As recently stressed by the I.A.G.G/A.M.P.A. Task Force, hospital organizations should enable the easy identification of old adults vulnerable for functional decline. After identification, the geriatric patient should be guided through a coherent pathway of care to minimize negative outcomes. **Method :** The present research communicates preliminary findings from a pilot project about a community hospital attempting to apply a patient-centered pathway of care. More precisely, the research project aims to profile the characteristics of frail adults aged 80 years and more and their vulnerabilities by using a very short screener that sets off a process of in-depth geriatric assessment using a broader newly constructed geriatric screening instrument. The Zitha Geriatric Screening is composed of medical, physical, cognitive, functional, and social parameters, enabling the multidisciplinary team to construct a detailed profile of the individual patient. **Results :** Patient profiles are then used to propose individualized patient-centered pathways of care. **Conclusion :** The present research communication will demonstrate the characteristics of approximately 200 hospitalized adults aged 80 years and more and will discuss actions undertaken by geriatricians to support maintenance of the functional status among elderly patients. **Keywords :** geriatric screening, case management, geriatric profile

PP26 C-156

DISTAL ARM AND LEG CIRCUMFERENCES CORRELATED WITH SKELETAL MUSCLE MASS IN OLDER ADULTS

Kuei-Yu CHIEN¹, Lee-Hwa CHEN², Jou-Min TUNG², Yu-Ti TIEN¹, Shu-Chen CHEN³, Li-Fang HU⁴ (1. Graduate Institute of Sports Science, National Taiwan Sport University, Taiwan; 2. Department of Athletic Training and Health, National Taiwan Sport University, Taiwan; 3. Department of Recreation Sport Management, Yu-Da University, Taiwan; 4. Dept. of Nursing, Taichung Veterans General Hospital Chiayi Branch, Taiwan)

Introduction : Accurate and practical estimation of skeletal muscle mass is important for clinical practice and community health promotion. Appendicular skeletal muscle mass (ASM) is a majority portion SMM. Therefore, upper arm and thigh as estimations of muscle mass are frequently reported. However, the correlation between forearm and leg circumferences and ASM are unclear. The purpose of this study was to investigate the correlation among ASM, appendicular circumferences, body mass index (BMI), arm muscle circumference (AMC) and AMA (Arm muscle area). **Method :** A total of 102 community-dwellers (mean age 74.3±0.58 yrs ;) volunteered for the study. Fifty-four participants are from 65 to 75 years old and 48 participant are older than 76. Appendicular skeletal muscle mass was measured by dual energy X-ray absorptiometry (DXA). Anthropometric measurements (height; weight; forearm; middle arm; thigh and calf circumference) were also determined. **Results :** Middle

arm, thigh circumferences, BMI, AMC and AMA moderately correlated with ASM in the age of 65-75 participants (.409-.518, p<.001), except for age older than 76 participants (-.266-.241, p>.05). Forearm and calf circumferences highly correlated with ASM and WSM (forearm .605-.737; calf .573-.749, p<.001) in all of elderly. **Conclusion :** These results suggest that forearm and calf circumferences measurements would be added into clinical or community screening procedures, especial for the elderly older than 75 years old. **Keywords :** Appendicular, Elderly, Nutrition assessment

PP26 C-157

RELIABILITY OF ONLINE GERIATRIC DIAGNOSTIC AND PROGNOSTIC DECISIONS

Leonard C. GRAY¹, Melinda MARTIN-KHAN¹, Helen EDWARDS², Steven COUNSELL³, Richard WOOTTON⁴, Peteris DARZINS⁵ (1. Centre for Research in Geriatric Medicine, The University of Queensland, Australia; 2. School of Nursing, Queensland University of Technology, Australia; 3. School of Medicine, Indiana University, USA; 4. Centre for Integrated Care and Telemedicine, University Hospital of North Norway, Norway; 5. Geriatric Medicine and Continuing Care, Monash University, Australia)

Introduction : The relative shortage of geriatricians, particularly in rural communities, suggests a need to use geriatrician time more efficiently, and to find methods to enable their expertise to be provided at a distance. We developed a method to achieve this using a combination of structured assessment based on the interRAI Acute Care system, applied by a trained nurse assessor at the distant site, and reviewed on a web-based clinical decision support system by geriatricians at a distant site. This study tested the reliability of online decision making using this system. **Method :** Prospective cohort study in which patients referred in 3 acute hospitals received paired assessments by 2 geriatricians. Pairs were randomly allocated to be conducted 'online' or 'live'. Thus patients received either 2 sequential live assessments (LL) or a live and online assessment (LO). This enabled the inter-rater reliability (IRR) of live decisions to be compared with the IRR of live - online pairings. **Results :** 175 patients were recruited, with 87 receiving live-live paired assessments and 88 receiving paired live-online assessments. Agreement expressed % agreement did not differ significantly for any of the following clinical judgements: Presence of delirium (LL 63%, LO 62%); dementia (100%,100%); depression (67%, 61%); requires long term residential care (87%, 90%); probable discharge destination from hospitals (40%, 37%); and likely location in 3 months (62%, 54%). **Conclusion :** These results indicate that key decisions made by geriatricians, including some difficult prognostic decisions which are associated with considerable inaccuracy when performed live, are equally as reliable when made online as in person. **Keywords :** assessment; telehealth; geriatrician

PP26 C-158

A TRIAL ON INTERVENTIONS BY THE LIAISON PSYCHIATRY TEAM IN A JAPANESE ACUTE CARE HOSPITAL _SUPPORTING ELDERLY PATIENTS' RETURN HOME_

Minori TOKUI¹, Makoto TAKAYOSE², Eiki KONISHI³, Akira TAKAHARA¹, Daisuke ITO¹, Mineo ARAKI¹ (1. Nursing, Himeji St. Mary's Hospital, Japan; 2. Liaison Psychiatry Team, Himeji St. Mary's Hospital, Japan; 3. Rehabilitation, Himeji St. Mary's Hospital, Japan; 4. Psychiatry, Kikukawa Araki Psycho-somatic Medicine Clinic, Japan)

Introduction : Psychiatric conditions such as dementia, delirium, and

depression are frequently a problem during hospitalization in elderly patients. Taking these medical circumstances into account, the Ministry of Health, Labor and Welfare decided to include a payment system for Liaison Psychiatry Team activities in acute care hospitals from 2012 to promote early discharge. We established a Liaison Psychiatry Team at our hospital and would like to report the operational status of their interventions. Method : The team comprised 6 members (a psychiatric physician, clinical psychotherapist, certified nurse specializing in gerontological nursing, certified nurse in dementia care, and an occupational therapist). The clinical psychotherapist makes a daily ward round and collects patient information. Team conferences are held every week to map out patients' care/treatment plans. The data were collected from July to September, 2012. Results : Forty-six patients [18 males, 28 females; average age, 75.24 years (82.6% ≥65)] received consultations (internal medical ward, 30; surgical ward, 9; orthopedic surgery, 5; ENT, 1; urology, 1). The most frequent reasons for consultation were insomnia, anxiety, and delirium, and the most frequent interventions were pharmacotherapy, occupational therapy, and psychotherapy. Outcomes: 22 discharged home, 9 still under hospitalization, 9 discharged to long-term-care hospitals or nursing homes, and 6 died. Conclusion : Most consultations involved enquiring about patients' psychological or behavioral disorders such as insomnia, anxiety, and delirium. Nearly half of patients were discharged 'Home', which indicates the success of the interventions. Keywords : Liaison Psychiatry Team, elderly patients, discharge

PP26 C-159

WHEN THE GOLDEN YEARS ARE BLUE: CHANGES IN DEPRESSIVE SYMPTOMS OVER TIME AMONG OLDER ADULTS NEWLY ADMITTED TO LONG TERM CARE FACILITIES IN ONTARIO, CANADA

Eva NEUFELD¹, Shannon FREEMAN¹, Karlijn JOLING², John P. HIRDES¹ (1. School of Public Health and Health Systems, University of Waterloo, Canada; 2. Department of General Practice and Elderly Care Medicine, VU University Medical Centre and EMGO Institute for Health and Care Research, Netherlands)

Introduction : The identification of depression among residents in long-term care facilities is an important concern. This study investigated prevalence of depressive symptoms and diagnoses among older adults newly admitted to long term care facilities (LTCFs) in Ontario, Canada. The degree of change in depressive symptoms at 3 month follow-up assessment was also examined, including predictors of the development of depression over time. Method : Using assessments (N=63,095) from the Minimum Data Set 2.0 (MDS 2.0) collected as a regular part of clinical care, changes in depressive symptoms and predictors of depression following admission to institutional care were examined. The MDS 2.0 captures information on all residents who enter a LTCF and is mandated for use in all LTCFs in Ontario, Canada. Results : Depressive symptoms were present in 54.3 cases per 100 residents at initial assessment, increasing to 60.8 cases per 100 residents by follow-up. Although depressive symptoms worsened, approximately 30% of residents showed moderate to significant improvement following LTCF admission. Changes in depressive symptoms are discussed in relation to clinical characteristics including functional, cognitive, psychosocial, and demographic variables. Results are discussed in the context of the MDS 2.0 and interRAI Mood CAP as a resource for LTCF care staff. Conclusion : Integrated approaches using information from the interRAI Mood CAP will assist LTCF staff in recognizing depressive symptoms and treat residents at-risk; make informed decisions in addressing depression at the person-level, and thereby improve the

quality of care and quality of life of LTCF residents. Keywords : interRAI, Minimum Data Set, assessment

PP26 C-160

FACTORS AFFECTING LIFE SATISFACTION AMONG THE PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE

Haejung LEE¹, Yeonjung LIM¹, Sungmin KIM¹, Jong Joon AHN², Ki Uk KIM³, Doo Soo JEON⁴, Yunseong KIM⁴, Hye-Kyung PARK³ (1. College of Nursing, Pusan National University, Korea; 2. Department of Internal Medicine, Ulsan University Hospital, Korea; 3. Department of Internal Medicine, Pusan National University Hospital, Korea; 4. Department of Internal Medicine, Pusan National University Yangsan Hospital, Korea)

Introduction : This study was conducted to identify the factors related life satisfaction in patients with chronic obstructive pulmonary disease (COPD). Method : Male patients with COPD (N=235) were recruited from 5 hospitals in Korea between March and November 2010. Descriptive statistics, Pearson correlation, and stepwise multiple regression were used. General and disease-related characteristics, health status, and depression were included in the regression model as predictors. Results : The mean age was 67.13±7.92 years, duration since diagnosed with COPD was 7.06±9.57 years, forced expiratory volume in 1 second (FEV1) % predicted was 61.39±23.07 %, and 6 minute walk distance (6MWD) was 348.01±84.42 meters. The mean score of life satisfaction was 20.32±6.71 (range: 5.0~35.0), perceived health status was 67.49±19.08 (range: 10.1~95.8), and depression was 14.13±8.73 (range: 0~57.0). Stepwise multiple regression analysis indicated that 24.2% of the variance in life satisfaction was explained by depression (β=.350), age (β=.251), total household income (β=.202), FEV1 % predicted (β=.156), and educational level (β=.140). Depression was the most important predictor of life satisfaction (β=.350). Patients with less depression, older age, higher total household income, better pulmonary function, and lower educational level reported higher life satisfaction. Conclusion : Findings from this study provide a comprehensive understanding of life satisfaction and related factors in patients with COPD in Korea. Researchers and healthcare professionals need to be aware of the presence of depression and its possible adverse effects on patients' future life satisfaction. Further study with a larger sample and long-term design is necessary. Keywords : chronic obstructive pulmonary disease, life satisfaction, depression

PP26 C-161

ETHICAL ISSUES RELATED TO PERCUTANEOUS ENDOSCOPIC GASTROSTOMY AND TUBE FEEDING OF ELDERLY PEOPLE IN JAPAN- APPROACHES OF THE JAPAN ACADEMY OF GERONTOLOGICAL NURSING -

Harue MASAKI¹, Satoshi IDE², Mari KATAOKA³, Mayuko TSUJIMURA¹, Pingping ZHANG⁴, Kieko IIDA⁵ (1. Graduate School of Nursing, Chiba University, Japan; 2. Gerontological Nursing, Open University of Japan, Japan; 3. Nursing Course of Kochi Medical School, Kochi University, Japan; 4. Department of Nursing, Faculty of Health Sciences, Saitama Prefectural University, Japan; 5. Florence Nightingale School of Nursing & Midwifery, King's College London, United Kingdom)

Introduction : The International Exchange Committee of the Japan Academy of Gerontological Nursing (JAGN) continuously held international exchange meetings with the objective of learning from the practices in various countries to clarify the ethical issues related to Percutaneous Endoscopic Gastrostomy (PEG) and tube feeding for the

elderly. Method : In the JAGN annual meetings in 2011 and 2012, we invited nursing specialists from Japan, Korea, China and Sweden, and exchanged opinions with the participants about the ethical issues related to PEG and tube feeding in the elderly. We analyzed the exchanged opinions and the response papers from the participants by the Qualitative Synthesis Method (KJ Method). Results : The participants understood the differences among countries and cultures, and obtained deeper understandings of the present situations and issues in their own as well as other countries. It became clear that making decisions regarding PEG or tube feeding which can satisfy patients and their families is difficult in the current medical and long-term care settings in Japan. The participants confirmed that the philosophy, systems and policies in each country affect the decision-making, and recognized the necessity for civic education and recognition changes of the patients, families and healthcare workers in order to make a breakthrough. The roles of the JAGN are also highly expected. Conclusion : We shall continue to discuss this theme, and to consider the role of the geriatric nursing practice in the decision-making process suitable for the Japanese culture as well as the JAGN's concrete approaches for the future improvement in this field. Keywords : elderly, nursing, end-of-life care

PP26 C-162

THE INFLUENCE OF EMOTIONAL LABOR AND SOCIAL SUPPORT ON BURNOUT OF CLINICAL NURSES

Hyeon Jeong LIM¹, Seo-In HA¹, Min-Seo KIM¹, Min-Yi PARK¹, Hyo-Jung BAN¹, Na-Rai LEE¹, Yoon-Mi LEE¹, Eun-Sook LEE¹, Hye-Young LEE¹, Ji-Won JUN¹, Yeon-Jung CHO¹, In-Suk CHOI¹, Kyung-Sook PARK² (1. Department of Nursing, Graduate School, Chung-Ang University, Korea; 2. Professor, Red Cross College of Nursing, Chung-Ang University, Korea)

Introduction : This study is designed to know the influence of emotional labor and social support on burnout of clinical nurses. Method : A random sample of 200 nurses working in five general hospitals with more than 500 beds in Seoul. The survey with questionnaires was in process during the period from Nov. 5 to Nov. 23, 2012. It used measuring tools of Maslach Burnout Inventory(MBI), emotional labor, and social support. The collected data were analyzed by frequency, percentage, mean and standard deviation, t-test, ANOVA, Duncan's test, and Pearson's correlation. Results : Mean scores for each category were 3.08 for emotional labor, 3.27 for supervisor's support, 3.59 for colleague's support, and 3.24 for burnout. There was statistically significant difference between emotional labor and demographic characteristics, in age, gender, working unit, position, and clinical experience($p < .05$); there was statistically significant difference between social support and demographic characteristics, in gender and education level($p < .05$); there was statistically significant difference between burnout and demographic characteristics, in working unit and position($p < .05$). In other words, emotional labor was positively correlated with burnout and social support was negatively correlated with burnout. Conclusion: It is confirmed that emotional labor and social support are the factors influencing the burnout of clinical nurses. Among the factors, the correlation between the nurses' burnout and emotional labor appeared to be the strongest. Following the prior, the list continued in order with the factors of social support. Therefore it is necessary to establish support system through several programs at the organizational level to reduce nurses' emotional labor and improve the awareness of social support. Keywords : Burnout, Emotional labor, Social support

PP26 C-163

KNOWLEDGE AND CARE BURDEN FOR THE PATIENTS

WITH DEMENTIA IN ACUTE HOSPITAL NURSES

Jeong-Sook KIM¹, Jeung-Im KIM², Sook-Hee LEE³ (1. Department of Nursing, Soon Chun Hyang University Hospital, Korea; 2. School of Nursing, Soon Chun Hyang University, Korea; 3. Department of Nursing, Seoyeong University, Korea)

Introduction : This study was to aimed to explore nurses' knowledge and care burden for problematic behavior and symptoms of the demented in acute hospitals. Method : The subject was consisted of 191 people working at two acute hospitals in Seoul and Kyungi. We used the questionnaire of knowledge for demented elderly patients and the measurement of care burden on problematic behavior and symptoms. Data collection was done by self administered questionnaires after getting an informed consent. The differences of care burden were analyzed with t-test and ANOVA. Results : The mean age of the subjects was 30.0(± 6.1) years. The mean score of knowledge on the demented was 16.7(± 1.71), and the subjects had the lowest score about knowledge on dementia disease among knowledge of treatment, nursing, and disease. Correct answer rate was highest in the item of "It is a good way for demented elderly to keep lay down and keep alone" while the lowest score in "Demented elderly can't anything by themselves because of their low thinking and cognitive level" The mean score of the care burden to problematic behavior and symptoms was 2.26(± 0.50), and it was significantly different by age($t=2.67, p < .05$), career($t=3.54, p < .05$), continuous education related dementia ($t=2.67, p < .05$), experiences of care the demented ($t=2.71, p < .05$). Conclusion : From the above results, we suggest that it needs to be provided more specific education on the demented and problematic behaviors and symptoms into continuous education for nurse in acute hospitals. Keywords : Care burden, Problematic behavior & symptoms, Demented

PP26 C-164

THE EFFECTS OF VISUAL STIMULATION AND SWALLOWING PROMOTING EXERCISE BEFORE MEAL FOR STROKE ELDERLY IN A LONG TERM CARE FACILITY

Mi Soon HAN, Hwasoon KIM (Department of Nursing, Inha University, Korea)

Introduction : Many stroke patients had swallowing problems after stroke attack. Swallowing difficulty can cause severe aspiration pneumonia. The purpose of this study was to investigate the effect of providing visual stimulation and swallowing promoting exercise before meal among stroke elderly who had swallowing difficulty. Method : The subjects for this nonequivalent control pre-post test design were 72 stroke elderly. Inclusion criteria were subjects who were 1) less than 19 Gugging Swallowing Screen(GUSS) score; 2)having solid and chopped or half solid food; 3) older than 65 years. Thirty-six subjects were assigned experimental group and control group using convenient sampling method respectively. The intervention was provided for 13 to 15 minutes in every lunch and dinner time during 4 weeks. The outcome variables were GUSS score, body weight, total caloric intake for 3 days, self-efficacy for swallowing, coughing episodes during meal times. Results : Female elderly were 51(72.9%) and 74.3 percents of subjects had only one diagnosis. The experimental group had less time to finish their meal and more ratio of patients had solid chopped food than the control group. These difference were statistically significant. Mean GUSS score for the experimental group in pretest was significantly lower than the score of the control group. In ANCOVA analysis using GUSS score as a covariate, the only significant variable was self-efficacy for swallowing. Conclusion : The visual stimulation and swallowing

promoting exercise could make the improvement of self-efficacy for swallowing even if it had no effect in decreasing coughing episode due to aspiration of food during meal time. Keywords : elderly, swallowing difficulty, stroke

PP26 C-165

NURSING STAFF MEMBERS' KNOWLEDGE AND ATTITUDE ABOUT EVIDENCE-BASED RESTRAINTS PRACTICE FOR OLDER ADULTS IN KOREA

Myonghwa PARK¹, Mi-Hwa PARK² (1. College of Nursing, Chungnam National University, Korea; 2. Department of Nursing, Seojeong College, Korea)

Introduction : This study was to explore nursing staff members' knowledge and attitude toward evidence-based restraints practice for older adults to establish baseline data of evidence-based restraints protocol development and dissemination. Method : The subjects were 500 nurses and nurse aides from 22 long term care hospitals in Korea. Self-administered questionnaires were used to collect the data and the results of the study were analyzed with descriptive statistics, t-test, ANOVA and Pearson correlation. Results : There were statistically significant differences between nurses and nurse aides in knowledge and attitude toward restraints use. Nurse aides showed more positive attitudes toward restraint use and lower knowledge of restraints use compared to nurses' knowledge and attitude. There were also statistically significant differences in knowledge and attitudes according to the career and experience of restraint education. There is a high agreement among nursing staff that a standardized evidence based restraints protocol is needed to facilitate right use of restraints in long term care settings. Conclusion : The nursing staff members' knowledge and attitudes toward evidence based restraints use for the older adults showed gaps between evidence and actual practice. To ensure safe restraints use, the factors contributing to these gaps need to be analyzed to identify the barriers. In addition, the evidence-based restraints use protocol suitable for long term care settings needs to be developed and disseminated. * This work was supported by research grant of Basic Science Research Program through the National Research Foundation of Korea (NRF) funded by the Ministry of Education, Science and Technology (No. 2010-0024922). Keywords : Evidence based, Aged, Restraints

PP26 C-166

EFFECTS OF A SWALLOWING REHABILITATION PROGRAM ON NUTRITION AND QUALITY OF LIFE IN LONG-TERM CARE RESIDENTS

Su-Min LEE, Ju-Young HA (College of Nursing, Pusan National University, Korea)

Introduction : The purpose of this study was to examine the effect of a swallowing rehabilitation program on nutrition and quality of life in long-term care residents. Method : The research design was non-equivalent control group non-synchronized design. The subjects of this study consisted of 85 elderly patients hospitalized in Nursing facilities between August 23, 2012 and October 25, 2012. The 85 research subjects were assigned to experimental (42 patients) and control (43 patients) groups. The rehabilitation program was provided to the experimental group 5 days a week for 8 weeks. The effects were evaluated by measuring MAMC (Mid-upper Arm Muscle Circumference), TLC (Total lymphocytes counts), albumin, TC (Total cholesterol) and SWAL-QOL. The collected data were analyzed with descriptive statistics, x²-test and independent t-test using SPSS WIN 18.0 program. Results : The participants aged 65 to 71 years (Mean: 68.09). In nutrition, the degree of MAMC of the experimental group

was significantly increased than that of the control group after providing the rehabilitation program (t=2.360, p=.021). The score of SWAL-QOL of the experimental group were significantly increased than that of the control group after rehabilitation program, especially Burden (t=3.344, p=.002), Frequency (t=2.677, p=.011), Fear (t=2.442, p=.019), Mental Health (t=2.471, p=.018), Sleep (t=2.077, p=.044). Conclusion : Based on this results described above, the swallowing rehabilitation program should be helpful to promote the swallowing function and nutrition condition for elderly in long-term care facilities. Keywords : Swallowing, Nutritional Status, Quality of life

PP26 C-167

NON-COMMUNICABLE DISEASES IN AGEING: A MULTI-DIMENSIONAL PREVENTIVE AND CURATIVE APPROACH FROM URBAN AND SEMI-URBAN INDIA

Shuchin BAJAJ (Internal Medicine, Cygnus Medicare, India)

Introduction : Ageing is on rise in India. Currently, there are over 100 million people living above the age of 60 years in India. A figure which is likely to touch the 300 million-mark by 2050. With significant medical advances, the life expectancy has grown but the quality of life has remained of great concern, especially due to the high prevalence of non-communicable diseases (NCDs) in elderly. Method: Cygnus Medicare is a network of hospitals and outreach healthcare professionals dedicated to providing highest quality healthcare at affordable prices to communities. The network runs 7 hospitals in Delhi and Haryana states of India, in areas where there is a lack of services. Ageing is on top of the agenda for the group. Outreach component in the context of NCDs concentrates on life-style education mainly aimed at nutrition and hygiene promotion. Cygnus is also actively engaged in research, policy advocacy and public health training with NGOs and academia. Results : The work reaches an elderly population of over 30,000 people of the region. The services include specialty geriatrics clinics, indoor wards specifically designed for elderly patients, therapeutic and surgical services and a comprehensive outreach programme on education, cure and counseling. Battling with the NCDs is in the core of Cygnus' work on older people's health. Special focus is laid on high prevalence diseases including diabetes, cardio-vascular conditions, cancer and musculo-skeletal disorders. Conclusion : Multi-dimensional approach of Cygnus has been effective and will continue making an important contribution on older people's health in a rapidly ageing India. Keywords : Healthcare, Hospitals, Geriatric

PP26 C-168

COMPREHENSIVE GERIATRIC ASSESSMENT HAS A ROLE IN UK CARE HOMES

Adam L. GORDON¹, Isabella J. ROBBINS², Jane DYAS³, Lucy BRADSHAW², Matthew FRANKLIN², Pip A LOGAN², John R.F. GLADMAN² (1. Health Care of Older People, Nottingham University Hospitals NHS Trust, United Kingdom; 2. Division of Rehabilitation and Ageing, University of Nottingham, United Kingdom; 3. Faculty of Medicine and Health Sciences, University of Nottingham, United Kingdom)

Introduction : Comprehensive Geriatric Assessment (CGA) improves individual and service level outcomes in a number of healthcare settings. The UK care home population has not been described in such a way that would justify widespread implementation of CGA. We set out to describe this group and how they receive healthcare in detail. Method : We conducted a programme of research comprising: a 6 month longitudinal cohort study of 227 residents of 11 UK care homes, collecting comprehensive health and functional status data; and

a grounded theory-style interview study with 31 care home and healthcare professionals considering how they respond to care home residents' medical problems. Results : Residents had a median Barthel index of 9(2.5-15.5), MMSE of 13(4-22) and number of medications of 8(5.5-10.5) The mean number of diagnoses per resident was 6.2(4). 30% were malnourished, 66% had evidence of behavioural disturbance. Residents had unpredictable illness trajectories. General Practitioners (GPs) reported difficulty finding the time to meet these needs. There was a dissonance in health care knowledge between care home staff and GPs indicating imperfect partnership working. GPs and care home staff identified similar goals and challenges in caring for care home residents but neither group seemed to recognise this commonality. Conclusion : The cohort described was dependent, cognitively impaired, had prevalent malnutrition, and was subject to polypharmacy, multimorbidity and behavioural disturbance. Existing models of care were delivered by staff with an inadequate knowledge-base and flawed models of partnership and communication. CGA represents the most evidence-based response to the identified care needs and deficiencies. Keywords : Comprehensive Geriatric Assessment (CGA), Care Homes

PP26 C-169

THE NATIONAL AUDIT OF INTERMEDIATE CARE (NAIC) FOR ENGLAND, WALES AND NORTHERN IRELAND

John GLADMAN¹, John YOUNG², Duncan FORSYTH³, Claire HOLDITCH⁴ (1. *Division of Rehabilitation and Ageing, University of Nottingham, United Kingdom*; 2. *BIHR, Bradford Teaching Hospitals NHS Foundation Trust, United Kingdom*; 3. *Elderly Care, Addenbrooke's Hospital, Cambridge University Hospitals NHS FT, United Kingdom*; 4. *NHS Benchmarking Network, NHS Benchmarking Network, United Kingdom*)

Introduction : Intermediate Care services in the National Health Services in the UK were expanded between 2000-2010, but no national quality assurance processes have occurred. The aim of NAIC was to survey intermediate care provision in 2011-12, benchmarking for organisation, provision and outcome. Method : All commissioners and providers of intermediate care in the UK were invited to participate, using a subscription model of funding. Participants provided data on quality standards for commissioners, quality standards for providers, and data on 10 consecutive patients. Results : 327 services (167 bed-based and 160 home-based) participated, giving data on 3150 patients. Provision varied markedly throughout the country. The investment averaged 1.9 million per 100,000 population (58% bed based and 42% on home based). The average cost per bed day was 136 in residential care homes and 252 in community hospitals. The mean number of admissions to bed based services was 259 per 100,000 population and there were 725 home based users per 100,000. Average lengths of stay were 27-30 days for bed based and 24-29 days for home based provision. Patients with lengths of stay over 90 days accounted for 9% of bed based days and 21% of home based days. 72% of bed based and 82% of home based service users maintained their level of independence (measured as their type of care setting) following intermediate care. Conclusion : More research is required to examine the reasons for the variations between parts of the country, and to estimate the most cost-effective models of provision. Keywords : intermediate care, audit

PP26 C-170

TELECARE WITH REMOTE ALARM AS PSYCHOSOCIAL SUPPORT FOR SENIORS; EXPERIENCE IN MEXICO

Sara TORRES-CASTRO¹, Liliana GIRALDO RODRIGUEZ¹, Maria De Lourdes AVILA ALVA² (1. *Investigacion Social, Instituto*

Nacional de Geriatria, Mexico; 2. *Direccion de Investigacion, Instituto Nacional de Geriatria, Mexico*)

Introduction : Telecare is a home care service that operates through a telephone system and a base center equipped with trained personnel for immediate attention to psychological, medical or social needs, and is a practical resource. These services help improve the quality of life and to decrease the incidence of depression, as it allows older adults remained in their home environment. Objective. Determine the impact of Telecare with remote alarm on the quality of life and incidence of depression in older adults in Mexico. Method : 454 older adults enrolled in June 2010 in the pilot Telecare with remote alarm of the Mexican Social Security Institute (IMSS) were given a questionnaire which included demographic data and measurement scales for quality of life and health status (EuroQoL) and depression (Yesavage), validated in Mexico. Results : Of the 378 elderly respondents, before the intervention, 50% of the participants rated their health with a value between 76 and 100 (best imaginable state of health), and 61.4% of the same population perceived their health at that level after the intervention. Before entering the program, 50.4% of the adult population had some degree of depression, and after participating, this percentage decreased to 44.6%. Conclusion : El analisis arroja resultados satisfactorios en terminos de la percepcion de la calidad de vida y de la salud mental en las personas adultas mayores participantes en un modelo publico de teleasistencia y telealarma en Mexico. Keywords : Telecare, remote alarm, psychosocial support

PP26 C-171

VACCINE COVERAGE IS RELATED TO LOWER RESPIRATORY MORTALITY

Angelo Jose G. BOS¹, Andrea Ribeiro MIRANDOLA¹, Sheila Ferreira FERNANDES² (1. *Institute of Geriatrics and Gerontology, Pontifical Catholic University of Rio Grande do Sul, Brazil*; 2. *School of Medicine, Pontifical Catholic University of Rio Grande do Sul, Brazil*)

Introduction : Respiratory infections are a group of diseases commonly related to the elderly, whereas the influenza virus is a major etiological agent. Vaccination of these individuals is considered by the World Health Organization as the most effective strategy to reduce morbidity and mortality from the disease. Brazil has sought in recent years, as a goal to vaccinate 80% of the target population. Method : This study aimed to relate the coverage of influenza and the mortality rate from respiratory diseases in the elderly. Methodology: This was a cross-sectional secondary data analysis. Data on vaccination coverage in 2010 of the 496 municipalities in the elderly Gauchos were obtained on the website of the National Immunization Program and mortality in the Mortality Information System. Results : The results showed that 49% of municipalities reached the target of 80% of seniors vaccinated, with vaccination coverage in municipalities below the target number of deaths was 5.2 per 1,000 elderly, this average significantly higher than in municipalities with coverage equal to or greater than 80%. Conclusion : We conclude that the target proposed by the Brazilian Ministry of Health to vaccinate 80% or more of the elderly is effective in reducing mortality from respiratory diseases. Keywords : vaccine coverage, primary prevention, mortality

PP26 C-172

ASSOCIATION OF DEPENDENCE IN ACTIVITIES OF DAILY LIVING AND INSTRUMENTAL ACTIVITIES OF DAILY LIVING WITH WORRY ABOUT FALL AMONG KOREAN ELDERLY

Beom-Young CHO (*Department of Occupational Science and*

Technology, College of Health Sciences, University of Wisconsin-Milwaukee, USA)

Introduction : Performing daily activities independently is important to maintain good health. However, many elders do not perform daily activities independently. The aim of the present study is to assess factors associated with dependence in daily activities then, to provide an evidence for improving independent performing of daily activities among elderly. **Method :** A cross-sectional study was conducted in 7556 participants (3365 males, 4191 females) aged 47 - 99 years (mean 62.5) selected from South Korea, as part of the Korean Longitudinal Study of Ageing (KLoSA) in 2008. Worry about falling was measured by questionnaires and dependence in daily activities was assessed by using 10 Activities of Daily Living (ADL) and 7 Instrumental-ADL (IADL) items. Prevalence of dependence in ADL&IADL based upon each variable was examined by Chi-square test. Multivariate logistic regressions were used to find association between dependence in ADL&IADL and worry about falling, adjusting for socio-demographic variables. **Results :** Older groups tended to have higher dependence in ADL&IADL than younger groups; furthermore, this tendency was prevalent in women. Worry about falling was strongly associated with dependence in ADL&IADL; a little bit of worry about falling showed Odds Ratio of 1.7 (95% Confidence Intervals, 1.3-2.3) in men and 5.2 (2.9-9.5) in women, and worry about falling a lot showed 2.3 (1.6-3.3) in men and 11.2 (6.0-20.8) in women, adjusting for covariates. **Conclusion :** Elders worried about falling performed ADL&IADL more dependently. Professionals in the gerontology & geriatrics should consider not only physical intervention, but also various factors among elderly to promote their independent performing of ADL&IADL. **Keywords :** Elderly, Dependence, Fall

PP26 C-173
COMPARISON OF ESTIMATED GLOMERULAR FILTRATION RATE (EGFR) USING THE MDRD STUDY EQUATION AND THE CKD-EPI STUDY EQUATION

Kyounghe KIM¹, Meae KIM² (1. Science Course, 3rd Grade, Hankuk Academy of Foreign Studies, Korea; 2. Laboratory Medicine, Gunpo G Sam Hospital, Korea)

Introduction : Glomerular Filtration Rate (GFR) is the predictor of renal dysfunction. Serum creatinine is of limited value, and creatinine based MDRD study equation is used to estimate GFR for the patients with renal disease. Korea National Healthcare Program adapted eGFR by MDRD Study equation to estimate renal function in healthy individuals. Recently CKD-EPI equation better performed in normal GFR ranges is proposed. We compared eGFR by MDRD Study Equation and CKD-EPI Study Equation to estimate CKD in Korean healthy population. **Method :** A retrospective study was performed using 612 Korean individuals whose eGFR had been calculated by MDRD and CKD-EPI study equation. The CKD-EPI equations are different following the creatinine value (0.7mg/dL for the women and 0.9 mg/dL for the men). One major difference between the two equations is the 'age factor', (age)-0.203 in the MDRD equation whereas (0.993)age in the CKD-EPI equation. The chronic kidney disease (CKD) is defined as eGFR under 60 mL/min/1.73 β_{\geq} . **Results :** The CKD-EPI Study Equation confers less underestimation of GFR than MDRD Study Equation in subjects under 60 years. Using the CKD-EPI equations, the prevalence of CKD is higher than the MDRD study equation in subjects over 70 years old. There is strong agreement between eGFR classification by MDRD equation and CKD-EPI equation. Serum creatinine concentration equivalent to 60 mL/min/1.73 β_{\geq} using average body weight and height in each age

group were lower when subjects were older, female and using CKD-EPI equation. **Conclusion :** CKD-EPI Study Equation is probably better than the MDRD Study Equation to screen CKD in healthy old population. **Keywords :** eGFR, MDRD equation, CKD-EPI equation

PP26 C-174
MODIFYING EFFECTS OF RESTING HEART RATE ON THE ASSOCIATION OF BINGE DRINKING AND MORTALITY FROM ALL-CAUSE AND CARDIOVASCULAR DISEASES IN OLDER KOREAN MEN: THE KANGWHA COHORT STUDY

Mikyung RYU¹, Bayasgalan GOMBOJAV², Sang-Wook YI³, Chung Mo NAM⁴, Heechoul OHRR⁴, Yunhwan LEE⁵ (1. Aju University School of Medicine, Department of Preventive Medicine and Public Health, Institute on Aging, Korea; 2. Institute for Health Promotion, Graduate School of Public Health, Yonsei University, Korea; 3. Department of Preventive Medicine and Public Health, College of Medicine, Kwandong University, Korea; 4. Department of Preventive Medicine and Public Health, College of Medicine, Yonsei University, Korea; 5. Department of Preventive Medicine and Public Health, Aju University School of Medicine, Institute on Aging, Korea)

Introduction : The combined effect of binge drinking and resting heart rate on mortality has rarely been assessed. This study assessed the association of binge drinking with cardiovascular and all-cause mortality, and evaluated the potential modifying effect of resting heart rate on this association in Korean men. **Method :** A total of 2,600 men (55 or older as of 1985), were followed for cardiovascular and all-cause mortality for 20.8 years until 2005. We estimated hazard ratios (HRs) for cardiovascular and total mortality by binge drinking and resting heart rate using the Cox proportional hazard model after controlling for confounding factors. **Results :** A total of 1,990 (76.5%) deaths occurred in the 20.8 years of follow-up. Heavy binge drinkers (≥ 12 drinks on one occasion) with elevated resting heart rate (≥ 80 bpm) had higher HR of 2.35 [95% confidence interval (CI)=1.53-3.59] for death from cardiovascular disease and 1.47 (95% CI=0.94-2.30) for total mortality compared to the reference group (non-drinking and resting heart rate 61-79 bpm). The HRs of dying from cardiovascular disease linearly increased from 1.43 to 1.55, 1.69 and 2.26 among individuals with resting heart rate greater than 80 bpm within the four alcohol consumption categories (non-drinking, non-binge, moderate binge, and heavy binge, respectively). **Conclusion :** Our findings suggest that heavy binge drinkers with increased resting heart rate are at higher risk for cardiovascular and all-cause mortality in older Korean men. **Keywords :** drinking; cardiovascular disease; mortality; resting heart rate

PP26 C-175
THE RELEVANCE BETWEEN SLEEPING HOURS AND HYPERTENSION, DIABETES, OBESITY OF ELDERLY IN KOREA

Sun A. KIM, Jung-Ae RHEE (Department of Preventive Medicine, Chonnam National University Medical School, Korea)

Introduction : The aim of this study was to identify the affects of sleeping hours on hypertension, diabetes, and obesity targeting adults male and female over 60 in South Korea. **Method :** This research utilized the materials for community health survey conducted in 2008 and 2009. The subject households were selected by probability proportional systematic sampling. It targeted adults over 60 year-old, 139,035 people and finalized the number, 110,472 people (male 49,140, female 61,332) excluding every missing values. **Results :** The prevalence rate of hypertension in adults over 60 were 34.8% in male, 43.1% in female and the prevalence rate of diabetes are 13.5% in male,

13.9% in female. The prevalence of obesity were male 19.7%, female 23.1%. Based on the group with 7 hours of sleep, the risk of hypertension with modified variables such as age, smoking, alcohol, marital status, family income, education level, and career was significantly high in the female group with less than 6 hours (OR=1.09, 95% CI: 1.05, 1.14). The risks of diabetes were significantly high in both gender groups with more than 8 hours (men: OR=1.13, 95% CI: 1.05, 1.21, women: OR=1.15, 95% CI: 1.08, 1.23). The risk of obesity was significantly high in the female group with more than 8 hours (OR=1.05, 95% CI: 1.00, 1.11). Conclusion : This research shows the fact that sleeping hours can have impacts on chronic diseases. Keywords : sleeping, hypertension, diabetes

PP26 C-176

EXPLORING THE RELATIONSHIP BETWEEN PHYSICAL FITNESS AND BONE MINERAL DENSITY IN OSTEOPOROTIC ELDERLY

Tsung-Ching LIN¹, Ming-Fang HSU², Shu-Fen CHIU¹, I-Po LIN³, Hsiu-Ling CHOU⁴ (1. Department of Physical Medicine and Rehabilitation, Far Eastern Memorial Hospital, Taiwan; 2. Department of Healthcare Administration, Asia University, Taiwan; 3. Department of Healthcare Administration, Oriental Institute of Technology, Taiwan; 4. Department of Nursing, Taipei Veterans General hospital, Taiwan)

Introduction : Osteoporosis is one of the major public health problems in elderly. The aim of the present study was to investigate the correlation between physical fitness and bone mineral density (BMD) in elderly with osteoporosis. Method : Elderly aged over 40 years old were recruited in this cross-sectional study. Measurements included (1) self-administered questionnaire for collecting their demographic characteristics and medical history; (2) fat mass and muscle ratio analysis by using Body composition analyzer; (3) physical fitness evaluation (grip strength and 30-Second Chair Stand); (4) BMD measurement at lumbar spine and femoral neck by using dual energy X-ray absorptiometry (DXA). Results : A total of 104 subjects (mean age of 65.47 ±12.13 years old) were selected and predominantly in female (78.8%). The percentage of osteoporosis in lumbar spine and femoral neck was about 14.4% and 8.7%, and 47.1% and 36.5% for osteopenia. The degree of osteoporosis was significantly differed by age (F=5.310, p=0.006), body composition (F=5.653, p=0.005). Further, Pearson correlation analysis revealed there was negative correlation between age and BMD (r=-0.255, p=0.009), whereas positive correlations among Free fat mass, grip strength, 30-Second Chair Stand, and BMD in femoral neck (r=0.433, p=0.000, r=0.366, p=0.000, r=0.325, p=0.001). Conclusion : According to the findings in this study, increasing muscle mass and training muscular strength of limbs should be emphasized to strength BMD. It can help to prevent the risk of osteoporosis to get a better quality of life for elderly and thus reduce the burden of health care. Keywords : Osteoporosis; Bone mineral density (BMD); Physical fitness

PP26 C-177

ADDRESSING HIV IN THE ELDERLY POPULATIONS IN INDIA: THE FORGOTTEN ASPECT OF THE EPIDEMIC

Prakash TYAGI (Adin, GRAVIS, India)

Introduction : HIV and its implications on elderly populations are hardly discussed in the academic, policy and program arena in India and globally. Older age is not a safety net that protects people from getting HIV and that people are living with HIV for decades. It was also clear that the many issues surrounding HIV among older adults will only increase as our country faces the continuing greying of our

nation's HIV epidemic. The threat of HIV for older people is as serious as it is for younger age groups. Method : GRAVIS in partnership with Help Age International is running a comprehensive age-friendly healthcare programme in India, which covers several health aspects including HIV and AIDS. People of above 50 years of age are provided education and counseling on HIV transmission and preventive aspects through outreach sessions. Specialized training materials have been developed keeping cultural aspects in view. A cadre of community-based trainers has been developed. Those living with HIV are encouraged to access government provided Anti Retro-Viral Therapy. Special focus is given on older women's educations, which are more unaware and vulnerable. Results : The programme has so far successfully trained over 9,000 older people in the area. The awareness on HIV has increased among elderly and there is an increased tendency of older people getting tested. ART centers are also giving special attention to older people coming for treatment. Conclusion : HIV and AIDS are a serious medial and public health challenge for elderly people too, and need adequate attention in community based health programmes. Keywords : ageing, HIV, community health

PP26 C-178

CARE NEEDS ASSESSMENT IN ELDERLY INDIVIDUALS LIVING IN LONG TERM UNIT BASED ON CANE QUESTIONNAIRE

Katarzyna WIECZOROWSKA-TOBIS¹, Dorota TALARSKA², Sylwia KROPINSKA³, Agnieszka DYMEK-SKOCZYNSKA³, Sławomir TOBIS⁴, Mirosława CYLKOWSKA-NOWAK⁴, Justyna MAZUREK⁵, Joanna RYMASZEWSKA⁶ (1. Department of Geriatric Medicine and Gerontology, University of Medical Sciences, Poland; 2. Department of Preventive Medicine, Laboratory of Social Nursing, University of Medical Sciences, Poland; 3. Department of Geriatric Medicine and Gerontology, University of Medical Sciences, Poland; 4. Department of Education, University of Medical Sciences, Poland; 5. University Hospital, Wrocław Medical University, Poland; 6. Department of Psychiatry, Wrocław Medical University, Poland)

Introduction : CANE questionnaire is a tool used in assessment of care needs in elderly individuals. It covers 24 areas targeting both the met needs (MN - problems receiving suitable intervention) and the unmet needs (UN). The aim of the study was to compare the needs rated separately by the elderly living in long term care unit and by the nursing staff. Method : The study involved 50 individuals, aged 75 years and more (mean age: 81.6±6.3 years; 37 females) receiving at least 15 points in MMSE. Results : The average number of needs identified by the staff was 11.6±2.8 (MN: 10.2±2.3; UN: 1.4±1.2). The most common UN were reported in areas of "Psychological distress" and "Company" (n=16 for each) and "Daytime activities" (n=14). The number of needs identified by the elderly was only 9.4±3.4, p<0.001. It was due to lower number of MN (7.1±2.5; p<0.001) while the number of UN was higher (2.3±1.7; p<0.001). They reported more commonly UN in areas of: "Food", "Information (related to health status)" and "Company". The lowest percentage of agreement (identical report for needs from the perspective of elderly person and the staff) was found in areas of "Eyesight/hearing" (26%), "Food" (36%), and "Company" (40%). The average percentage of agreement which includes all 24 areas was high and equaled 73.6%. Conclusion : Our study demonstrates good quality of care in analyzed subjects. An outline of the area of disagreement in the rating of needs (between the elderly individuals and the staff) allows to focus on them. Keywords : CANE, care need, unmet needs

PP26 C-179

IT'S NOT ALL DOWNHILL FROM HERE: EXAMINING DECLINE IN COGNITION UPON ENTRY TO LONG TERM CARE FACILITIES IN ONTARIO, CANADA

Shannon FREEMAN¹, Lina SPIRGIENE², Melinda MARTIN-KHAN³, John P. HIRDES¹ (1. School of Public Health and Health Systems, University of Waterloo, Canada; 2. Faculty of Nursing, Lithuanian University of Health Sciences, Lithuania; 3. Centre for Research in Geriatric Medicine, University of Queensland, Australia)

Introduction : Declining cognitive function has a significant impact on an individual's perception of their quality of life. In long term care facilities (LTCFs), there may be specific causes driving cognitive decline. This study examined factors which drive cognitive decline among residents newly admitted to a LTCF and identified factors amenable to intervention. Method : Secondary data analysis was performed using the interRAI Minimum Data Set (MDS 2.0) at admission and 6 months (N=109,067). The MDS 2.0. gathers comprehensive information as part of regular clinical care and is mandated for all LTCFs in Ontario. Decline in cognition and predictors of this decline following admission to institutional care were examined. Results : Data from 148,037 residents (aged 82.6 ± 9.9 years) was available for analysis however, 38,970 were excluded based on specific criteria. Analysis was stratified for residents with a diagnosis of dementia at admission (N=55,344). 16% of residents (N=17,445) exhibited decline in cognitive functioning at follow-up. Regression analyses of clinical characteristics (functional, cognitive, psychosocial, and demographic) illustrate factors affecting cognition in LTC. Analyses highlight links between use of physical restraints (chair, trunk, and limb) and importance of social interactions and decline of cognitive functioning. Conclusion : Use of physical restraints is closely linked to a decline in cognitive function. Cognitive decline was less pronounced among residents involved in social interactions on a regular basis, either formal activities or ad hoc. This held true for residents with a dementia diagnosis and without. Strong social networks and greater participation in social activities are associated with lower risks of cognitive decline. Keywords : geriatric assessment, interRAI, Minimum Data Set

PP26 C-180

REGULAR PHYSICAL ACTIVITY AND PREVENTION OF LONG-TERM CARE INSURANCE REQUIREMENT CERTIFICATION IN COMMUNITY-DWELLING JAPANESE ELDERLY WITH COGNITIVE IMPAIRMENT: A PROSPECTIVE COHORT STUDY

Shu NISHIGUCHI, Minoru YAMADA, Takuya SONODA, Tomoki AOYAMA (Department of Physical Therapy, Human Health Sciences, Graduate School of Medicine, Kyoto University, Japan)

Introduction : Cognitive impairment is one of the main factors that necessitates long-term care insurance (LTCI) in Japan. Recent researches have shown that physical activity is associated with improvement of cognitive impairment. The aim of the current prospective cohort study was to examine whether the regular physical activity can reduce new LTCI requirement certification in community-dwelling Japanese elderly with cognitive impairment. Method : We analyzed the cohort data from a prospective study entitled the Japan Multi-center Aging Cohort for Care prevention (J-MACC). We followed the cases of 1086 older adults with cognitive impairment defined by the Cognitive Performance Scale in a city for 18 months. We collected information concerning their regular physical activity through a questionnaire. The outcome measure was new LTCI requirement certification during 18 months. Cox proportional hazards model was used to estimate the hazard ratio (HR) and 95% confidence

interval (CI) for the impact of regular physical activity on the time of the new LTCI requirement certification in a multivariate analysis, adjusted for demographic variables and impaired lifestyle conditions. Results : During the 18 month follow-up period, older adults with cognitive impairment who had regular physical activity had a significantly lower risk for LTCI requirement than those who did not have regular physical activity in a multivariate analysis (adjusted hazard ratio: 2.52, 95%CI: 1.09-5.83, p < 0.05). Conclusion : Our results indicate that regular physical activity is an important factor for preventing the new LTCI requirement certification in older adults with cognitive impairment. Keywords : Physical activity, Cognitive impairment, LTCI requirement

PP26 C-181

NASOGASTRIC FEEDING IN HOSPITALIZED OLDER PATIENTS

Nordiana NORDIN, Mau Pin TAN (Geriatric Unit, Medical Department, University Malaya Medical Centre, Malaysia)

Introduction : Nasogastric feeding is often prescribed in patients with dysphagia. However, tube fed patients are devoid of the protective effect of oral clearance. Naso-gastric (NG) feeding is also associated with complications. This study was performed to determine the characteristics and complications associated with nasogastric feeding in older patients. Method : Data on demographics and ng-feeding use was collected prospectively for consecutive patients aged ≥ 65 years admitted to the acute geriatric ward at the University of Malaya Medical Centre over the period of 6 months. Patients were monitored for complications throughout their hospital stay. Results : 96 subjects, median age =80 years were recruited into the study, 44 of whom had NG tube inserted during their hospitalization, while the remaining had pre-existing NG feeding. The main indications for NG feeding were reduced conscious level (55%) and cerebrovascular events (28%). 67% of the patients reported at least 1 complication. Complications reported included gastroparesis (29%), aspiration pneumonia (26%) and constipation (27.1%). There were a total of 36 (37.5 %) deaths in this group of patient. Individuals with gastroparesis were more likely to develop aspiration pneumonia (15/28 (53.5%) vs 10/68 (14%), p<0.001). Conclusion : Complication and mortality rates are high among patients receiving NG feeding on our acute geriatric ward. It is important that carers receive adequate training about gastroparesis and feeding techniques to reduce the complications of aspiration. Further studies should now be performed to determine appropriate indications and to improve the management of NG feeding in order to reduce complications. Keywords : Nasogastric feeding

PP26 C-182

DETERMINANTS OF NUTRITIONAL STATUS OF COMMUNITY DWELLING OLDER PERSONS IN A PERI-URBAN AREA OF SOUTH AFRICA

Indhren NAIDOO¹, Karen CHARLTON², Tonya ESTERHUIZEN³, Bilkish CASSIM¹ (1. Department of Geriatrics, College of Health Sciences, University of KwaZulu-Natal, South Africa; 2. School of Health Sciences, Faculty of Health and Behavioural Sciences, University of Wollongong, Australia; 3. College of Health Sciences, University of KwaZulu-Natal, South Africa)

Introduction : The increased risk of malnutrition in older subjects is multifactorial. We studied the nutritional status and the determinants thereof of in community dwelling adults, aged 60 years and over, residing in a peri-urban area in South Africa. Method : In a questionnaire based survey of 984 randomly selected subjects, the demographic, socio-economic, medical and nutritional status (Mini

Nutritional Assessment-short form (MNA-SF) was recorded. Descriptive statistics, Pearson Chi-Square, Kruskal Wallis tests and logistic regression were applied. Results : The mean age of the subjects was 68.8 ± 7.4 years and the female to male ratio was 3.4:1. Five hundred and three subjects (51.1%) were classified as having a normal nutritional status, 427 (43.4%) as being at risk for malnutrition and 54 (5.5%) malnourished. There was a significant association between nutritional status and BMI ($p = 0.00$). Male gender ($p = 0.008$), lower income ($p = 0.003$), poor oral health ($p = 0.000$), depression ($p < 0.001$), pain ($p = 0.014$) and not walking to the shops ($p = 0.00$) were associated with an abnormal nutritional status. After logistic regression analysis gender, poor oral health and not walking to the shops remained significantly associated with an abnormal nutritional status. Surprisingly subjects who reported food insecurity were less likely to be at risk or being malnourished compared to those who did not ($p = 0.00$) in independent and logistic regression analysis. Conclusion : The high prevalence of the risk of malnutrition in older Africans supports the inclusion of nutritional assessment and interventions in the primary health care programme. Keywords : nutrition, South Africa, MNA-SF

PP26 C-183

HEALTH AND NUTRITIONAL STATUS AMONG THE OLDEST OLDS IN SARDINIA: EVIDENCE FOR GEOGRAPHIC DIFFERENCES

Gianni PES¹, Francesco TOLU², Michel POULAIN³ (1. Dept. Clinical and Experimental Medicine, University of Sassari, Italy; 2. Diabetes Unit, Azienda Ospedaliero-Universitaria di Sassari, Italy; 3. IACCHOS, Universite Catholique de Louvain, Belgium)

Introduction : Health status among the oldest-olds is very heterogeneous and major sources of variation are lifestyle and environmental factors. In the Mediterranean island of Sardinia, the distribution of long-lived people follows two distinct modalities: (i) an aggregated pattern in a mountain area (Longevity Blue Zone, LBZ), indicating the presence of shared determinants in the population; (ii) a more spatially dispersed pattern suggesting a variety of heterogeneous determinants acting at individual level. Our objective was to examine potential differences in health and nutritional status in groups of oldest-olds representative of the two areas. Method : In 244 Sardinian subjects aged 90 years or older (122 living inside and 122 outside the LBZ) we investigated several indicators of health and nutritional status such as self-reported health score (SRHS), MMSE, comorbidity indices, BADL/IADL disability score, weight change, anthropometry and vitamin status. Results : Compared to non-LBZ, LBZ subjects displayed 12% higher SRHS, 26% higher MMSE, 23% lower comorbidity, 20% lower mean IADL, 39% lower weight loss in the past 5 years, 5% higher average calf circumference, higher levels of vitamin B12, C, and D. Conclusion : The oldest-olds living in the Sardinian LBZ show a better nutritional status and more favourable health profile than age peers living outside this area. Traditional lifestyle of the LBZ population has remained very stable over the years, and nutrition transition was relatively delayed. This likely caused the accumulation of various positive behavioral and nutrition factors which have reduced the incidence of age-associated diseases and facilitated the emergence of a “longlived phenotype” at population level. Keywords : nutritional status, oldest olds, Sardinia

PP26 C-184

ASSOCIATION BETWEEN SERUM 25- OH VITAMIN D LEVEL AND THE QUALITY OF LIFE AMONG KOREAN OLDER ADULTS ? BASED ON KOREA NUTRITION AND HEALTH EXAMINATION SURVEY 2007-2010

Hyehyung SHIN¹, Kitae MOON² (1. Research Institute of Insurance, Samsung Life Insurance, Korea; 2. Insurance Medical Center, Samsung Life Insurance, Korea)

Introduction : Studies showed that vitamin D may be involved with quality of life and mood among the elderly. The purpose of this study is to investigate the association between serum 25-OH vitamin D and quality of life among Korean elderly. Method : This study utilized the data of the Korea National Health and Nutrition Examination Survey (KNHANES) 2007-2010. Subjects older than 65 years of age were only included in this analyses. Serum 25-OH vitamin D below 20ng/ml was considered as vitamin D deficiency. In addition to EQ-5D, one or more suicidal thoughts within the past year, perceived stress level and sleeping hours were assessed. Survey procedures in SAS 9.2 were used in all analyses. Results : The average serum 25-OH vitamin D was $19.6(\pm 0.2)$ ng/ml, and 54% of the elderly were vitamin D deficiency. 29.1(± 1.0)% of the elderly, who are vitamin D deficiency, had suicidal thoughts within the past year, whereas 25.1(± 1.3)% for those who are not ($p < 0.05$). For perceive stress, 25.5(± 1.0)% of those who are vitamin D deficiency expressed perceived stress while 21.4(± 1.2)% for those who are not ($p < 0.001$) reported perceived stress. The average score of EQ5D was significantly lower among the elderly with vitamin D deficiency (0.82 ± 0.004) compared to those who are not (0.85 ± 0.005 , $p < 0.001$). Conclusion : The results showed the clear association between vitamin D and the quality of life among the Korean elderly. Further studies are needed to investigate the mechanism of vitamin D for the psychological well-being for the elderly living in Korea. Keywords : vitamin D, Quality of Life

PP26 C-185

RELATIONSHIP BETWEEN PLASMA CAROTENOID LEVELS AND PHYSICAL PERFORMANCE AMONG JAPANESE ELDERLY

Kyoko SAITO¹, Yuki KISHIMOTO², Hisashi KAWAI³, Hirohiko HIRANO¹, Hunkyung KIM¹, Miji KIM¹, Yoshinori FUJIWARA⁴, Motonaga KOJIMA³, Kazushige IHARA⁵, Hideyo YOSHIDA¹, Shuichi OBUCHI³, Naoki MARUYAMA², Ishigami AKIHITO² (1. Research Team for Promoting Independence of the Elderly, Tokyo Metropolitan Institute of Gerontology, Japan; 2. Molecular Regulation of Aging, Tokyo Metropolitan Institute of Gerontology, Japan; 3. Human Care Research Team, Tokyo Metropolitan Institute of Gerontology, Japan; 4. Promoting participation and contribution to society, Tokyo Metropolitan Institute of Gerontology, Japan; 5. Department of Public Health, Toho university School of Medicine, Japan)

Introduction : Physical performance is one of the most important indicators of health status in elderly people and is also closely related to the quality of life. Recent studies suggested a beneficial relationship between plasma carotene levels and physical performance in elderly people. The purpose of this study was to examine the relationship between plasma carotene levels and physical performance among Japanese community-dwelling elderly men and women. Method : A cross-sectional study was conducted involving elderly residing in an urban area in Tokyo, Japan, in October 2011. We examined anthropometric measurements, physical performance measures such as hand grip strength, knee extension strength, usual and maximal walking speeds timed up & go, one leg standing time, lifestyles. Plasma carotene levels including lutein, zeaxanthin, beta carotene, alfa carotene and lycopene were also assessed. A total number of 242 subjects were analyzed. Results : The mean age (\pm standard deviation) of participants was 73.9 ± 5.0 years in this study. The geometric mean

(geometric standard deviation) of plasma beta carotene concentration was 0.50 (1.90) μ M. In age adjusted analysis showed that plasma beta carotene was significantly correlated with one leg standing with eyes open ($r=0.25$, $p<0.0001$) and time up & go ($r=-0.19$, $p=0.0036$). Conclusion : The results of this study suggest that plasma carotene levels may be related to physical performance in community-dwelling elderly men and women, specifically in balance ability. Keywords : Plasma carotene, physical performance, elderly Japanese

PP26 C-186

ASSOCIATION BETWEEN NUTRITIONAL STATUS AND FEEDING CONDITION ON JAPANESE ELDERLY RECEIVING HOME CARE: A CROSS-SECTIONAL STUDY

Rika OHTSUKA¹, Kyoko SAITO², Hideki OHTA³, Kayoko MAEDA⁴, Masafumi KUZUYA⁵, Hisayuki MIURA¹ (1. Department of Home Care Coordinators, National Center for Geriatrics and Gerontology, Japan; 2. Research Team for Promoting Independence of the Elderly, Tokyo Metropolitan Institute of Gerontology, Japan; 3. ASMSS Health Corporation, Japan; 4. Department of Food Science and Nutrition, Mukogawa Woman's University, Japan; 5. Department of Community Healthcare & Geriatrics, Nagoya University Graduate School of Medicine, Japan)

Introduction : Nutritional status is the most important indicators of health status in home care elderly people and is also closely related to the quality of life. The purpose of this study is to examine the association between nutritional status and feeding condition on Japanese elderly receiving home care. Method : This is a cross-sectional study on receiving home care the Japanese elderly, in October 2012. The eligible subjects were over 65 years old people using the home care services. We examined nutritional status, feeding condition, and lifestyle assessments. This survey was conducted by 46 teams which included home care clinics, home-visit nursing stations, pharmacies, and dental clinics, worked in collaboration. The initial number of subjects were 2120, and 1141 people ultimately participated in this study. Results : The mean age (\pm standard deviation) of participants was 82.5 ± 9.5 years, and 60.0 % of them was female. The mean of BMI was 20.9 ± 4.1 (N=888). Prevalence of low BMI group (<18.5) was 29.6 %. Concerning feeding condition the low BMI was 27.7% of oral feeding group (n=804), 46.2% of percutaneous endoscopic gastrostomy (n=93), 75.5% of intravenous hyperalimentation (n=4). Conclusion : The result above implied that there was association between nutritional status and feeding condition, and more detailed analysis will be shown at the session. Based on these findings, we will discuss and discussion on nutritional status of the Japanese elderly receiving home care. Keywords : nutritional status, feeding condition, home care

PP26 C-187

EFFECT OF NUTRITIONAL STATUS AT ADMISSION ON THE PHYSICAL FUNCTION AT DISCHARGE

Shin SATOU¹, Shohei OHGI² (1. Rehabilitation, Enshu Hospital, Japan; 2. Graduate School of Rehabilitation Sciences, Seirei Christopher University, Japan)

Introduction : The patients in malnutrition, muscle mass would reduce due to the muscle fibers cannot be synthesized, would fall into sarcopenia and eventually fall into physical function decline. This study aimed to reveal the relationship between changes of nutritional status and physical function during hospitalization. Method : Out the Enshu hospital inpatient databases at 2011 year (n=304), we extracted the data (n=164) which is measured at the time of C-reactive protein (CRP) and serum albumin levels on admission and motor scores of

Functional Independence Measure (m-FIM) on admission and discharge. From which, we analyzed the people (n=71) except those CRP levels greater than 0.3mg/dl in order to eliminate the influence of inflammation. We examined the relationship between serum albumin level and the m-FIM of the difference between at admission and discharge (m-FIM). We also examined by age groups and disease classification similarly. Statistical analysis was used the Pearson Product-Moment Correlation Coefficient, and significance level was less than 5%. Results : Significant positive correlation was observed between the serum albumin level and m-FIM ($r=0.295$). Higher age group and patients group with disuse syndrome showed significantly higher correlation than other age and disease classification groups ($r=0.632$, $r=0.729$, respectively). Conclusion : This study describes the patients with malnutrition had poor physical functional recovery at the time of discharge from the hospital, which is higher relevance in the older age and disuse syndrome group. It suggests that a nutritional intervention might be benefit in improving their physical function. Keywords : Malnutrition, Functional Prognosis, Rehabilitation

PP26 C-188

WAIST CIRCUMFERENCE AS AN INDICATOR OF HEALTH IN ELDERLY LIVING IN RIO DE JANEIRO, BRAZIL

Fernanda BORGES¹, Marisa SANTOS², Luiz Mauricio PLOTKOWSKI², Jerson LAKS² (1. Nutrition, Centro de Estudo e Pesquisa do Envelhecimento, Brazil; 2. Medicine, Centro de Estudo e Pesquisa do Envelhecimento, Brazil)

Introduction : Waist circumference (WC) had good relationship with Body Mass Index (BMI) and can be used as a predictor of risk for diseases in the elderly. This study aimed to investigate other factors related to WC in older people. Method : We screened 300 elderly people referred by a Primary Care Center from April to December 2012. WC was measured by trained professional at the midpoint between the last rib and the iliac crest and BMI calculated using weight in kilograms divided by height in meters squared. Direct questions assessed physical activity, comorbidities, education and health self perception. Pearson's correlation was used to calculate the differences in WC inadequate group. Results : The sample were mainly female (59%), mean age= 70 years (± 7); 42% lower educated, 82% from D/E economic class and 78% with at least 3 co-morbidities. Hypertension (88%), dyslipidemia (47%), diabetes (30%), and depression (18%) were the most frequent comorbidities. WC showed 78% inadequate subjects (≥ 94 cm for men and ≥ 80 cm for women) and 25.2% practiced regular physical activity. 48.6% of subjects considered their current health poor/very poor, 6.7% regular and 44.7% good/very good. There was a significant correlation between inadequate WC and low education ($p<0.01$), sedentariness ($p<0.01$), and more than three morbidities ($p=0.04$), whereas BMI did not correlated with any of these variables. Conclusion : Wc seems to be a better indicator than BMI in the elderly. Keywords : Waist circumference, elderly people, Body Mass Index

PP26 C-189

A SURVEY OF WILLINGNESS TO ACCEPT CHEMOTHERAPY AMONG ELDERLY MALAYSIAN PATIENTS

Rizah Mazzuin RAZALI¹, Ping Chong BEE² (1. Geriatrics, Hospital Kuala Lumpur, Malaysia; 2. Hematology, University of Malaya Medical Centre, Malaysia)

Introduction : Elderly patients with cancer are less likely offered optimal treatment due to concerns over their physical, mental frailty with multiple co-morbidities deteriorating organ reserve rendering

them less tolerance to chemotherapy as well as perceptions that costly treatment is a waste of socio-economy resources. Traditionally, elderly cancer patients are perceived as not willing to undertake chemotherapy. Method : Cross-sectional study recruiting patients above 60 years old from various clinics in UMMC from November 2008 - March 2009. They were interviewed with questionnaire, comprised of a scenario of side effects of strong and mild chemotherapy and to express their willingness to undertake chemotherapy. Exclusion criteria were dementia and patients who have received chemotherapy within a year prior to interview. Results : 75 patients recruited. 47% had previous cancer, 38.7% Chinese, 29.3% Indian, 26.7% Malay. 83% and 73% of patients willing to accept strong and mild chemotherapy respectively. Patients who had cancer were more willing to accept strong and mild chemotherapy compared to non-cancer group (88.6% vs 62.5%, $p=0.005$, 94% vs 80%, $p=0.068$). Chinese patients without history of cancer were not willing to receive strong ($p=0.001$) and mild ($p=0.010$) chemotherapy respectively. Conclusion : Elderly patients were willing to have chemotherapy if they were allowed to express their own wish. They should not be denied from the involvement of decision making. Treatment for cancer should not be compromised as a result of vulnerable socio-economic status. Delivering accurate information and support from cancer survivors may alleviate their fear of chemotherapy. Effective collaboration between oncologist and geriatrician is paramount. Keywords : Chemotherapy, elderly

PP26 C-190

CARE NEEDS OF SYMPTOM MANAGEMENT FOR PATIENTS WITH CANCER IN END-OF-LIFE CARE AT HOME - COMPARATIVE STUDY BETWEEN KOREA AND JAPAN -

Setsu SHIMANOUCHI¹, Shunyue CHENG¹, Junko MINAI¹, Soon Lea KIM², Jong-Eun LEE³ (1. School of Nursing, Hiroshima Bunka Gakuen University, Japan; 2. School of Nursing, International University of Health and Welfare, Japan; 3. College of Nursing, Catholic University of Korea, Korea)

Introduction : The aim of this study was to identify care needs of symptom management for patients with cancer by different stages (beginning, stable and near-death) during end-of-life care at home in Korea and Japan. Method : We analyzed data collected from a retrospective cohort study conducted in 2007 in Korea and Japan. Visiting nurses completed a questionnaire regarding symptom management for their patients. Criteria for inclusion of patients included patients aged 40 and over, received terminal home care, and died at home in 2006. Results : A total of 239 cancers (119 from Japan and 120 from Korea) data were available for statistical analyses. The need for pain management was significantly higher in Korea (52.5% - 87.5%) than in Japan (34.5% - 60.5%) in all three stages. The needs for management of dyspnea, digestive symptoms, dysphagia, fluid imbalance/nutritional state and fatigue were significantly higher in Korea than in Japan in both beginning and stable stages, but not near-death stage. While the needs for management of fever and infection were significantly higher in Japan than in Korea. The highest care need was fluid balance/nutritional state in both countries (Japan: 74.8%; Korea: 85.8%) followed by fatigue (Japan: 72.3%; Korea: 80.8%). Conclusion : The findings of this study showed that pain and physical symptom management were not satisfactory both in Korea and Japan. To improve QOL in terminal cancer patients, more active management of physical symptoms is needed. Keywords : end-of-life, care needs, cancer

PP26 C-191

USING BEERS CRITERIA ON HOSPITALIZED MEDICAL PATIENTS; WHAT DIFFERENCE DOES IT MAKE

Ada OKOLI, Muhammad MATIN, Clifford LISK, Ahmad NOORI (Medicine, Barnet Hospital, United Kingdom)

Introduction : Previous studies have shown that older patients take an average of 9 medications daily with an increase in the risk of adverse drug reactions. This may lead to a prescribing cascade ultimately increasing the numbers of medications patients take and also account for up to 10-17% of hospital admissions. In recent times the American Geriatric Society Beers criteria has been developed to assist Health Care Professionals in improving medication safety in older adults. Method : A review of patient clinical records for 83 hospitalized inpatients at a UK district general hospital was carried out in July 2012 looking at serious medication interactions and the effects of Beers criteria. Results : The majority of patients were above 60 years old (65) with the majority in their eighties (25). They were predominantly female (49). Patient had a median of 3 co-morbidities (range 0-6) and were on an average of 6 medications daily. There were 116 serious medication interactions occurring in 52/83 patients. These interactions mainly involved carbamazepine (15) and tricyclic antidepressants (14) with antipsychotics, antifungals, antibiotics and opiate analgesics accounting for the remainder. Using Beers criteria reduced serious medication interactions by a third. Conclusion : Significant medication interactions are common and mostly involve medications that health care professionals are familiar with. There is a necessity to teach our trainees about tools like Beers criteria which can complement our clinical decision making in older adults and help reduce serious medication interactions resulting from prescribing. Keywords : interactions, Beers, polypharmacy

PP26 C-192

POLYPHARMACY AMONG OLDER PEOPLE IN VARIOUS LONG-TERM CARE SETTINGS IN KOREA

Ahreum YOO, Hongsoo KIM, Young-Il JUNG, Moonhee SUNG, Jiyeon KIM (Division of Health Care Management and Policy, Seoul National University School of Public Health, Korea)

Introduction : Polypharmacy could have serious negative impacts on the health of frail older people. The study aimed to explore the prevalence of polypharmacy among older people with long-term care needs, who reside in three different care settings--long-term care hospital, nursing home, and home with home care services. Method : This was a cross-sectional study of 706 older adults in 7 long-term care hospitals ($n=270$), 10 nursing homes ($n=241$), and home with home care services from one of 11 home care organizations ($n=195$) in Korea. Medication data were collected along with interRAI-long-term care facility (interRAI-LTCF) and interRAI-home care (interRAI-HC) assessment system in 2011. The number of medication drugs was counted and polypharmacy status was grouped as non-polypharmacy (0-8 drugs) and polypharmacy (9 or more drugs). Descriptive statistics and ANOVA were used for the data analyses. Results : The average numbers of medication taken by older people were $8.71(\pm 3.99)$ in long-term care hospitals, $6.20(\pm 3.15)$ in nursing homes, and $5.97(\pm 3.79)$ in home care services ($p<.001$). The overall prevalence of polypharmacy across the three settings was 31%. The highest prevalence of polypharmacy was among residents in long-term care hospitals, which was up to 44.8%, followed by nursing home residents (21%), and people receiving home care (23.6, $p<.001$). Conclusion : Polypharmacy is common among older people with long-term care needs in Korea regardless of settings. Further studies are needed to explore resident and facility factors related to polypharmacy. Keywords : Polypharmacy, Older People, Long-term Care

PP26 C-193

IATROGENY IN HOSPITALISED ELDERLY PATIENTS

Ioana Dana ALEXA¹, Gabriel Ioan PRADA², Ovidiu ALEXA³, Adina Carmen ILIE¹ (1. Department of Geriatrics, Faculty of Medicine, University of Medicine and Pharmacy 'Gr.T.Popa', Romania; 2. Faculty of Medicine, University of Medicine and Pharmacy 'Carol Davila', Ana Aslan - National Institute of Gerontology and Geriatrics, Romania; 3. Department of Trauma, Faculty of Medicine, 'Gr. T. Popa' University of Medicine and Pharmacy, Romania)

Introduction : Iatrogeny refers to any unwanted event induced by an intervention belonging to health system either ambulatory or during hospitalization ... by any person involved in medical gestures: physicians, nurses, persons performing kinesitherapy or physiotherapy, psychotherapists and even the patient himself (by lack of proper surveillance). Modern approach of iatrogeny tends to enlarge the semantics of the term: iatrogeny should include any unwanted effect induced by any diagnostic, therapeutic or prophylactic gesture performed in the health system. **Method :** In this prospective study we included patients over 65 years hospitalized in our clinic for serious side effects due to ambulatory medical treatment. They underwent physical examination, geriatric assessment, biochemical tests and other specific investigations. **Results :** Data obtained from a 12 month period has been analyzed. The most affected age group was 70-80 years. The highest rates iatrogeny included: oral anticoagulant overdose, orthostatic hypotension (due to antihypertensive treatment, diuretic treatment, alpha-blockers), acute exacerbation of chronic kidney disease, thyroid disorders, arrhythmias. **Conclusion :** Elderly patients need careful monitoring and a refined personal therapeutical approach due to co-morbidities and frequent functional deficits, which may need multiple pharmaceutical approach with possible medical interferences. When prescribing, one must take into account the patient as a whole, including his or her life expectancy, cognitive status, family support and quality of life within a social and economical environment. **Keywords :** iatrogeny, elderly

PP26 C-194

A STUDY OF STOPP/START IN GERIATRIC INPATIENTS IN SINGAPORE

Mei Qi WAN (Pharmacy, National University Hospital, Singapore)

Introduction : Polypharmacy is common in the elderly due to multiple co-morbidities. The Screening Tool of Older People's Prescription (STOPP) and Screening Tool to Alert doctors to Right Treatment (START) can guide appropriate prescribing. The aim is to estimate the prevalence of potentially inappropriate medications (PIMs) and prescribing omissions (POs) in geriatric inpatients in an acute care, tertiary hospital in Singapore. Another objective is to survey pharmacists' awareness of STOPP/START. **Method :** Data was collected in 150 consecutive admissions of elderly patients (average age 79 years) from July to October 2011 in an internal medicine ward. PIMs and POs were identified using STOPP/START. 67 pharmacists from National University Hospital (NUH) and National Healthcare Group (NHG) were surveyed to gauge their awareness of these tools. **Results :** Results: 53% had at least one PIM and 67% had at least one PO. 73% of pharmacists were unaware of STOPP/START. Top 3 PIMs were: proton pump inhibitors for peptic ulcer disease at full therapeutic dosage for more than 8 weeks (n=29, 21.2%), beta-blockers in those with diabetes mellitus and frequent hypoglycaemia (n=20, 14.6%), long term neuroleptics as long term hypnotics (more than 1 month) (n=14, 10.2%). Top 3 prescribing omissions for START were: metformin in Type 2 Diabetes mellitus (n=37, 20%), statins in documented vascular disease (n=28, 16%) and statins in diabetes

mellitus with elevated cholesterol levels (n=19, 11%). **Conclusion :** STOPP/START are useful to detect PIMs or POs in elderly inpatients in Singapore; however, more awareness is needed amongst pharmacists. A prospective study incorporating these medication review tools. **Keywords :** STOPP/START criteria, Inappropriate prescription, Prescribing omission

PP26 C-195

PREVALENCE OF POLYPHARMACY IN PATIENTS 65 YEARS AND ABOVE WITH CARDIOVASCULAR RISK FACTORS

Qi Chang Tricia CHANG, Keith TSOU (Family Medicine, National Healthcare Group Polyclinics, Singapore)

Introduction : Polypharmacy is commonly seen in the primary care setting and is most evident in two populations: the elderly and the psychiatric patients. The geriatric population aged 65 years and above is more worrying due to the different pharmacokinetics and pharmacodynamics with a higher likelihood of chronic diseases leading to long-term pharmacotherapy. Risks associated with polypharmacy include non-compliance, adverse drug reactions, interactions and medication errors. **Method :** We conducted a cross-sectional study of patients aged 65 and above with 5 common cardiovascular risk factors in our population. Electronic prescriptive data were collected from our database analysing the number of drugs prescribed to each patient presenting to our polyclinic in Singapore over a 2 week period in 2012. Patients were selected based on having one or more of the following diagnoses: Hypertension, Ischemic heart disease, Type 2 Diabetes Mellitus, Hyperlipidemia and Stroke. The cohort comprised of 979 elderly subjects who presented for either chronic or acute conditions. Polypharmacy status was defined as a three stage variable. Non-polypharmacy was defined as the concurrent use of five or fewer drugs. Usage of six to nine drugs was classified as polypharmacy and usage of ten or more drugs was excessive polypharmacy. **Results :** A total of 363 elderly patients in the cohort (37.0%) were exposed to polypharmacy during the study period. The prevalence of excessive polypharmacy was 8.6%. **Conclusion :** Polypharmacy is common in the elderly. Further research with regards to patient characteristics, classes of medications and disease profile in those with polypharmacy would be beneficial to highlight patients at risk. **Keywords :** polypharmacy, elderly

PP26 C-196

POLYPHARMACY AMONG OLDER INPATIENTS IN AUSTRALIA

Ruth Eleanor HUBBARD¹, Nancye M PEEL¹, Ian A. SCOTT², Jennifer H. MARTIN³, Peter I PILLANS³, Leonard C. GRAY¹ (1. Centre for Research in Geriatric Medicine, The University of Queensland, Australia; 2. Department of Internal Medicine, Princess Alexandra Hospital and School of Medicine, The University of Queensland, Australia; 3. Department of Clinical Pharmacology, Princess Alexandra Hospital and School of Medicine, The University of Queensland, Australia)

Introduction : Hospitalisation presents an opportunity for physicians to rationalise medication prescribing for older people, weighing up the potential benefits and risks of pharmacotherapy. Here, we aimed to investigate medication changes for older inpatients and explore the associations with excessive polypharmacy. **Method :** This prospective cohort study included 1220 patients (mean 81.3y ± SD 6.8) admitted to general medical units of 11 acute care hospitals in Australia. The interRAI Acute Care assessment tool was used to collect data on each patient's functional status. **Results :** Patients were prescribed a mean of

8.42 (SD 3.9) regular medications on admission, 8.15 (3.9) on discharge. There were significant reductions in heparin (41.6% vs 11.1%) and antibiotics (45.8% vs 32.7%) but no changes in the prevalence of potentially inappropriate medications such as statins (38.5% vs 38.6%), opioid analgesics (14% vs 14.1%), antipsychotics (5.1% vs 5.6%) and benzodiazepines (10.4% vs 11.4%). Excessive polypharmacy (≥ 10 drugs) was observed in 426 (35.1%) inpatients at admission, 403 (33%) on discharge. Compared with non-polypharmacy (< 5 drugs), excessive polypharmacy on admission was associated with pain (OR 1.56; 95% CI 1.10-2.21), breathlessness (OR 4.27; 2.96-6.16) and pre-morbid dependence in instrumental activities of daily living (OR 2.02; 1.19-3.44), but inversely associated with cognitive impairment (OR severe vs no impairment 0.24; 0.13-0.45). Conclusion : Excessive polypharmacy is common among older people in Australia with no significant reductions in many chronic treatments during the inpatient episode. Patients with functional dependence are at particular risk and may be a target group for more individualised prescribing. Keywords : polypharmacy; inpatients; oldest old

PP26 C-197
PREDICTORS OF HEALTH-RELATED QUALITY OF LIFE (HRQOL) IN THE ELDER PATIENTS WITH OSTEOARTHRITIS USING EQ-5D

In Young YOO (Department of Nursing, Jeonju University, Korea)

Introduction : The purpose of this study was to identify the predictors of health-related quality of life (HRQoL) in the elder patients with osteoarthritis using EuroQol-5 Dimension (EQ-5D). Method : Data were extracted from the 5th Korea National Health and Nutrition Examination Survey (KNHANES) 2011. Subjects were 386 patients with osteoarthritis aged 65 years and over. Data was analyzed by using SPSS/Win 18.0. Results : The mean HRQoL using EQ-5D index of participants was .75 (± 0.22). HRQoL were significantly different according to age, education level, income, employment status, knee pain, knee stiffness, hip joint pain, low back pain, activity limitation, asthma, stress, depression and suicidal ideation. HRQoL was correlated with knee pain, hip joint pain, number of chronic disease, perceived health status and age. The factors affecting the HRQoL were perceived health status, activity limitation, knee stiffness, suicidal ideation, low back pain, asthma, income, hip joint pain, stress and employment status. These factors accounted for 46.0% of HRQoL. Conclusion : The findings suggest that the health care program for the elder patients with osteoarthritis should be carefully designed and tailored by socioeconomic variables, physical and emotional health status to improve HRQoL. Keywords : EQ-5D, Quality of life, Osteoarthritis

PP26 C-198
HEALTH-RELATED QUALITY OF LIFE IN ELDERLY PATIENTS WITH PARKINSON'S DISEASE

Ju Hee LEE¹, Moon Ki CHOI¹, Young Ho SOHN², Jin Yong HONG²
(1. Department of Clinical Nursing Science, College of Nursing, Yonsei University, Korea; 2. Department of Neurology, College of Medicine, Yonsei University, Korea)

Introduction : Health-related quality of life (HRQOL) has emerged as an important issue to elderly patients with chronic disease. With population aging, the number of the Parkinson's disease patients is predicted to grow, but we have limited knowledge of their HRQOL. This study was designed to test structural equation modeling of HRQOL of Parkinson's disease patients to provide development of interventions and strategies to improve their quality of life. Method : The participants in the study were patients who visited the neurology

outpatient department of a tertiary hospital in Seoul from July 16, 2012 to January 16, 2013. Demographic characteristics, disease related characteristics, quality of sleep, pain, depression, functional factors, and HRQOL were investigated via a structured questionnaire and measurement of physical function. The collected data were analyzed using PASW Statistics 18.0 and AMOS 7.0 program. Results : The final analysis included 217 patients. This hypothetical model verified disease related factors, depression, and pain as direct factors significantly influencing quality of life for Parkinson's disease patients (GFI=.93 and CFI=.96). Indirect factors including age, quality of sleep were also important factors in predicting quality of life. These variables explained 76.1% of variance in this model. Conclusion : Depression, pain as well as disease related features have the major impact on HRQOL in elderly Parkinson's disease. Therefore, comprehensive interventions are necessary to improve the quality of life of Parkinson's disease patients. Keywords : Parkinson's disease, health related quality of life

PP26 C-199
ASSOCIATION BETWEEN THE SATISFACTION FOR COMMUNICATION AND HEALTH-RELATED QUALITY OF LIFE IN COMMUNITY-RESIDING JAPANESE ELDERLY

Shuichi HARA¹, Hiroko MIURA², Kiyoko YAMASAKI³, Ken OSAKA⁴
(1. School of Health Science, Kyushu University of Health and Welfare, Japan; 2. Community Healthcare, National Institute of Public Health, Japan; 3. School of Social Welfare, Kyushu University of Health and Welfare, Japan; 4. Graduate School of Dentistry, Tohoku University, Japan)

Introduction : Decline of oral function may affect one's ability to communicate and may also decrease opportunities for verbal exchanges or deteriorate quality of life (QOL). We investigated oral function and health-related QOL (HRQOL) using a questionnaire to explore the factors related to improving the satisfaction for communication among community-residing elderly individuals. Method : Five hundred and seventy-eight subjects over 65 years (mean age 76.3 \pm 6.7 years) living in the north area of Miyazaki Prefecture, Japan were investigated. SF8 Health Survey (SF-8) was used to measure HRQOL. Satisfaction for communication was evaluated by five scale items (very satisfactory - very unsatisfactory). Dentition and denture condition, mastication, dysphagia risk, and General Oral Health Assessment Index (GOHAI) were assessed to clarify the factors associated with satisfaction for communication. Results : All scores on the SF-8 domains in subjects with low satisfaction for communication (unsatisfactory or very unsatisfactory) were significantly less than those in subjects with high satisfaction for communication (very satisfactory or satisfactory: $p < 0.001$). Furthermore, poorer mastication, worse denture condition, higher dysphagia risk, or a lower score on the GOHAI was significantly related to lower satisfaction for communication respectively ($p < 0.01$). Conclusion : These findings suggest that satisfactory oral conditions contribute to the ability for and satisfaction of communication; thus improving HRQOL among Japanese elderly individuals. Therefore, oral health programs for the elderly may play an important role in improving their communication status and HRQOL. Keywords : communication, health-related QOL (HRQOL), oral function

PP26 C-200
MULTIPLE TRAJECTORIES OF MULTIMORBIDITY AND IMPACTS ON SUCCESSFUL AGING AMONG THE TAIWANESE ELDERLY

Hui-Chuan HSU (Department of Health Care Administration, Asia University, Taiwan)

Introduction : Elderly usually have multiple chronic diseases at the same time which causes large medical expenditure and impacts on successful aging. However, the multimorbidity patterns are hardly examined across a long period of time. The purpose of this study was to examine the joint trajectories of chronic multimorbidity among the Taiwanese elderly as well as to examine the related factors across 14 years. **Method :** The data was from “The Taiwanese Longitudinal Survey on Aging (TLISA)”, year 1993 to 2007. Those who participated at least 3 waves or more were included in the analysis, in total 2,584 persons (57,012 observations). The chronic diseases included cardiovascular diseases (CVD), chronic non-specific lung disease (CNSLD), arthritis, cancer, gastrointestinal disease (GI), and kidney disease. The multiple group-based trajectories analysis approach was applied to identify the joint trajectory groups; the multinomial logistic regression was used to examine relationships of baseline factors to trajectory groups; the multiple regression and logistic regression were used to examine relationships of multimorbidity trajectories and successful aging indicators. **Results :** Four trajectory groups of multimorbidity were identified: Low risk (55.51%), CVD only risk (15.55%), GI & CNSLD risk (20.20%), and multiple risk (8.74%). Factors related to multimorbidity included age, education, physical functioning, depressive symptoms, regular exercise, and doing health examination. The multimorbidity trajectories were related to later physical functioning, depressive symptoms, social support, and life satisfaction. **Conclusion :** Multiple trajectories of multimorbidity show the patterns of health burden among the elderly over time. Dynamic changes of related factors to multimorbidity need to be further explored. **Keywords :** multiple group-based trajectories, multimorbidity, cormorbidity, chronic disease, successful aging

PP26 C-201

SARCOIDOSIS IN THE ELDERLY PATIENTS

H. HARIZ¹, S. MARZOUK¹, Radhouane GOUIAA², R. BEN SALAH¹, N. SAIDI¹, F. FRIKHA¹, M. SNOUSSI¹, M. JALLOULI¹, M. FRIGUI¹, Z. BAHLOUL¹ (1. Internal Medicine, Hedi Chaker Hospital, Tunisia; 2. Polyclinique CNSS - Sfax, Tunisian Association of Gerontology, Tunisia)

Introduction : Sarcoidosis is a multisystem granulomatous disease that generally affects young subjects. In elderly patients, the clinical features and the course of the disease can be different making the diagnosis challenging in some cases. **Method :** We retrospectively analyzed eight cases of sarcoidosis in elderly patients (≥65 years of age) treated in our department. Clinical and therapeutic characteristics were compared between the elderly and the younger patients. **Results :** From a series of 51 patients, eight patients (15, 7%) with sarcoidosis diagnosed after age 65 years. A female preponderance (75%) was noted. The intrathoracic involvement was frequent (75%). Dyspnea and cough were noted in the half of cases. Extrapulmonary signs involved ocular (3 cases), articular (2 cases) and hepatic (2 cases) manifestations. Cutaneous manifestations were significantly less frequent in elderly (p= 0,017). Hypercalcemia was noted in only one patient. Accessory salivary gland and lymphadenopathy biopsies were important contributing factors to diagnosis (respectively: 60% and 100% were positive). Oral corticosteroid therapy was required in 50% of cases but was less prescribed in young patients (p = 0, 05). **Conclusion :** Sarcoidosis is relatively rare in older persons. Female preponderance, as in our series, is widely reported. Pulmonary functional signs are the prominent symptoms. Alteration of general health is not rare. Diagnosis is sometimes not easy and should include accessory salivary gland or lymphadenopathy biopsy. Therapy involves corticosteroids. **Conclusion:** Sarcoidosis is not a condition exclusively of the young. It should be considered in the differential

diagnosis of elderly patients presenting with pulmonary or multisystem disease. **Keywords :** Sarcoidosis Elderly

PP26 C-202

A CASE OF TYPE 2 DIABETES MELLITUS DIAGNOSED THROUGH DETECTION OF PHARYNGOLARYNGEAL MYCOSIS

Shintaro IDE¹, Kazuki KOBAYASHI¹, Kho ISHIKAWA¹, Hidetaka YOKOH¹, Kaori TACHIBANA¹, Seichiro HIGUCHI¹, Naoko KIKKAWA², Ken-ichi SAKURAI¹, Minoru TAKEMOTO¹, Yoshitaka OKAMOTO², Koutaro YOKOTE¹ (1. Department of Medicine, Division of Metabolism and Endocrinology, Chiba University Hospital, Japan; 2. Department of Otorhinolaryngology/Head and Neck Surgery, Chiba University Hospital, Japan)

Introduction : A 65-year-old man visited the otolaryngology unit at our hospital with complaints of pharyngeal discomfort and difficulty in drinking. He was diagnosed as having impaired glucose tolerance on health checkup at the age of 50, but had not undergone further examination or treatment. Endoscopic examination revealed laryngeal edema with white patches, which led to a diagnosis of pharyngolaryngeal mycosis. **Method :** The patient was immediately hospitalized and treated with antifungal agents to avoid upper airway obstruction by acute progression of laryngeal edema. Blood test on admission showed marked hyperglycemia as 329 mg/dl of fasting plasma glucose and 12.7% of HbA1c, and therefore the patient was transferred to the diabetic unit for glycemic control. **Results :** Administration of insulin was initiated, and the pharyngolaryngeal mycosis resolved by day 12, with improvement of hyperglycemia. At the same time, a right renal tumor of 56?68 mm in size was detected and suspected as malignant on abdominal CT, therefore the patient was scheduled for surgery. **Conclusion :** It has been reported that pharyngolaryngeal mycosis is rare in Japan and mostly occurs in association with impaired local or systemic immunity. Several examinations for evaluating immune status showed almost normal results (ex. total and differential white blood cell count, T lymphocyte subset and serum concentration of immunoglobulins), nevertheless this patients would be thought to have some immunocompromised conditions caused by the untreated diabetes and malignant tumor. **Keywords :** Pharyngolaryngeal mycosis, Diabetes mellitus, Immunocompromised conditions

PP26 C-203

VISUAL AND MORPHOLOGICAL EVALUATION OF PERISTOMAL SKIN UNDER THE CERAMIDE-CONTAINING ADHESIVE

Hiroe KOYANAGI¹, Shinji IIZAKA², Sanae SASAKI¹, Mayumi ASADA², Gojiro NAKAGAMI², Takafumi KADONO³, Eiji SUNAMI⁴, Hiromi SANADA² (1. Dept. of Nurs, Univ. of Tokyo Hospital, Japan; 2. Dept. of Gerontol. Nurs./Wound. Care. Manage, Univ. of Tokyo, Japan; 3. Dept of Dermatology, Faculty of Medicine, Univ. of Tokyo, Japan; 4. Dept of Dermatology, Surgical Oncology & Vascular Surgery, Univ. of Tokyo, Japan)

Introduction : Peristomal skin may face the risk of eroded corneocytes, increased transepidermal water loss (TEWL) and various skin disorders because of the repeated attachment and detachment of the adhesives. Ceramide is a key molecule to maintain skin hydration at stratum corneum and barrier function. The objectives were to assess the morphological features of peristomal skin under the adhesives and to evaluate the effect of ceramide-containing adhesive in terms of the recovery fromof damaged peristomal skin. **Method :** We recruited older patients who aged 70yrs and visited the outpatient clinic for

stoma at the University of Tokyo hospital using the adhesives made by a manufacture. A ceramide-containing adhesive was applied instead of the usual adhesive. A patient was evaluated at most twice; baseline and at least 28 days later or the day when a patient consumed 10 adhesives. A trained nurse evaluated TEWL (VapoMeter®) and microscopic features (CharmView®) at six parts; the upper, lower, medial and lateral sites around stoma under adhesive, skin outside adhesive and an opposite site. Microscopic images were digitally analyzed to evaluate morphological feature of sulcus cutis. The protocol was approved by the Ethical Committee of the University of Tokyo (#2257). Results : At baseline, chronic skin changes characterized as a partial hypopigmentation, pigmentation, skin thinning and planarization of skin sulcus cutis were observed. After the application of a ceramide-containing adhesive, skin barrier function was recovered with decreased TEWL and normalized morphological condition. Conclusion : A ceramide-containing adhesive may be helpful to recover skin barrier function and improve chronic skin damages of peristomal skin. Keywords : Peristomal skin, Ceramide, Visual and morphological evaluation

PP26 C-204

PREVALENCE AND MANAGEMENT OF PRESSURE ULCERS IN A NEUROREHABILITATION WARD.

Maria Panagiota PANOURGIA, Cinzia TEROLLA, Francesca MAMOLI, Caterina PISTARINI (*Neurorehabilitation, Salvatore Maugeri Foundation, Italy*)

Introduction : Pressure ulcers (PU) are localized areas of tissue damage, caused by forces of pressure and friction, which constitute a common and serious health care problem having high costs in both economical and quality of life terms. Method : At admission patients were evaluated by registered nurses educated on risk assessment for developing PU and their nutritional states were screened and assessed by nutritionist. In case of PU presence registered nurse classified the PU, photographed the sore and started specific treatment according to the NPUA-EPUAP guide-lines. Results : 83 patients out of 176 admitted during 2011 were above 65 y.o. (median age=77, men=52, women=31). At admission 20 patients (24%) presented at least one PU and one patient (1.2%) presented one PU during the hospitalization period. According to the NPUAP-EPUAP classification 5 PU (23.8%) were presented at stage I, 7 PU (33.33%) at stage II, 4 PU (19.04%) at stage III and 5 PU (23.8%) at stage IV. After specific treatment for PU, according to the NPUA-EPUAP guide-lines, 19 patients (90.48%) out of 21 reached the complete healing of the ulcers while 2 patients deceased for causes not related to the PU presence. Conclusion : These results demonstrate the importance of the evaluation of the patients risk assessment on developing PU and of the presence of PU at admission, in order to activate immediately prevention measures and specific treatment. Thus, we observed a reduction of clinical complications due to PU and a substantial improvement of patients life quality. Keywords : pressure ulcers management

PP26 C-205

PROFILE OF REFRACTIVE ERRORS IN A SAMPLE OF OLDER POPULATION IN KUALA LUMPUR

Norhani MOHIDIN¹, Woei Kang THAM² (*1. Optometry & Vision Sciences, Faculty of Health Sciences, Universiti Kebangsaan Malaysia (National University of Malaysia), Malaysia; 2. School of Optometry, Twintech University College of Technology, Bandar Sri Damansara, Malaysia*)

Introduction : To study profiles of refractive errors in a sample of older population in a private practice in Kuala Lumpur. Method : This is a

retrospective study. Patients' files seen in a busy optical practice was reviewed and data on refractive errors extracted. The inclusion criteria was healthy subjects aged 40-80 years examined for refractive conditions in 2011. Data extracted include emmetropia, myopia, high myopia, hyperopia, astigmatism and its axis. Myopia was defined as SE < -0.50D, high myopia as SE < -5.00D, astigmatism as cylinder < -0.50DC, hyperopia as SE > 0.50D, and anisometropia as SE difference > 1.00 D. Results : Altogether 555 data of older adults was extracted. Only the right eye was analyzed since there was no significant difference between the right and left eye. Profile of refractive errors found was as follows: myopia -35.5%, high myopia -7.2%, hyperopia -24.9%, astigmatism -58.9% and anisometropia -8.3%. Astigmatism was found to be prevalent among emmetropic (32.4%), myopic (46.8%) and hyperopic (20.8%) subjects respectively. Hyperopic shift was seen as age increased. The proportion of subjects found with against-the-rule-astigmatism was higher in myopes, emmetropes and hyperopes than with-the-rule-astigmatism. There was no significant difference in refractive status according to gender. However, subjects with Chinese and Indian ethnicity showed higher prevalence of myopia and hyperopia respectively (p<0.001). Conclusion : The distribution for myopia was found to be 35.5% in the study population and the incidence is higher among the Chinese compared to the Indians and Malays. Keywords : Prevalence, Refractive error, Malaysian older population.

PP26 C-206

PATTERN VISUAL EVOKED POTENTIALS (PVEP) IN MILD COGNITIVE IMPAIRMENTS (MCI) - A PILOT STUDY

Norhani MOHIDIN¹, Chean Ling LAU¹, Suzana SHAHAR² (*1. Optometry & Vision Sciences, Faculty of Health Sciences, Universiti Kebangsaan Malaysia (National University of Malaysia), Malaysia; 2. Dietetics, Faculty of Health Sciences, Universiti Kebangsaan Malaysia (National University of Malaysia), Malaysia*)

Introduction : The effect of pattern visual evoked potential (pVEP) on mild cognitive impairment (MCI) is unknown, although it has been reported in patients with severe dementia such as Alzheimer. The purpose of this study is to find whether these effects are reflected in patients diagnosed with MCI. Method : Subjects aged 60 years and older diagnosed with MCI by clinical psychologists were invited to take part in the study. VEP recording was done in accordance with ISCEV recommendations using Roland Consult Electrophysiological instrument. Two measurements were taken and data on amplitude and implicit times of P100 were averaged. A group of controls were also recruited and subjected to the same procedure for comparison. The project was approved by the ethical committee of UKM and followed the tenets of Declaration of Helsinki. Results : The results for P100 amplitude and implicit time for MCI subjects and controls were 9.859 ± 4.207 (μ v), 109.737 ± 7.759 (ms), 9.030 ± 3.557 (μ v) and 105.736 ± 3.522 (ms) respectively. The results showed no significant difference in amplitude and implicit time of subjects diagnosed with MCI as compared to controls. Subjects included in this study were diagnosed between 1-3 years prior to VEP measurement. However the severity of MCI was not taken into consideration during analysis. It is possible that these contributed to the outcome of the study. Conclusion : Our pilot study results do not show any significant differences in amplitude and implicit times of pVEP in MCI subjects as compared to controls. Keywords : pattern VEP, MCI

PP26 C-207

IMPLEMENTATION OF A PROGRAM OF FALLS PREVENTION IN GERIATRIC POPULATION IN LA RIBERA COUNTY (ALZIRA, VALENCIA, SPAIN): PRELIMINARY

RESULTS

Pilar PEREZ-ROS¹, Francisco MARTINEZ-ARNAU², Rosana ALBERT-BLASCO³, Francisco J. TARAZONA-SANTABALBINA³ (1. *Facultad de Enfermería., Universidad Católica San Vicente Martir., Spain*; 2. *Departament de Fisioteràpia., Facultat de Fisioteràpia Valencia. Universitat de Valencia., Spain*; 3. *Geriatric Medicine, Hospital Universitario de la Ribera., Spain*)

Introduction : Prevalence of falls is high in geriatric population, constituting a social and sanitary problem. The aim of our study was to apply a program of falls prevention in the community based on active aging and evaluating its results. Method : 106 subjects of a sample of 730 were analyzed. They had completed twelve months of study follow-up. Sample was shared in three groups: 1.- This group received instructions on falls prevention and healthy exercises to improve physical function and balance at beginning of the study. 2.- This group received same theoretical information adding a quarterly session of recollection. 3.- This group received same theoretical information adding a monthly theoretical and practical reinforcement. Variables studied included anthropometric, nutritional, clinical, functional, cognitive and of quality of life values. Results : Average age was 75,1 (SD 4,7) years. Women percentage was 61,3 %. Active group presented a significant reduction of weight percentage (1,84% (IC 95% 0,96-2,72), $p < 0,05$) and body mass index (1,99 % (IC 95% 0,99-2,98), $p < 0,048$) and a major physical activity ($p < 0,03$). We observed an increased muscular force measured by dynamometer, a decreased fat mass measured with impedancemetry and a functional improvement measured up to Barthel's scale in intervention group. These trends were not statistically significant. Conclusion : A program of falls prevention applied in the community can influence positively an increase in physical activity and a reduction of weight. Analysis of complete sample will help to confirm some of these observed trends. Keywords : Falls prevention geriatric syndrome

PP26 C-208

UPDATE OF THE HIP FRACTURE CLINICAL PRACTICE GUIDELINE IN THE HOSPITAL UNIVERSITARIO DE LA RIBERA (ALZIRA, VALENCIA, SPAIN)

Josefina CUBES¹, Encarna MINANA¹, Raquel VILLAMAR¹, Elena BURDEOS², Francisco Jose TARAZONA-SANTABALBINA³, Antonio CALATAYUD⁴, Jose MINGUEZ⁵, Santiago BONONAD⁶, Edelmira MORENO⁷, Juan Antonio AVELLANA³, David CUESTA², Susana SIVERA¹ (1. *Anesthesia Department, Hospital Universitario de la Ribera, Spain*; 2. *Medical Assistential Quality Department, Hospital Universitario de la Ribera, Spain*; 3. *Geriatric Medicine, Hospital Universitario de la Ribera, Spain*; 4. *Orthopaedic Department, Hospital Universitario de la Ribera, Spain*; 5. *Medical Emergencies Department, Hospital Universitario de la Ribera, Spain*; 6. *Haematology Department, Hospital Universitario de la Ribera, Spain*; 7. *Rehabilitation Department, Hospital Universitario de la Ribera, Spain*)

Introduction : Hospital Universitario de la Ribera implemented a hip fracture clinical practice guidelines (CPG) in the year 2001. Method : 11 years later this CPG has been updated according medicine based evidence (MBE). An important point in approach strategy is interdisciplinary team action based in precociousness. Results : In this way, CPG incorporates to emergencies service. In emergencies room priority is based in clinical attention before 30 minute since patient arrives, pain control with an EVA scale ≤ 3 , fluid therapy, according kidney function and blood and X-ray tests. In Orthopaedic room patients will be received ferric carboxymaltose (500 mg) intravenous in only dose. Geriatric Comprehensive Assessment will be done before

8 hours since hospital admission. Assessment includes function scales, Nottingham hip fracture score and acute confusional state prevention tasks. In addition femoral nerve block will be considered to pain control and an anticoagulant drugs protocol has been established to avoid surgical delays beyond 36 hours. In this way, changes in anesthetic methods will be considered in order to an early surgery. Our updated CPG avoids permanent vesical catheter and establishes hemoglobin value of 9 g/dl as a limit to blood transfusion. It is essential to complete 100 % items of surgical check-list before starting surgical procedures. Surgical technique will be chosen according fracture type and MBE. Rehabilitation team will examine patient in first 24 hours after surgery. Conclusion : At hospital discharge calcium and vitamin D supplements, enteral nutritional supplements and antiresorptive or bone formation drugs will be considered. Keywords : hip fracture guidelines

PP26 C-209

VITAMIN D3 DEFICIT AS EVOLUTION RISK FACTOR IN GERIATRIC PATIENTS WITH HIP FRACTURE

Francisco Jose TARAZONA-SANTABALBINA¹, Rosa Ana PEREZ-GINER², Francisco Borja MARUENDA², Angel BELENGUER¹, Eduardo ROVIRA³ (1. *Geriatric Medicine, Hospital Universitario de la Ribera, Spain*; 2. *Orthopaedic Department, Hospital Universitario de la Ribera, Spain*; 3. *Internal Medicine Department, Hospital Universitario de la Ribera, Spain*)

Introduction : Vitamin D3 deficit is highly prevalent in geriatric population. This deficit associates increase risk of hip fracture. Objective: To study possible relationship between calcidiol blood levels and functional changes and mortality. Method : Prospective cohort of geriatric patients with hip fracture admitted at Hospital Universitario de la Ribera between years 2010 and 2012. 161 patients of age ≥ 70 years of a total sample of 332 who completed a follow-up period of 12 months. We studied functional and cognitive variables, nutritional parameters, blood values of calcidiol, parathormone (PTH), hospital readmissions and mortality for a 12 months of follow-up period were collected. Results : 121 women (74,7 %). Age 84,0 (SD 6,31) years, mean of length of stay 8,05 (SD 2,76) days. Mean presurgical length of stay 1,84 (SD 1,34) days. Calcidiol 13,8 (SD 9,5) ng/ml. 157 (96,95) with calcidiol levels in rank of insufficiency. PTH 84,6 (SD 46,9) pg/ml. 101 (62,3 %) patients with PTH levels higher than normal. Mortality during hospital admission 6 (3,7%), at month after admission 9 (6%), at 6 months 27 (18,2%), at 12 months 33 (22,4%). There is a significant statistical Spearman's correlation between difference Barthel's score and calcidiol blood levels, $p < 0,03$. A multiple regression was calculated to 12 months accumulated mortality. We found a significant statistical relationship between masculine gender and previous fracture history and mortality, $R^2 = 0,567$, $P < 0,016$. Conclusion : We have not found a statistically significant relationship between calcidiol levels and mortality or functional deterioration. We believe possible to find a relationship when we had completed global sample study. Keywords : hip fracture calcidiol deficiency

PP26 C-210

DO NOT RESUSCITATE ORDERS AND AGING: IS THERE AN IMPACT OF COMORBIDITIES ON THE DECISION-MAKING PROCESS?

De Decker LAURE¹, Annweiller CEDRIC², Berrut GILLES³, Beauchet OLIVIER² (1. *Geriatric, University Nantes, France*; 2. *Geriatric, University Angers, France*; 3. *Geriatric, Hospital Nantes, France*)

Introduction : The “Do Not Resuscitate” orders (DNR) are defined as advance medical directives to withhold cardiopulmonary resuscitation during cardiac arrest. Comorbidities may influence the DNR decision-making process. Our objective was to perform a systematic review and meta-analysis of published data examining the relationship between DNR orders and comorbidities in older patients. **Method :** A systematic Medline and Cochrane literature search limited to human studies published in English and French was conducted on August 2012, with no date limits, using the following terms: “resuscitation orders” OR “do-not-resuscitate” combined with “aged, 80 and over” combined with “comorbidities” OR ‘chronic diseases’. **Results :** Of the 65 selected studies, 22 met the selection criteria for inclusion in the qualitative analysis. DNR orders were positively associated with comorbidities in 21 studies (95%). The meta-analysis included 7 studies with a total of 27,707 participants and 5065 DNR orders. It confirmed that comorbidities were positively associated with DNR orders (summary OR = 1.25 [95% CI: 1.19-1.33]). The relationship between DNR orders and comorbidities differed according to the nature of comorbidities; the summary OR for DNR orders was 1.15 (95% CI: 1.07-1.23) for cognitive impairment, OR=2.58 (95% CI: 2.08-3.20) for cancer, OR=1.07 (95% CI: 0.92-1.24) for heart diseases (i.e., coronary heart disease or congestive heart failure), and OR=1.97 (95% CI: 1.61-2.40) for stroke. **Conclusion :** This systematic review and meta-analysis showed that DNR orders are positively associated with comorbidities, particularly with cognitive impairment, cancer and stroke. **Keywords :** Do not resuscitate orders; comorbidities

PP26 C-211

EARLY DEATH IN OLDER PATIENTS WITH CANCER

Rabia BOULAHSSASS¹, Sebastien GONFRIER¹, Francine AUBEN¹, Veronique MARI², Isabelle BEREDER¹, Anne Laure COUDERC¹, Jerome BARRIERE², Eric FRANCOIS², Olivier GUERIN¹ (1. Gerontology, CHU de Nice, France; 2. Oncology, Centre Antoine Lacassagne, France)

Introduction : The purpose of this study is to analyse early death in older patients with cancer during 100 days after a geriatric comprehensive assessment. **Method :** This study is a prospective et descriptive work. A geriatric comprehensive have been done before the treatment decision. Geriatric data (MMSE, MNA, BMI, ADL, IADL, CIRSg, Gait speed, QLQC30, Charlson, G8 and Balducci classification) are collected and also characteristic of the cancer and social and demographic data. During 100 days of follow up, the rate of death, treatment made et geriatric interventions are collected. **Results :** One third of the patients (n=104) have died during the follow up of 100 days. Mean age of the patients are 81 years old. Patients with lower gait speed (p=0,04), metastatic cancers (p=0,03), poor nutritional status (p=0,01), lower screening score test (G8) (p=0,01), PS>2 (p=0,01) and higher state score on Balducci's classification had significantly more risk to die. **Conclusion :** This study confirms the importance of the geriatric comprehensive assessment in oncogeriatric patients to predict risk factors of worse outcomes. Further analyses (logistic regression and Interventional geriatric factors) will be done in this study. **Keywords :** oncogeriatric, survey, early death

PP26 C-212

TREATMENT DECISIONS FOR ELDERLY CANCER PATIENTS

Boulahssass RABIA¹, Veronique MARI², Francine AUBEN¹, Sebastien GONFRIER¹, Jean Michel TURPIN¹, Guillaume SACCO¹, Patrice BROCKER¹, Eric FRANCOIS², Olivier GUERIN¹ (1. Gerontology, CHU de Nice, France; 2. Oncology, Centre Antoine Lacassagne, France)

Introduction : Purpose of the study was to analyse the treatment decision made by older patients with cancers and their caregivers. **Method :** After a Comprehensive Geriatric Assessment (CGA) , 109 patients and their caregiver were asked about their decision on oncologic treatment .Treatment could be chemotherapy, radiotherapy, surgery , others therapies or palliative care. Different aspects which could influence decision were collected: characteristics of the cancer (metastasis or not), cognitive status, knowledge of the diagnosis and data on CGA. **Results :** One hundred and one patients and 109 caregivers were enrolled .Mean age was 81 [SD] years old. Only 11% patients (n=12) refused the treatment and 14% of the caregivers (n=15). Five percent of patients could not make a decision because « it's difficult » and ask their doctors to make it. Fifteen percent could not make a decision because of their cognitive status. Six percent of the patients could not make decision because they don't know the diagnosis. Sixty three percent of them accepted to be treated. **Conclusion :** Most of patients who could made a decision have the same reflex ion than younger patients. Cognitive status needs to be checked before making the decision. A little part of them don't know the diagnosis because of their family .Ethical reflex ion is necessary because the right to know is also important in elderly patients. Further analyses are need to compare if there is differences between the treatments and including the data of the CGA. **Keywords :** ethics, treatment decision making, oncogeriatric

PP26 C-213

EFFECT OF ANEMIA ON FATIGUE AND QUALITY OF LIFE OF PATIENTS OVER 75 YEARS

Claire VANHAECKE COLLARD¹, Coralie BARBE², Jean Luc NOVELLA¹, Francois BLANCHARD¹, Dragos CIOCAN², Delphine LEBRUN¹, Rachid MAHMOUDI¹ (1. Geriatrie Aigue et Medecine Interne, CHU Reims, France; 2. Unite d'aide Methodologique, CHU Reims, France)

Introduction : Anemia is more prevalent with ageing and constitutes a risk of decompensation of frailty, which is a consequence of the multiple comorbidities frequent in the elderly. Aims of this study was to evaluate impact of anemia on fatigue and quality of life (QoL) among elderly over 75, based on the hemoglobin level, and to identify the etiologies of anemia, the treatment prescribed and the clinical and functional impact of the treatment. **Method :** A prospective and observational cohort study was conducted in the acute geriatric unit of the Hospital of Reims and included patients over 75. Socio-demographic and geriatric characteristics, hemoglobin level, assessment of fatigue and QoL (FACT-An and SF-36) were collected at admission and on discharge. Etiology and treatment of anemia were collected from medical records. **Results :** A total of 66 patients were included and 36 of them presented anemia (54,5 %). Mean hemoglobin level was 104,6 g/L. Fatigue and QoL were impacted by anemia with a reduction in FACT-An (p=0,0296), FACT-F (p=0,0356) and “anemia score” of FACT-An (p=0,0369) scores. Main etiologies of anemia were chronic kidney disease, inflammation and nutritional deficiencies. A treatment of anemia was prescribed to 15 patients (42,8%). **Conclusion :** Our study shows that there is a functional impact of anemia in the elderly. Medical management of anemia in this population can't be a transposition of the one applied to the general population and must be adapted to the specificities of the elderly in terms of tolerance to anemia. **Keywords :** anemia, fatigue, quality of live

PP26 C-214

INTEREST OF AB40 ASSAY AND AB42/AB40 RATIO IN THE DIAGNOSIS OF ALZHEIMER'S DISEASE

Rachid MAHMOUDI¹, Isabella MORRONE¹, Jean Baptiste OUDART², Claire VANHAECKE COLLARD¹, Laurent RAMONT³, Camille TALBOT³, Moustapha DRAME³, Jean Luc NOVELLA¹ (1. Internal Medicine and Clinical Gerontology, CHU Reims, France; 2. Biology, CHU Reims, France; 3. Geriatric, CHU Reims, France)

Introduction : Combined assay of A β 42 and tau-protein (total/phosphorylated) in cerebrospinal fluid (CSF) showed a high potential in the diagnosis of Alzheimer's Disease (AD) justifying their introduction in the new diagnosis criteria. However this assay led sometimes to discordant results indiscriminate (isolated variation of A β 42 or P-tau). The A β 42/A β 40 ratio reflects the relative variation of A β 42 in relation to the amyloid burden overall. This ratio is less than 0.05 in AD. Aim of this study was to evaluate interest of the A β 42/A β 40 ratio in patients whose biomarkers profile was discordant. **Method :** A monocentric prospective study was conducted over a period of 24 months. Were included all patients who received CSF biomarkers assay. **Results :** 119 patients were included of which 56 presented discordant profile. After integration of the A β 42/A β 40 ratio, 26 patients had normal profile (A β 42/A β 40 >0.05 and P-Tau<60), 2 had isolated tauopathy profile (A β 42/A β 40 > 0.05 and P-Tau> 60), 13 AD (A β 42/A β 40 < 0.05 and P-Tau>60), 15 isolated Amyloidopathy profile (A β 42/A β 40 < 0.05 and P-Tau<60). The A β 42/A β 40 ratio allows amelioration of diagnosis performance of 22% (63% versus 85% integrating the ratio). **Conclusion :** This study shows interest of A β 40 assay and A β 42/A β 40 ratio in diagnosis of AD. The recourse to this ratio can be very useful to our clinical practice. **Keywords :** Alzheimer's disease, A β 42/A β 40 ratio, CSF Biomarkers

PP26 C-215 THE CLINICAL CHARACTERISTICS OF PNEUMONIA AND URINARY TRACT INFECTION IN A COMMUNITY-BASED GERIATRIC HOSPITAL

Jong-Hoo LEE¹, Young-Jin KIM¹, In-Gyu KIM², Sung-Man ROWE², Hyun-Sik YUN¹, Jae-Young HAN¹, In-Sung CHOI¹, Sam-Gyu LEE¹ (1. Department of Physical & Rehabilitation Medicine, Research Institute of Medical Sciences, Chonnam National University Medical School & Hospital, Korea; 2. Department of Physical & Rehabilitation Medicine, Chonnam National University Hwasun Geriatric Hospital, Korea)

Introduction : Infection such as pneumonia and urinary tract infection (UTI) is one of common problems in patients of geriatric hospital. We aimed to investigate the clinical characteristics of pneumonia and UTI in a community-based geriatric hospital. **Method :** One hundred and seventy three inpatients (age 62.52±15.31 years; 61 men, 112 women; stroke 116, brain tumor 5, spinal cord injury 17, others 30) participated in NeuroRehabilitation program. We retrospectively reviewed the medical records of inpatients. Pneumonia was diagnosed by clinical symptoms, laboratory findings and simple radiologic findings. UTI was diagnosed by clinical symptoms, blood examination and urine analysis. **Results :** Four patients (4 men) out of 173 patients developed geriatric hospital acquired pneumonia. Tracheostomy was observed in 1 patient. Previous feeding route was tube feeding in all 4 patients. They were successfully treated with intravenous (IV) injection of antibiotics (2 ceftriaxone, levofloxacillin, tazobactam). Five (1 man, 4 women) patients out of 173 patients developed UTI. Voiding methods were voluntary voiding in 1 patient, continuous catheterization in 4 patients. They were successfully treated with empirical IV antibiotics treatment (4 levofloxacillin, 1 ceftriaxone). **Conclusion :** The incidence of pneumonia or UTI was not higher than expected. It may be attributed to the adoption of well-structured rehabilitative management system. The understanding of the clinical characteristics of pneumonia and

UTI in geriatric hospital would be helpful for therapeutic optimization. **Keywords :** Elderly, Pneumonia, Urinary tract infection

PP26 C-216 COMPARISON OF HOSPITAL-BASED CARDIAC REHABILITATION AND HOME-BASED CARDIAC REHABILITATION IN THE ELDERLY

Sam-Gyu LEE, Min-Keun SONG, Hyo-Jeong SEON, Young-Cheol YUN, Jun-Beom LEE, Hyun-Sik YUN, Jae-Young HAN, In-Sung CHOI (Department of Physical & Rehabilitation Medicine, Research Institute of Medical Sciences, Chonnam National University Medical School & Hospital, Korea)

Introduction : Home-based cardiac rehabilitation (CR) and hospital-based CR seem to be equally effective in improving clinical and health related quality of life outcomes in CR patients. The elderly has received less attention in CR field. We aimed to compare the effects of hospital-based CR and home-based CR in the elderly. **Method :** Twenty patients over 65 years old, who were referred for CR after percutaneous coronary intervention (PCI), were enrolled. All patients conducted exercise tolerance test (ETT) in 2 weeks after PCI by modified Bruce protocol. After ETT, each patient took an exercise prescription according to the result of ETT. Thirteen patients (6 men, 7 women; 7 ST-elevation myocardial infarction (STEMI), 6 non-ST elevation myocardial infarction (NSTEMI); age 71.6±4.9 years; ejection fraction (EF) 57.8±10.4 %; body mass index (BMI) 23.6±2.5 kg/m²) participated in the hospital-based CR and 7 patients (3 men, 4 women; 2 STEMI, 5 NSTEMI; age 71.8±2.9 years; EF 61.1±10.0 %; BMI 23.6±3.7 kg/m²) did the home-based CR. We evaluated the cardiac function by recording maximal metabolic equivalent of task (MET), VO₂max and peak heart rate (PHR). PHR was recorded at 100% of VO₂max during ETT. Follow-up ETT was conducted after 4 weeks. **Results :** There were significant differences of VO₂max and maximal METs in hospital-based CR group before and after CR (p=0.001, 0.013). After CR, there was significant difference of maximal METs between hospital-based CR group and home-based CR group (p=0.028). **Conclusion :** Hospital-based CR showed more improvement of cardiac function than home-based CR at short-term follow-up. **Keywords :** Exercise, Function, Ischemic heart disease

PP26 C-217 THE CLINICAL SIGNIFICANCE OF QUANTITATIVE SENSORY TEST IN STROKE

Yu-Ri CHOI, Hyo-Jeong SEON, Jun-Beom LEE, Hyun-Sik YUN, Jae-Young HAN, In-Sung CHOI, Sam-Gyu LEE (Department of Physical & Rehabilitation Medicine, Research Institute of Medical Sciences, Chonnam National University Medical School & Hospital, Korea)

Introduction : Sensory impairment is one of common symptoms in stroke patients. Quantitative sensory test (QST) has been developed to complement traditional neurological bedside examination in the analysis of sensory impairment. Pain and temperature sensations are conveyed via spinothalamic pathway, however, it is not easy to evaluate spinothalamic pathway objectively in stroke patients. We aimed to investigate the clinical significance of QST in stroke patients. **Method :** Eleven stroke patients (8 men, 3 women; age 59.82±12.19 years; ischemic 7, hemorrhagic 4) who can cooperate in the sensory evaluation were recruited. Conventional sensory exam including light touch, sharp & dull, proprioception and stereognosis was performed on 45.64±22.95 days. Both median nerve SSEPs were obtained on 39.18±21.88 days. QST with CASE IV (WR Medical Electronics,

Stillwater, MN) was performed on 42.09±21.86 days. We tested vibratory perception threshold (VPT), cold perception thresholds (CPT) and warm perception threshold (WPT) in both hands. Results : In the affected hand, VPT was 17.73±2.69 JND, CPT was 18.18±7.63 JND, WPT was 16.82±3.66 JND. Light touch sensation and proprioception were not associated with SSEP, respectively (p=0.424, 0.545). Sharp & dull sensation was associated with CPT (p=0.006). But, sharp & dull sensation was not associated with WPT (p=0.727). Light touch sensation was abnormal in 8 patients, SSEP was abnormal in 6 patients, however, VPT was elevated in all patients. Conclusion : CPT would be helpful for the objective evaluation of spinothalamic pathway in stroke patients. Further study including large stroke patients group with post-stroke central pain will be needed. Keywords: Stroke, Sensory function, Evaluation

PP26 C-218

OUTCOMES IN COMPLEX PATIENTS WITH DELIRIUM AND SUBSYNDROMAL DELIRIUM ONE YEAR AFTER HOSPITAL DISCHARGE

Nicolas MARTINEZ-VELILLA¹, Koldo CAMBRA², Berta IBANEZ³, Cristina ALONSO BOUZON⁴, Javier ALONSO-RENEO⁵, Alvaro CASAS-HERRERO⁵ (1. Geriatric Department, Complejo Hospitalario de Navarra, Spain; 2. Centro de Investigacion Biomedica, Fundacion Miguel Servet, Spain; 3. Centro Investigacion Biomedica, Fundacion Miguel Servet, Spain; 4. Servicio de Geriatria, Hospital Universitario de Getafe, Spain; 5. Servicio de Geriatria, Complejo Hospitalario de Navarra, Spain)

Introduction : There is growing evidence about the prognostic significance of SSD among elderly but to date, there are very few published studies of SSD in elderly medical patients and the goal of our study was to corroborate the 1-year outcomes. Method : Prospective multicentre study of 85 patients admitted in the acute geriatric wards of three tertiary hospitals in Spain. Our SSD clinical diagnostic criteria used were based on Marcantonio's, who defines them as non-full presence of CAM definitive delirium criteria rather as the presence of at least one of their criteria. To assess the relationship of delirium and SSD with different variables we used the Chi square test or Fisher test, the trend test in proportions, and T-test or Mann Whitney test. In multivariate models, linear or logistic, we have tried as covariates all variables with at least marginal significance in the bivariate analysis. Results : At 1-year follow-up thirty four (40%) of patients died (51% of patients with delirium, 39% with SSD and 47% without delirium). In the bivariate analysis the risk of death doesn't appear to be associated with any of the variables except CIRS-G (Cumulative Illness Rating Scale-Geriatric). Adjusting for CIRS-G and the initial Barthel, the diagnosis of subsyndromal delirium did not appear significantly associated with Barthel index variation at 12 months. Conclusion : Findings from this study confirm the high prevalence of delirium and SSD but fail to prove the gradient in outcomes at one year along the delirium spectrum that the baseline study suggested. We suggest several explanations. Keywords : delirium, subsyndromal delirium, prognosis

PP26 C-219

COST EFFECTIVENESS OF MEDICAL HOME VISITS IN BED BOUND HOME BOUND OLDER ADULTS IN A COMMUNITY SETTING

Rahul PADMANABHAN (Geriatric Services, G Kuppuswamy Naidu Memorial Hospital, Coimbatore, India)

Introduction : Aim of the study was to study the cost effectiveness of providing geriatric home care services to older adults in the

community through a mobile geriatric team. Method : Data was collected from 25 patients who were registered with the geriatric services department of a tertiary care hospital for routine home visits. Cost effectiveness was calculated by comparing the actual cost incurred to the patient and the estimated cost that would have incurred if the patient was brought to the hospital. Secondly, effectiveness of each home visit in preventing future hospital admission, re-admission and further complication were analyzed. Results : We found that through properly designed home care service program, we are able to cut down the overall health expenditure of the patient by 43 %. The sample included patients that were followed from the hospital to home through transitional care model (TCM) (3) and patients who registered from the community for the program (22). 45 % of patients studied improved well with routine health evaluations at home. We were able to cut down hospital admission by 40 %, hospital re-admission by 70 %. Infection was found to be the major contributor to declining health status (75%) needing in-patient care. Conclusion : Geriatric home visit is a cost effective method to cut down medical expenditure in older adults. Proper designing of the protocol and logistics is key to cost effectiveness from the hospital perspective. Early detection and management of anticipated complication reduces patient expenditure. TCM was an effective method of reducing re-admission and complications. Keywords : Geriatric Home visits, Transitional care model, Cost effectiveness

PP26 C-220

EARLY DISCHARGE AND ADMISSION AVOIDANCE STRATEGIES FOR OLDER PATIENTS WITH FUNCTIONAL DECLINE DUE TO ACUTE ILLNESS: COMPARING TWO INTERMEDIATE CARE UNITS

Miquel Angel MAS¹, Sebastia SANTA EUGENIA¹, Antoni SICRAS², Joan CUNILL¹ (1. Department of Geriatric Medicine and Palliative Care, Badalona Serveis Assistencials, Spain; 2. Planning and Resources Management, Badalona Serveis Assistencials, Spain)

Introduction : Alternatives to conventional care for older patients are needed. Intermediate Care (IC) resources seem effective both at home and at specialized hospital units. Method : A pilot descriptive study analyzed functional gain (measured by Barthel Index), length of stay (LOS; days) and discharge destination (%) of older medical (M) and orthogeriatric (O) patients with functional decline after acute illness. We compared two units: recently developed IC hospital-at-home (IC home) versus IC hospitalization (main inclusion criteria except home support; IC home if career and acceptance). We separately analyzed Early Discharge (ESD) and Admission Avoidance (AA) strategies. Results : 637 patients. Main results were (IC home/IC hospitalization): ESD M (N 47/126; functional gain 23.6/23.1, p 0.92; LOS 34/57, p<0.01; destination home 62/77, p<0.01); AA M (N 54/33; functional gain 25.8/15.8, p 0.06; LOS 53/58, p 0.43; destination home 76/73, p 0.02); ESD O (N 66/265; functional gain 27.0/29.2, p 0.45; LOS 43/60, p <0.01; destination home 89/89, p 0.91); AA O (N 20/26; functional gain 23.8/31.0, p 0.24; LOS 48/60, p 0.16; destination home 85/88, p 0.21). Conclusion : Both units had good results on ESD and AA processes. For ESD strategy LOS was significantly shorter in home unit. Some medical patients couldn't stay at home at the end of intervention due to severe acute events. Keywords : Intermediate Care, Admission Avoidance, Early Discharge, Rehabilitation

PP26 C-221

MEASUREMENTS OF FUNCTIONAL CAPACITY AMONG A VERY OLD SAMPLE OF INSTITUTIONALIZED PARTICIPANTS

Alvaro CASAS HERRERO¹, Eduardo CADORE², Frabricio

ZAMBON², Nora MILLOR³, Teresa MARCELLAN⁴, Mikel IZQUIERDO⁵ (1. Geriatrics, Complejo Hospitalario de Navarra. Universidad Publica de Navarra, Spain; 2. Pyhiotherapy, Universidad Publica de Navarra, Spain; 3. Mathematics, Universidad publicca de Navarra, Spain; 4. Geriatrics, Residencia Casa misericordia, Spain; 5. Pyhiotherapy, Univerisdad Publica Navarra, Spain)

Introduction : Limited information is available about measurements of functional capacity in the oldest old institutionalized elders. It remains controversial if cognitive decline could be part of the frail phenotype. Method : 35 participants were divided according to frailty paradigm (Fried criteria) into frail (n=12), robust (n=12) and frail and mild cognitive decline (MCI) (n=9) using Petersen criteria. Gait velocity 5 m test (GVT) and Time up and go (TUG), both with dual task paradigm, balance (semitandem) and strength (hand grip, knee extension, hip strength) were examined. Results : Significant differences between groups were observed in all tests related to the gait ability. Robust group reached higher TUG performance compared to that observed in frail (P<0.01) and MCI+frail group (P<0.01), whereas similar results were observed using dual task paradigm. Moreover, the nofrail group had significant greater performance in the usual GVT than the frail (P<0.001) and MCI+frail group (P<0.001), as well as greater performance with arithmetic and verbal dual task compared with frail (P<0.01) and DCL+frail group (P<0.001) Robust showed significant greater semitandem test performance compared with that observed in the frail (P<0.001) and DCL+frail group (P<0.05). Nofrail elderls showed greater hand grip, knee extension and hip flexor strength values compared with the frail (P<0.01) and MCI+frail group (P<0.01). Conclusion : Measurements of functional capacity in the robust oldest group were significant higher than that observe in frail or frail+ MCI group whereas no statistical differences were found between frail and MCI+frail group.. These results suggest that MCI could be included in the frailty continuum. Keywords : Functional capacity, frailty, mild cognitive impairment

PP26 C-222

THE RESULTS OF RENAL BIOPSY IN THE OLDER PATIENTS WITH RENAL DISEASE

Mi Young KIM¹, Dong Won PARK¹, Hang-Il, GOH², Koo Ho SEOK² (1. Internal Medicine, Seoul Paik Hospital, Korea; 2. Internal Medicine, Nephrology, Seoul Paik Hospital, Korea)

Introduction : The older patient with renal disease have been being taken conservative treatment without renal biopsy because of old age. But recently with the development of medicine and the number of older people in general population, it is time for need of analyzing the clinical manifestation and renal pathology about the older patient in Korea. Method : From Jun 1979 to Aug 2012, we searched and analyzed the medical record about the older patient (> 65 yrs) who had renal biopsy in Seoul Paik hospital. Results : The number who had renal biopsy was 54, the mean age was 70 ± 5, the number of male gender was 26 (45.6%), female gender was 27 (47.4%). Initially, the level of serum creatinine was 2.44 ± 2.04 mg/dL, and estimated glomerular filtration rate was 40.52 ± 2.71 ml/min/1.73m² and the stage of CKD by MDRD equation was 3 ± 1. With the result of pathology including repetition, the percentage of primary glomerulonephritis was 47.4% and that of secondary glomerulonephritis was 28.1%. In order of frequency, the percentage of membranous nephropathy was 16.92%, that of the interstitial nephritis was 13.85% and that of the FSGS was 7.69%. Secondary glomerulonephritis included diabetic nephropathy, lupus nephritis and vasculitis. Conclusion : In this study, the percentage of primary

glomerulonephritis was higher and the percentage of membranous nephropathy was the most. After the treatment renal function and proteinuria showed improvement, so we suggested that the older patient with renal disease should have renal biopsy actively for appropriate treatment. Keywords : renal biopsy, older patient, renal disease

PP26 C-223

A SYSTEMATIC REVIEW ON ESSENTIAL FACTORS AND EFFICIENT MANAGEMENT METHODS FOR COMPREHENSIVE GERIATRIC ASSESSMENT

Naoki TOMITA¹, Takae EBIHARA¹, Takashi OHRUI², Kaori UNE¹, Miho TSUTSUI¹, Youich KOSAKA¹, Shoji OKINAGA¹, Katsutoshi FURUKAWA¹, Hiroyuki ARAI¹ (1. Department of Geriatrics and Gerontology, Institute of Development, Aging and Cancer, Tohoku University, Japan; 2. Division of Geriatric Pharmacotherapy, Institute of Development, Aging and Cancer, Tohoku University, Japan)

Introduction : Trials have reported on several types of comprehensive geriatric assessments (CGA). The factors to be evaluated and management of these evaluations in the whole assessment are varying among these studies. However, not much is available on the comparison of these variations. As medical and care resources are limited, we need to develop not only effective, but also efficient system of geriatric assessments. In the present study, we reviewed the variation of CGA described in previous studies systematically to confirm the efficient method of evaluation. Method : Searches of PubMed were conducted for articles written in English, and published between January 1960 and December 25, 2012. The search terms were geriatric assessment, geriatric evaluation combined with comprehensive assessment, geriatric syndrome. Results : One thousand five hundred fifty-four citations were identified in the original literature search. Conclusion : In order to achieve more efficient assessment, seamless integration of structured geriatric problem detection through hospital-based (inpatient, outpatient) and community-based assessment are required. Our review indicated the potential usefulness of digital device for the comprehensive assessment. It was also suggested that the assessment should be discussed together with effective care planning. Keywords : Comprehensive geriatric assessment

PP26 C-224

RELATIONSHIP BETWEEN VITAMIN D, CENTRAL BLOOD PRESSURE AND AUGMENTATION INDEX IN ELDERLY

Mehmet Emin KUYUMCU, Yusuf YESIL, Burcu Balam YAVUZ, Meltem HALIL, Mustafa CANKURTARAN, Servet ARIOGUL (Department of Geriatric Medicine, IAGG 2013, Turkey)

Introduction : A growing body of evidence suggests a possible association between vitamin D deficiency and many cardiovascular disorders. Enough study was no found in geriatric population. Studies have suggested that central blood pressure measurement is more sensitive method than peripheral blood pressure measurement(1). Simultaneously measured Augmentation Index (AI) is the proportion of central pulse pressure (CBP) due to the late systolic peak caused by the reflected wave and serves as a measure of central arterial stiffness (2). The purpose of this study is evaluating the relationship between vitamin D levels, central blood pressure and augmentation index in geriatric population. Method : A total of 202 elderly patients were included. The patients with cardiac disease, advanced dementia and take vitamin D supplementation were excluded from the study. Non-invasive CBP and AI measured with tonometric system HEM-9000A. Results : Patients were evaluated in two groups according to vitamin D

level (cut-off=20 ng/ml). The mean age was similar. Mini-Mental State Examination and calcium levels were significantly higher in high vitamin D group. PTH levels and triglycerides were significantly lower in high vitamin D group. AI and CBP of groups were similar. Conclusion : In this study, there was no association between vitamin D levels, CBP and AI in elderly patients. The relationship between vitamin D levels, cognitive impairment and cardio-metabolic risk factors is attractive, because vitamin D may be an alternative for prevention and treatment of this diseases. Keywords : vitamin d, cbp, mmse

PP26 C-225

THE EFFECT OF BRAIN TRAINING PROGRAM ON COGNITIVE ABILITY IN ELDERLY

Tae-Yu KIM¹, Yun-Suk JUNG², Dong-Won KIM³, Tae-Young OH⁴
(1. Department of Neurology, Busan Willis Hospital, Korea; 2. Department of Social Welfare, Busan Willis Hospital, Korea; 3. Department of Instruction Section, Haeundae High School, Korea; 4. Dept.Physical Therapy, Silla University, Korea)

Introduction : The purpose of this study was to investigate effect of brain training on cognitive ability in elderly. Method : This study was performed in Willis hospital located B city during 2012 Oct. 12 ~ Dec. 12. Participants were 8 outpatient who were 2 male and 6 female(mean age 77.12). Brain training was performed 50 minute of once time per 1 week for 2 months using by brain training program self-developed. Brain training program has a program using by standardized workbooks, picture, music, sound and painting and shape fill, array scene, reminiscence therapy. We used CSOA(Cognition Scale for Older Adults) in order to evaluate cognitive ability of elderly. Data were analyzed paired test, ANOVA using by SPSS ver. 18. Results : The results of this study were as follow : the mean value between pre and post of brain training program were increased in every subdomain of CSOA. There was significantly difference between pre and post of brain training program in raw scores and scaled scores of reported drawing(p<.05). A highest score of COSA was occupation function score and lowest score was management intelligence area in pre brain training(p<.05). Attention function score was highest and management intelligence score was lowest in post training. Variation between pre and post of brain training showed significantly increasing in attention function, and showed significantly decreasing in occupational function(p<.05). Conclusion : We could confirm that brain training program for improving cognitive ability positive effect on CSOA. We suggested brain training program with physical activity because reported drawing was improved in this study. Keywords : Brain training program, cognition ability, elderly

PP26 C-226

AGE EFFECT ON QUALITY OF LIFE AMONG LOW INCOME AND LOW EDUCATED ELDERLY USING THE EQ-5D IN RIO DE JANEIRO, BRAZIL

Roberta BARROS¹, Janiciene SOUZA², Fayanne SCHAUSTZ², Fernanda BORGES³, Marisa SANTOS⁴, Jerson LAKS⁴, Luiz Mauricio PLOTKOWSKI⁴
(1. Geriatrics, Centro de Estudo e Pesquisa do Envelhecimento, Brazil; 2. Nursing, Centro de Estudo e Pesquisa do Envelhecimento, Brazil; 3. Nutrition, Centro de Estudo e Pesquisa do Envelhecimento, Brazil; 4. Medicine, Centro de Estudo e Pesquisa do Envelhecimento, Brazil)

Introduction : There are scarce data on the impact of aging on quality of life (QoL). EuroQol-5 D is not well studied in the elderly. This cross-sectional study aims to investigate the association between QoL and aging. Method : We screened 300 elderly people referred by a

primary care center from April to December 2012. EuroQol is available for 139 persons. Results : The patients were mainly female (59%), mean age= 70 years (± 7); 42% lower educated, 82% from D/E economic class. The results revealed a mean EQ-5D of 0.78. The mean QoL for each age group (G0=60-69; G1=70-79, G2 >80) was 0.77, 0.78, and 0.76 (p>0.05), respectively. We observed good QoL (EQ-5D>0.7) in 71.2% of the individuals. The proportion (%) of reported problems for each dimension was: mobility (G0=37.3, G1= 35.7, G2 = 50, total =38.8), self care (G0=11.9, G1=5.4, G2 =20.8, total =10.8), usual activities (G0= 18.6, G1=25, G2 =29.2, total =23), pain/discomfort (G0= 71.2, G1=60.7, G2 =66.7, total =66.2), anxiety/depression (G0= 45.8, G1=51.8, G2 =41.7, total =47.5). 2/3 of respondents reported pain/discomfort. Conclusion : Pain/discomfort was the most affected domain. An adjusted analysis is needed to study the effect of age higher than 80 years on QoL. Albeit this was a low income and low educated sample QoL was good. Keywords : Aging, Quality of life , EQ-5D

PP26 C-227

LONG-TERM FUNCTIONAL OUTCOME OF ACUTE FIRST-EVER STROKE PATIENTS

Hyo-Jeong SEON, Min-Keun SONG, Jeong-Hyun BYUN, Jung-Kook KIM, Hyun-Sik YUN, Jae-Young HAN, In-Sung CHOI, Sam-Gyu LEE
(Department of Physical & Rehabilitation Medicine, Research Institute of Medical Sciences, Chonnam National University Medical School & Hospital, Korea)

Introduction : We aimed to analyze the long-term functional outcome of acute first-ever stroke patients in Korea to provide useful information for the development of systematic rehabilitation care for stroke patients. Method : One hundred and thirty chronic stroke patients were recruited. All patients were acute first-ever stroke patients admitted to our NeuroRehabilitation center from 2008 to 2009. After 2 years or more from the onset of stroke, chronic stroke patients underwent neurological assessments for the functional outcome using Korean Modified Barthel Index (K-MBI), Lawton Instrumental Activities of Daily Living (IADL), Korean Mini-Mental Status Examination (K-MMSE), Fugl-Meyer Assessment (FMA) and Functional Ambulatory Category (FAC). General characteristics of subjects such as age, sex, educational background, residential area and income were collected and reviewed. Results : The duration of stroke was 2.83 \pm 0.61 years. Mean age was 63.7 years and the ratio of male to female was 1.23:1. K-MBI, Lawton IADL, K-MMSE, FMA and FAC were 96.2 \pm 85.3, 9.3 \pm 6.5, 24.5 \pm 5.3, 57.9 \pm 17.7 and 4.2 \pm 1.4, respectively. For the gender, K-NIHSS and Lawton IADL was higher in female than male, and K-MMSE was higher in male than female. K-MBI, Lawton IADL, K-MMSE, and FMA did not show any correlation with age. For a residential district, K-MMSE was higher in urban area than rural area (p=0.03) whereas Lawton IADL was higher in rural area than urban area (p=0.028). Conclusion : A large number of chronic stroke survivors showed impairments in many specific functional domains. Our results may afford further insights on the functional characteristics of Korean stroke survivors. Keywords : Stroke, Function, Outcome

PP26 C-228

LONG-TERM QUALITY OF LIFE OF ACUTE FIRST-EVER STROKE PATIENTS

Hyo-Jeong SEON, Min-Keun SONG, Jong-Hoo LEE, Jung-Kook KIM, Hyun-Sik YUN, Jae-Young HAN, In-Sung CHOI, Sam-Gyu LEE
(Department of Physical & Rehabilitation Medicine, Research Institute of Medical Sciences, Chonnam National University Medical School & Hospital, Korea)

Introduction : We aimed to analyze the long-term quality of life (QoL) of acute first-ever stroke patients in Korea. **Method :** One hundred and thirty chronic stroke patients were recruited. All patients were acute first-ever stroke patients admitted to our NeuroRehabilitation center from 2008 to 2009. After 2 years or more from the onset of stroke, chronic stroke patients underwent neurological assessments for the functional outcome including Korean Modified Barthel Index (K-MBI), Lawton Instrumental Activities of Daily Living (IADL), Korean Mini-Mental Status Examination (K-MMSE), Fugl-Meyer Assessment (FMA) and Functional Ambulatory Category (FAC). They completed structured self-administered questionnaires, and a face-to-face interview for QoL, psychosocial stress, and depression using Euro Quality of Life (EQ)-5D, Psychosocial Well-being Index-short form (PWI-SF), and Geriatric Depression Scale-short form (GDS-SF). General characteristics of subjects such as age, sex, educational background, residential area and income were collected and reviewed. **Results :** The duration of stroke was 2.83 ± 0.61 years. Age was 65.4 ± 12.2 years and the ratio of male to female was 1.75:1. EQ-5D showed negative correlation with age and functional status. Each PWI-SF and GDS-SF showed negative correlation with age and functional status. Chronic stroke patients with lower educational background showed higher psychosocial stress and lower QoL compared with higher educational background. For the gender, GDS-SF was higher in female than male. **Conclusion :** Long-term QoL, psychosocial stress and depression of chronic stroke patients was associated with functional status. It is necessary to apply the proper clinical rehabilitation practice to improve the function for the promotion of QoL in stroke survivors. **Keywords :** Stroke, Quality of life, Function

PP26 C-229

PHYSICAL AND PSYCHOSOCIAL BURDEN OF CAREGIVERS OF CHRONIC STROKE PATIENTS

Hyo-Jeong SEON, Min-Keun SONG, Yu-Ri CHOI, Jung-Kook KIM, Hyun-Sik YUN, Jae-Young HAN, In-Sung CHOI, Sam-Gyu LEE (*Department of Physical & Rehabilitation Medicine, Research Institute of Medical Sciences, Chonnam National University Medical School & Hospital, Korea*)

Introduction : Stroke lays a significant burden on caregivers. We aimed to analyze the physical and psychosocial burden of caregivers of chronic stroke patients. **Method :** One hundred and thirty chronic stroke patients and their caregivers (n=77) were recruited. All patients were acute first-ever stroke patients admitted to our NeuroRehabilitation center from 2008 to 2009. After 2 years or more from the onset of stroke, chronic stroke patients underwent neurological assessments for the functional outcome using Korean Modified Barthel Index (K-MBI), Lawton Instrumental Activities of Daily Living (IADL), Korean Mini-Mental Status Examination (K-MMSE) and Fugl-Meyer Assessment (FMA). Caregivers completed structured self-administered questionnaires for caregiver burden, psychosocial stress and quality of life using Caregiver Burden Inventory (CBI), Psychosocial Well-being Index-short form (PWI-SF) and Euro Quality of Life (EQ)-5D. **Results :** Mean stroke duration of patients was 2.83 ± 0.61 years. Age of caregivers was 59.6 ± 14.2 years and the ratio of male to female was 0.4:1. 71.4% and 28.6% of caregivers were the partner and the lineal family members, respectively. 89.9% of caregivers were living together with patients. CBI was significantly correlated with age of caregivers and functional status of patients, respectively. PWI-SF demonstrated positive correlation with age of caregivers and was higher in female than male caregivers. There was no significant correlation between EQ-5D of caregivers and functional status of patients. **Conclusion :** The functional status of chronic stroke patients was a factor associated with

the burden and psychosocial stress of caregivers. Additional support and anticipatory guidance for the caregivers of stroke survivors is needed. **Keywords :** Stroke, Caregiver, Quality of Life

PP26 C-230

SLEEP QUALITY OF CAREGIVERS OF INPATIENTS IN A COMMUNITY-BASED GERIATRIC HOSPITAL

Jeong-Hyun BYUN¹, Min-Keun SONG¹, In-Gyu KIM², Sung-Man ROWE², Hyung-Sik YUN¹, Jae-Young HAN¹, In-Sung CHOI¹, Sam-Gyu LEE¹ (*1. Department of Physical & Rehabilitation Medicine, Research Institute of Medical Sciences, Chonnam National University Medical School & Hospital, Korea; 2. Department of Physical & Rehabilitation Medicine, Chonnam National University Hwasun Geriatric Hospital, Korea*)

Introduction : Sleep disturbance negatively impacts quality of life (QoL) of patients and their caregivers. Little is known about sleep quality of caregivers. We aimed to evaluate the association of sleep quality of caregivers with functional status of inpatients in a community-based geriatric hospital. **Method :** Thirty-four caregivers of inpatients in a community-based geriatric hospital were enrolled. Caregivers completed structured self-administered questionnaires, and a face-to-face interview for demographics, health condition and quality of sleep using MOS (Medical Outcomes Study) 36-Item Health Survey (SF-36), Pittsburg Sleep Quality Index (PSQI). Functional status and cognitive function of patients were checked by reviewing medical records. Correlation analysis was used to analyze the associations between and within variables. **Results :** Fourteen caregivers were the partner or the lineal family members. Twenty caregivers were paid caregiver. Duration of disease of patients was 11.3 ± 19.8 months. Mean age of caregivers was 52.8 ± 10.1 years and the ratio of male to female was 0.26:1. 64.7% of caregivers were living together with patients. For the subjective health condition, 50.0% answered good and 5.9% answered bad. Social function in SF-36 was correlated with age of caregivers ($p=0.046$, $r=0.350$). PSQI was 27.4 ± 7.18 points. PSQI showed negative correlation with age of caregivers ($p=0.009$, $r=-0.450$). There were no significant correlations between PSQI and functional level of patients ($p>0.05$) and between SF-36 and functional level of patients ($p>0.05$). **Conclusion :** Our results showed the characteristics of health and sleep quality in caregivers of geriatric hospital patients. Additional support and anticipatory guidance for the caregivers will be needed. **Keywords :** Caregiver, Sleep, Quality of life

PP26 C-231

ESTHETIC AND COMFORT ANTERIOR TEETH ORTHODONTIC TREATMENT WITH 2D LINGUAL APPLIANCE IN A GERIATRIC PATIENT: A CASE REPORT

Hye-Young KWON, Yoon-Goo KANG (*Department of Orthodontics, Kyung-Hee University, Korea*)

Introduction : Today, the demand for esthetics in the elderly patients has increased and the need for orthodontic treatment is expected to continue to increase. However, geriatric patients preference to the invisible orthodontic appliance is much higher than the younger patients and their tolerance to the orthodontic appliance is much lower than the younger patients. 2D lingual appliance® is simple and lingually bonded appliance that minimizes appliance inconvenience but maximizes invisibility which makes the appliance suitable for geriatric patients. **Method :** This case report present a 73 year old female patient visited department of orthodontics with chief complaints of upper and lower anterior teeth spacing and malaligning. **Results :** 2D lingual brackets were bonded on the lingual side of upper and lower six anterior teeth. Aligning and leveling was done with

sectional archwires and the space was closed with elastics. Treatment duration was total 9 months. Panoramic radiographs and clinical examination revealed no harmful effect of orthodontic treatment on the periodontal and dental health. Conclusion : The patient was satisfied with the result of treatment also satisfied with the esthetic and comfortable procedure of the treatment. 2D lingual appliance is suggested appliance for esthetic orthodontic treatment anterior teeth in geriatric patients. Keywords : orthodontic treatment, lingual orthodontic appliance, esthetic orthodontic treatment

PP26 C-232

VERY COMMON DEPRESSIVE DISORDER, COGNITIVE IMPAIRMENT, AND DECREASED QUALITY OF LIFE IN CADASIL PATIENTS

Bong-Hee JEON¹, Jung Seok LEE², Na-Ri KANG¹, Jae-Sung RYU¹, Sang-Hee KIM¹, Moon-Doo KIM¹, Young-Sook KWAK¹, Chang-In LEE¹, Joon-Hyuk PARK¹ (1. Department of Psychiatry, Jeju National University Hospital, Korea; 2. Department of Neurology, Jeju National University Hospital, Korea)

Introduction : Cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy (CADASIL) is a single-gene disorder of the cerebral small blood vessels caused by mutations in the Notch3 gene. The main clinical manifestations are recurrent stroke, transient ischemic accident, migraine, psychiatric symptoms, and progressive cognitive impairment. Although recognized as a cardinal feature of the disease, psychiatric disturbances have rarely been the object of focused studies. Method : 53 patients with CADASIL (34 men, 64.2%) were assessed by psychiatrists using the Mini-International Neuropsychiatric Interview (M.I.N.I.), MMSE-KC and Medical Outcome Study Short Form 36(SF-36). Current mood disorder symptoms were assessed using the Hamilton Rating Scale for Depression (HRSD), the Center for Epidemiologic Studies Depression Scale (CES-D), and the Geriatric depression scale (GDS-K). Results : Mean age of participants was 61.65±11.41 years old and most of them had R544C heterotype(71.7%) in genotyping. Among the first presenting symptoms and signs of subjects with CADASIL, the most frequent one was stroke(35.8%), and the next one was migraine(22.6%). 28.3% of them was complaining of subjective cognitive and 17.0% was suffering from mood disturbance(17.0%). Mean score of MMSE-KC was 23.04±4.86 and Z score of MMSE-KC was -1.91±2.23. Frequency of major depressive disorder was 15.1% among the subjects with CADASIL. In aspects of quality of life, Physical component summary score of SF-36 was 44.69±9.92, Mental component summary score of SF-36 was 48.23±7.75. Conclusion : Depressive disorder was common among patients of CADASIL and they also showed cognitive dysfunction and poor quality of life, compared to general populations. Keywords : Cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy (CADASIL), Neuropsychiatric symptoms, Depression, Quality of life

PP26 C-233

ELECTROCRADIOGRAPHIC FINDINGS AMONG OLDER INDIVIDUALS WITH RECURRENT FALLS

Saedon Nor IZZATI (Internal Medical, University Malaya Medical Center, Malaysia)

Introduction : The population of Malaysia is ageing rapidly, posing a major challenge to our healthcare system. Falls are common medical problems in the older adult, which often lead to serious consequences. Cardiovascular conditions have been known to be associated with falls. We therefore determine the feasibility of conducting a

multidisciplinary falls assessment in our hospital, and to evaluate electrocardiographic (ECG) changes among older fallers seen at our hospital. Method : Older adults aged >65 years old with 2 or more falls or one injurious fall in the past year , were recruited from the primary care clinic, geriatric clinic and accident and emergency department at the University of Malaya Medical Centre. All patients were evaluated with a multifactorial falls assessment including 12-lead ECG, postural blood pressure, visual assessment, gait and balance assessment, psychological tests and fracture risk calculation. Results : Thirty eight patients were recruited our study. 11 (29%) abnormalities in their ECG. Prolonged PR interval as the commonest abnormality found. 7/11 (64%) had changes consistent with bifascicular block. 2/11 (18%) had sinus bradycardia. Conclusion : This pilot study has confirmed that multidisciplinary falls assessments can be conducted in our setting. Almost 30% of older fallers evaluated in our pilot study had abnormalities in their ECGs. 12-lead ECG should therefore always be performed in older people presenting with recurrent or injurious falls. Further studies should be performed to evaluate the relevance of abnormalities in ECGs in older fallers and to define the best strategies to further evaluate this abnormal finding. Keywords : electrocardiography , elderly fallers, risk

PP26 C-234

THE EXPERIENCE OF DEPRESSION IN LOW-INCOME ELDERLY WOMEN

Jeung-Im KIM¹, Haeng-Mi SON² (1. School of Nursing, Soon Chun Hyang University, Korea; 2. Department of Nursing, University of Ulsan, Korea)

Introduction : There were so many reports about the depression of elderly. The prevalence of probable depression in Korean elders increased with age and was highest in the group aged 80 years and over, at 35.4%. There is relatively consistent evidence that being female, having low income, no education, past MDD, dementia and history of cerebrovascular attack increased the risk of depression. However the essentials of depression were rarely found and low-income elderly women didn't have been interested by researchers. So it needs to be explored in low-income elderly women with depression. Purpose: This research was accomplished to explore and describe the essentials of depression in low-income elderly women. Method : Subjects were introduced by Registered Nurses in the Elderly Welfare Centers. We got the informed consent to interview. They were diagnosed as depressed. We did depth-interview 16 elderly women for one to two hours. We recorded the interview and copied the scripts as they said [verbatim]. We analyzed by Colazzi (1978) phenomenological methods. Results : We found some subjects. Depressed elderly women have lived without any hope. The essentials of depression were as continuum of worthless and painful life. There were categories like 'continuous hardness', 'children's shadowed problem', 'unhappy marriage life', 'painful life', 'worthless', 'loss of willing', 'strong loneliness', 'difficulty in sleeping' and 'dependent to religion'. Also most of them have lived to depend on seeing TV. TV is likes as their friends. Conclusion : We conclude the essential characteristics of low-income elderly women is the continuum of worthless and painful life. Keywords : depression, elderly women, qualitative research

PP26 C-235

ASSOCIATION OF PHYSICAL PERFORMANCE TESTS WITH BODY COMPOSITION

Pedro ARROYO-ACEVEDO¹, Mario PEREZ-ZEPEDA¹, Luis GUTIERREZ-ROBLEDO¹, Victoria ARANGO-LOPERA² (1. Clinical and Epidemiological Research, Instituto Nacional de Geriatria,

Mexico; 2. Education, Instituto Nacional de Geriatria, Mexico)

Introduction : Sarcopenia has been defined in the last years adding physical performance tests to body composition measurement. There are a number of factors that impact individually gait speed, grip strength and muscle mass. Aim of this study is to explore associations between these three elements and body composition. **Method :** Subjects belong to the Coyoacan cohort. Here we report baseline assessment. These subjects have measurements of gait speed, grip strength and calf circumference, along with anthropometry. Gait speed was measured by timing 4 meter track and then dividing it to obtain m/s; grip strength with dynamometry, reporting results in kilograms; anthropometry included calf circumference (reported in centimeters), knee height and weight. Body mass index was estimated with knee height and weight (kg/m²), stratified by WHO criteria. **Results :** A total number of 345 subjects were assessed. 184 women and 161 men, with a mean age of 78.5 years. Frequency of BMI, 3.19% underweight, 24.64% normal, 48.99% overweight, 23.19% obese. The mean values of calf circumference 33.02 (3.96), grip strength 15.42 (4.59) and gait speed .608 (.247). The main significant differences were found in those obese subjects, with lower gait speed. Also underweight subjects were lower in all the measurements. **Conclusion :** Obesity is higher than reported in other population; an effect that could account for the lower values observed in grip strength, gait speed and calf circumference in comparison with other populations. Further work is needed to assess the impact of body composition in different ethnical settings on physical performance, because of clinical implications of elderly assessment. **Keywords :** Sarcopenia, physical performance, body composition

PP26 C-236

PREVALENCE OF OSTEOPOROSIS AND IT'S ASSOCIATION WITH SERUM VITAMIN D LEVEL IN OLDER PEOPLE IN AMIRKOLA, NORTHEN OF IRAN

Zahra PORHASHEM¹, Mohammadali BAINI², Hajjighorban NOOREDDINI³, Ali BIJANI⁴, Seyed Reza HOSSEINI⁵, Robert Graham CUMMING⁶ (1. Medical School, Babol University of Medical Sciences, Iran; 2. Department of Internal Medicine, Babol University of Medical Sciences, Iran; 3. Radiology, Babol University of Medical Sciences, Iran; 4. Social Determinants of Health (SDH) Research Centre, Babol University of Medical Sciences, Iran; 5. Department of Community Medicine, Babol University of Medical Sciences, Iran; 6. Department of Epidemiology and Geriatric Medicine, University of Sydney, Australia)

Introduction : Ageing of population worldwide will be responsible for a major increase of the incidence of osteoporosis in elderly. For the individual, osteoporotic fractures result in great disability as well as loss of quality of life and also represent an enormous burden for healthcare systems. This study was conducted to determine the prevalence of osteoporosis and it's association with serum vitamin D level in elderly people in Amirkola. **Method :** In this cross-sectional study, 1202 participants aged 60 years old and over in Amirkola were assessed. Using a standard questionnaire, individual characteristics and densitometry (with DXA) results were collected and data were analyzed with SPSS18, t test and ANOVA. **Results :** The mean bone mineral density (BMD) in femoral area was 0.89±0.15 in men and 0.79±0.14 in women (p=0.000). The mean spinal BMD was 0.93±0.18 and 0.78±0.16 in men and women respectively (p=0.000). The prevalence of osteoporosis was 34.5% while 45.3% of them had osteopenia. The prevalence of osteoporosis in women (57.4%) was significantly higher than men (16.1%). Of the total subject, 38.20% had vitamin D less than 20 ng/ml and 68.1% had vitamin D below 30

ng/ml. There was no significant relationship between mean vitamin D in patients with osteoporosis (36.1±32.6), osteopenia (32.9±28.8) and people with normal BMD (32.3± 35.5) (p=0.308). **Conclusion :** Our findings revealed higher prevalence of osteoporosis in elderly people especially in women compared to other studies in Iran, and also showed high prevalence rate of vitamin D deficiency. **Keywords :** Osteoporosis, vitamin D, bone density, elderly

PP26 C-237

HOME HOSPITAL FOR LONG TERM MECHANICALLY VENTILATED PATIENTS

Jeremy M JACOBS, Jochanan STESSMAN (Home Hospital Unit, Institute of Geriatric Medicine, Clalit Health Services, Israel)

Introduction : The number of long-term ventilated patients is rising. With technological advances, home ventilation is becoming an increasingly common choice. We describe the experience of the last 7 years of home-ventilation within the Jerusalem Home Hospital Unit.

Method : The Jerusalem Home Hospital Unit treats over 300 home-bound medically complicated patients at home, as an alternative to a spectrum of in-patient care. Over 20,000 patients have been treated at home since its establishment in 1991. Home ventilated patients receive home visits by physician, pulmonologist, medical specialists, nurses, respiratory technicians, physiotherapist, occupational therapists, dieticians and social workers, as well as 24 hour on-call medical and technical backup. Descriptive data was gathered from medical records, and compared to long-term ventilated patients receiving in-patient care. **Results :** From 2005 -2012 the average number of home ventilated patients rose from 34 to 52 simultaneously, compared to a decline from 94 to 76 in-patients. Average age of adult home patients was 61 years, and 21% were under age 16 years. Reasons for ventilation were: neuromuscular degenerative (38%), chronic lung/post CVA/post resuscitation (23%), ALS (12%), post trauma (6%), pediatric illnesses (21%). Average duration of home ventilation was 60.9 months. Annual mortality at home ranged from 8-22% versus 35-46% for in-patients. The monthly cost of home ventilation versus in-patient care was 1:3. The number of referrals or admission to hospital was negligible among home ventilated patients. **Conclusion :** Home hospital is a cost effective and safe alternative to long term in-patient care for long term ventilated patients. **Keywords :** Home-Hospital, Chronic ventilation

PP26 C-238

A LONG-TERM CARE COMMUNITY MODEL TO SUPPORT PEOPLE WITH DEMENTIA: THE NAKA-SORACHI LOCAL NETWORK

Seiju KOBAYASHI¹, Masaru TATENO², Kumiko UTSUMI³, Toshikazu SAITO¹ (1. Neuropsychiatry, Sapporo Medical University, Japan; 2. Neuropsychiatry, Sapporo Medical University, Sapporo Hana Developmental Psychiatry Clinic, Japan; 3. Psychiatry, Sunagawa City Medical Center, Japan)

Introduction : Due to Japan's high life expectancy and low fertility rates, there have been a growing number of elderly individuals in Japan. The Naka-sorachi region is located in the center of Hokkaido with an aging rate of close to 30%. **Method :** Sunagawa City Medical Center (SCMC) is one of the primary hospitals in the region. SCMC opened a memory clinic (MC) which plays an important role as the central core of the local network built to support aged people in its catchment area. **Results :** The members of the MC are psychiatrists, a neurologist, a neurosurgeon, a clinical psychologist and radiological technicians who work together to provide accurate diagnosis and adequate medical treatments. The MC also offers emergency

interventions such as hospitalization to support clinic physicians. The network provides not only medical interventions but various educational opportunities to train staff members working in the region. It also educates people about the early detection of dementia through mass media, seminars and lecture meetings. Doctors and caseworkers regularly visit facilities such as day-care and group homes, and special elderly nursing homes. This allows direct monitoring of each facility and exchange of opinions between staff and community. The most vital function of the network is that it allows for collaboration between dementia patients and their families, general hospital and primary physicians, as well as medical specialists, caseworkers, and other staff members. Conclusion : We strongly believe that the network developed in Naka-sorachi could be an effective model for other regions in the long term-care of the elderly. Keywords : Dementia, care, network

PP26 R-001

USE OF THE MINI-NUTRITIONAL ASSESSMENT IN THE GREAT EAST JAPAN EARTHQUAKE DISASTER

Kanami TAMURA (*KATO Clinic, 43-1 Taira Aza Nityoume Iwaki-city Fukushima Prefecture, Japan*)

Introduction : An earthquake of magnitude 9.0 with a maximum seismic intensity of 7.0 struck the entire region of East Japan on March 11, 2011. And the Pacific coast of East Japan was hit by a massive tsunami. As a result, approximately 410,000 victims and evacuees had to take refuge in about 2000 shelters. Plus, the distribution of evacuation supplies was extremely delayed because of the TEPCO Fukushima Daiichi nuclear accident, leading to difficulties in the shelters. Method : We used MNA. Results : Temporary shortages of food and water continued in the shelters. Furthermore, when the food supplies arrived, there were major concerns regarding nutritional balance, such as excess energy and salt; these harsh conditions continued to affect the elderly, children, and patients with chronic diseases, such as diabetes and high blood pressure, for a long time. Conclusion : Most elderly people in the earthquake-stricken region took refuge in the shelters; therefore, there were many problems such as nutritional bias and the incidence of pressure ulcers. The physical and emotional stress were immense in the shelters. Also there were no weighing scales in the shelters, the evacuees could not measure their body weight. In this environment, MNA was a very useful assessment tool for the elderly because no complicated special devices were required; it was helpful as a tool for better communication among the evacuees. Under special circumstances, the role played by this assessment tool and its added value as a communication with for the elderly is extremely high. Keywords : Mini-Nutritional Assessment (MNA)

PP26 R-002

THE DAMAGES CAUSED BY THE GREAT EAST JAPAN EARTHQUAKE ON COMMUNITY GENERAL SUPPORT CENTERS, SUBSEQUENT SUPPORT FOR THE LOCAL ELDERLY VICTIMS AND THE FUTURE ISSUES

Masakazu SHIRASAWA¹, Naoto OKADA² (*1. Graduate School of Gerontology, J.F. Oberlin University, Japan; 2. School of Social Welfare, Hokusei Gakuen University, Japan*)

Introduction : The Great East Japan Earthquake on 11 March 2011 brought immense damage to the affected area, not just by the earthquake, but also by the subsequent tsunami and the damage to a nuclear power station. Japan stands on seismic faults and it is accepted that an earthquake of this magnitude can happen any time. Method : The aim of this survey is to strengthen the preparedness for such an

event by investigating the damages inflicted by the earthquake on Community General Support Centers (CGSC), which manages elderly care and support in the communities, the aftermath reality of the CGSCs and the future issues. The questionnaire survey was conducted between December 2011 and January 2012 to the managers of all CGSCs in Miyagi and Iwate prefectures. The recovery rate of the survey was 50%. Results : The survey identified that there are significant differences between CGSCs in the coastal areas and those in the mountain areas in terms of the dates when they started and finished safety checks of the client elderly and the level of difficulty of conducting such checks, while there was no difference in terms of the daily preparedness measures. Conclusion : It leads to the conclusion that the CGSCs had addressed and implemented the check procedures, but those in the coastal areas affected by tsunami found themselves in difficult situations with the consequent delay of starting and finishing the safety check. The study also found out that the everyday level risk management was not sufficient and the future issues to be addressed. Keywords : the Great East Japan Earthquake, Community General Support Center, safety check

PP26 R-003

A PICTURE AND PROBLEMS OF THE CONFIRMATION OF CLIENTS' SAFETY BY CARE MANAGERS FOLLOWING THE TSUNAMI DISASTER

Naoto OKADA¹, Masakazu SHIRASAWA² (*1. School of Social Welfare, Hokusei Gakuen University, Japan; 2. Graduate School of Gerontology, J.F. Oberlin University, Japan*)

Introduction : This study was conducted to clarify care management in disaster situations based on the activities of care managers in coastal areas that were hit by the tsunami following the Great East Japan Earthquake on March 11, 2011. Method : Questionnaires were sent to all care management organizations in Iwate and Miyagi prefectures, and an effective response rate of 47.1% (N=466) was obtained. Results: Results showed that by 6 days after the tsunami, 63.2% of care managers had successfully completed confirmation of clients' safety. However, notable differences in confirmation of safety existed between coastal areas that were hit by the tsunami and inland areas hit only by the earthquake and strong aftershocks. In the coastal areas, care managers' offices were not available due to tsunami damage (p<.000), personal information was lost (p<.000), and computers were damaged and unusable (p<.000). Therefore, personal information required to confirm clients' safety was not available in these areas (p<.001). Also, safety confirmation activities were significantly delayed (p<.000) and the work was extremely difficult (p<.000). Cooperation with medical services was difficult in coastal areas immediately after the disaster (p<.000), as was coordination with service providers to alter care plans (p<.000). As mentioned above, the area directly affected by the tsunami faced many more serious obstacles in terms of confirmation of clients' safety and support compared with inland areas that were affected only by strong earthquakes. Conclusion : It leads to the conclusion that everyday level risk management is important for care managers in the coastal areas in Japan. Keywords : the Great East Japan Earthquake, confirmation of clients' safety, care manager

PP26 R-004

THE VULNERABILITIES AND COPING STRATEGIES OF OLDER PEOPLE IN EAST JAPAN POST-EARTHQUAKE

Nahoko OKAMOTO¹, Chieko GRAINER², Godfred PAUL³, Marcus SKINNER⁴, Ayaka SOBU⁵, Shihoko FUJIMURA⁵, Hidenori HASHI⁶, Yoshiko TSUKADA⁷, Hiroshi HIGASHIURA¹ (*1. International Nursing & Disaster Nursing, Japanese Red Cross College of Nursing,*

Japan; 2. Geriatric Nursing, Japanese Red Cross College of Nursing, Japan; 3. Regional Office, Help Age International, Thailand; 4. Policy Advisor, Help Age International, United Kingdom; 5. Community Nursing, Iwate Prefecture University, Japan; 6. Clinical Nursing, Red Cross Akita College of Nursing, Japan; 7. International Humanity Research Institute, Japanese Red Cross Society, Japan)

Introduction : Japan has the world's highest proportion of older people. On March 11 2011, the M9 earthquake and resulting tsunami struck the eastern pacific coast of Japan. The affected regions of Miyagi ,Iwate and Fukushima Prefectures had very high population of older people. About 63% of East-Japan earthquake-related deaths were among persons 60 years of age or older. Older persons could not run away and clear direction of where to go. Health services which was a particular concern for those requiring continuous treatment for chronic disease. The challenges for displaced people are numerous, in temporary houses during harsh winters, dealing with the loss of items of sentimental value, managing the impact of isolation from family and community support. The objective is to gain a detailed understanding of the disaster on older people a year on, the vulnerabilities and challenges they faced and continue to face as a result of their displacement or their continued residency in affected areas where support and services are reduced. Method : Research Design; Survey using semi-structured interviews. Target Group: Older People over 65 years old in two prefecture affected. Results : Participants Olders 14; Male 2, Female 12, Under 80 years old 12, 80 years over , Older live alone 5, With wife/husband 5 , With son/daughter 4. They faced the weakness; limited Continuous treatment for chronic disease, Long evacuate days , Limited transportation, Less life activities, Less communication, Less friendship and Gender differences. Conclusion : Older people face common challenges between male and female, but they have gender differences. Consideration of Gender culture and each evacuate situation. Keywords : Disaster

PP26 R-005
PUBLIC HEALTH PROGRAMS AND POLICIES TO PREVENT ELDER ABUSE

Maryam HAZRATI (Gerontology, Shiraz University of Medical Sciences, Iran)

Introduction : Elder abuse is a complex and multi-dimensional issue. It has a significant negative effect on Victim's quality of life, and their well being is harshly threatened in the progressive form of abuse. Effective prevention program can reduce the occurrence, or prevent the consequence of elder abuse, and promote the well being and quality of life of elderly people who makes a vulnerable group of society. Method : The majority of researches in field of elder abuse focuses on the prevalence, incidence, and the numbers , but what not yet clear are the effective strategies and policies for controlling, and preventing this global problem. A variety of interventions programs are suggested which may have potentiality to prevent elder abuse, but in most cases there is a limited in practical experience. This review of articles is run to find the effective policies and programs for combating elder abuse in institutional setting, and domestic. Results : Different strategies are recommended for preventing of elder abuse such as daily prompt in the media, Public health contribution for prevention of elder abuse , Prevention Programs for elder abuse(Screening, Mandatory Reporting, Adult Protective Services, Professional's education and training , Potential Victim's Education, Legal and Victim Advocacy Services, Caregiver Support intercessions, and Public Health policies for prevention of elder abuse. Conclusion : Indeed advocating the older people, and preventing of elder abuse in the current epidemic of

elder mistreatment and neglect, is essential. Health care system, Justice System, and Financial system are responsible for preventing and managing elder abuse in communities. Moreover the existing preventative programs such as mandatory reporting, screening, and Adult Protective Services have little verified helpfulness for elder abuse, and need to careful evaluation of both positive and negative outcomes. Keywords : public health policies, prevention, Elder abuse

PP26 R-006
A STUDY ON PLANNING COMMUNITY GARDEN THROUGH ABILITY ENHANCEMENT OF IDLE LOCAL SENIOR HUMAN RESOURCES

Jaeyeon KIM, Yeunsook LEE, Yunsoo KIM (Housing and Interior Design, Yonsei University, Korea)

Introduction : Increasing the portion of elderly people who are disadvantaged among the residents and most of the aged people are surplus human resources living in socially and physically deprived environment. Therefore, it is necessary to find out any means to utilize these aged idle human resources living in bad environment by linking them with their physical environment in their community. Method : This study method was implemented through total eight workshops as a means of studying by local participation. ① Gathered idle senior residents in the community who have interest in growing plants, ② Through first workshop programs, we provided them with basic knowledge about growing plants, ③ Through second workshop process, we collected the idle senior residents' opinions, and ④ the final plan for community garden was set up through the consensus of idle senior residents' opinions. Results : As a result of this study by reinforcing the ability of the idle senior human resources at the target area through consecutive workshop process, they came to put great value upon improving their physical environment and their efforts resulted in forming a spontaneous working group being inspired by their community spirit. Conclusion : Through this study, if idle human resources, physical resources and educational contents are properly utilized in combination, it was proved that the physical environment of deprived urban area can be regenerated. Particularly, it is very meaningful that this study has verified the possibility of growth in consensus not by leaving the urban deprived area alone or supporting them one-sidedly but by helping them mutually. Keywords : Community Garden, Senior Human Resources, deprived area

PP26 R-008
COMMUNITY RESTAURANT IN AN AREA PROVIDING A HUB TO PREVENT ISOLATION OF ELDERS

Sakae HORIO¹, Shigeki HARADA², Shigenori NISHIWAKI³, Yukio NISHIMOTO⁴, Youichi KAWAMURA⁴ (1. Yogou, Social Welfare Corporation Seizanrikai, Japan; 2. Tokiwa, Social Welfare Corporation Seizanrikai, Japan; 3. Oyamado, Social Welfare Corporation Seizanrikai, Japan; 4. Seizanrikai, Social Welfare Corporation Seizanrikai, Japan)

Introduction : In recent years in Japan, solitary death and social isolation have been a social issue and its prevention has become a real problem. Method : with the rapid increase of older people living alone or in households consisting of elderly couples. Therefore, based on our research study, our nursing home has established a "Preventing isolation center", based on the three functions of "Securing Food", "Comprehensive Counseling" and "A Place for Interaction", for the older people living either alone or in households consisting of an elderly couple, by renting a space in the shopping center of a housing complex, which was built 40 ~ 50 years ago and with a rapidly aging

population, in March 2012. Results : It has been about one year since its opening. Its purpose is to prevent isolation and to enable the early discovery of a person in isolation. It has taken the aspect of a community restaurant, and the specialists, such as dieticians, social workers, and public health nurses, are working together and have been successful in preventing isolation by the early discovery of the basic needs of the elderly people living in the area. Conclusion : For the future, attempting to develop new living support service programs by consulting/cooperating with the relevant organizations in the area, we are just starting to set up "Life Support Mie". Keywords : Community Restaurant

PP26 R-009

A PLAN FOR BUILDING COMMUNITY-BASED ON THE BACKGROUND AND THE RISK FACTORS FOR "PREVENTING ISOLATION OF ELDERS"

Shigeki HARADA¹, Sakae HORIO², Shigenori NISHIWAKI³, Yukio NISHIMOTO⁴, Youichi KAWAMURA⁵ (1. Tokiwa, Social Welfare Corporation Seizanrikai, Japan; 2. Yogou, Social Welfare Corporation Seizanrikai, Japan; 3. Yamada, Social Welfare Corporation Seizanrikai, Japan; 4. Seizanrikai, Social Welfare Corporation Seizanrikai, Japan; 5. Aeizanrikai, Social Welfare Corporation Seizanrikai, Japan)

Introduction : With the rapid aging of the population and a declining birth rate, and an increasing number of seniors living alone, isolation of elders has become evident in Japan. Method : It is difficult for only the nursing-care insurance service to deal with these cases. Therefore, in June, 2008, our nursing home organized a group of researchers from various fields and conducted a questionnaire study of 2000 persons including older people who live alone and households with only elderly persons in Y area where there has been a rapid aging of the population. Also, we conducted a case study analysis of 25 cases collected by the care managers focusing on "Isolation". Results : Results of the study indicated paucity of neighborly relations and societal resources, in addition to the composition of the household, one's physical condition, and one's financial situation, as the background factors of "Isolation". The risk factors of isolation were food, such as the preparation of meals and getting foodstuffs, neighborly interaction, health maintenance, preventive care, and emergency response. Moreover, the involvement of care managers only provided nursing care insurance services, and it became obvious that the actual problem, which resulted from the difficulty in dealing with isolation because of the lack of societal resources, was left unresolved. Conclusion : In light of the outcome of the study, we have established and are operating "Preventing Isolation Centers" with three functions, which are "Securing Food", "Comprehensive Counseling", and "Place for Interaction", in two places in the Y area in March, 2012. Keywords : Preventing Isolation of Elders, A plan for building community-based

PP26 R-010

EXPENDITURE OF HOME HEALTH CARE UTILIZATION AMONG THE ELDERLY 65 AND OLDER IN TAIWAN

Chin Lung CHEN¹, Shu Hui LIN², Jeny Uan CHIOU³ (1. Department of Healthcare Administration, Asia University, Taiwan; 2. Nursing Department, Department of Healthcare Admini, Chung Shan Medical University Hospital, Asia University, Taiwan; 3. Health Policy and Management, Chung Shan Medical University, Taiwan)

Introduction : The rapid growth of the elder population brings up high prevalence rate of chronic diseases and functional disabilities, which consumes a great deal of medical and long-term care

resources. Method: This study explored the expenditure of home health care utilization among the elderly 65 and older in Taiwan from the 2122 samples who received home health care during 2008. The 2005 Longitudinal Health Insurance Database (LHID) from National Health Insurance Research Database (NHIRD) is used to do the analyses. Results : The results of this study has shown that women, having two or more chronic diseases, insured within the North district, Charlson Comorbidity Index (CCI) scored 1, and those grouped in resource utilizing group (RUG) level 2 are more likely to receive home health care. Those who stay at home have utilized more home health care than those who stay in the institution. The nasogastric tube care, Foley care, and large intravenous fluid injection are the top three special nursing care interventions both for those who stay at home and in the institutions. For medical care utilization, those who stay at home utilized more outpatient services, while those who stay in the institution utilized more admission services. Conclusion : we recommend that the health policy should design more home care visits for the newly enrolled and that there should be more respite care for the care-givers for more support. Keywords : National Health Insurance Research Database(NHIRD), home health care , medical care utilization

PP26 R-011

COMMUNITY BASED CARE FOR THE ELDERLY IN SHANGHAI: A CASE STUDY

Ginny Q. ZHAN (Psychology, Kennesaw State University, USA)

Introduction : The fast growing Chinese economy and changing views have brought many changes to people's lives, particularly family structure. For example, young people leave to pursue their dreams elsewhere, or move into their own apartments after marriage, establishing nuclear families. As a result, the number of elderly people living alone has skyrocketed. One estimate puts it as high as 40% of all the elderly population nationwide. In Shanghai, the biggest metropolis in China, approximately 30% of the elderly populace is considered empty-nesters who live alone and have no family nearby. Method : Published reports detailing community based elderly care programs in Shanghai were reviewed and content analyzed. These reports describe various programs of elderly care in Shanghai, some successful and some not. In this poster we will focus on two large districts: Yangpu and Putuo. Results : Our examination and analyses suggest that overall, an effective community based program would need to encompass the following elements: 1) financial commitment by the local government at the district level; 2) needs assessments before designing and implementing any programs; 3) dedicated volunteers from the same neighborhoods; 4) buddy system between the volunteer and the elderly; 5) aid concentrating in six specific areas of care; and 6) regular empirical assessments. Conclusion : It seems that community based elderly care can be an effective approach in a big city like Shanghai, if implemented properly. The programs provide various types of physical help as well as companionship to the elderly residents in the neighborhood who live alone. Keywords : China, community, elderly

PP26 R-012

A STRUCTURAL EQUATION MODEL OF NURSE'S TURNOVER INTENTION

Kyungsook PARK, Minsook SEO (Red Cross College of Nursing, Chung-Ang University, Korea)

Introduction : This study, the covariance structure for multiple group comparisons according to gender and to verify the validity of the model and the goodness of fit between the actual data and build a

hypothetical model based on a review of the literature in order to identify the factors affecting the Turnover Intention of Nurses. Those variables were nursing organization culture, empowerment, gender stereotype, mentoring, job stress and organizational commitment. Method : Nurses from general hospitals responded to a questionnaire. Between September 1 and October 25, 2012, among 375 copies of the distributed questionnaire 288 copies without any missing items were used for analysis. As an analysis tool, the SPSS/WIN 20.0 and AMOS/WIN 20.0 program was employed. Results : The nurse's turnover intention of the dependent variable of this study were influenced by organizational commitment, conservative culture, job stress and innovative culture. The male nurse's turnover intention of the dependent variable of this study were influenced by organizational commitment, conservative culture, job stress and innovative culture. The female nurse's turnover intention of the dependent variable of this study were influenced by conservative culture and innovative culture. Conclusion : The study findings demonstrate that gender stereotype, conservative culture, empowerment, innovative culture, job stress and organizational commitment had a significant influence upon nurse's turnover intention statistically. Based on the findings, the innovative scheme of human resources management could be recommended as a great way to manage nurses. Keywords : turnover, gender analysis

PP26 R-013

HOW WE HANDLE MISSING DATA IN GERIATRIC COHORT STUDIES

Geva GEVA¹, Danit SHAHAR², Sigal TEPPER¹, Tamara HARRIS³, Drora FRASER¹, Geert MOLENBERGHS⁴, Friger MICHAEL¹ (1. Public Health, Ben Gurion University, Israel; 2. Public Health, Ben Gurion University at the Negev, Israel; 3. Geriatric Epidemiology, Laboratory of Epidemiology, Demography, and Biometry, Israel; 4. Biostatistics and statistical Bioinformatics Centre, Leuven Katholieke University, Belgium)

Introduction : Longitudinal cohort studies focused on older persons are prone to selection bias due to the increased attrition as follow-up continues. This is an important issue requires analytical attention. Objective: to explore which missing data methodology has entered current practice and to illustrate the potential impact of ignoring the issue. Method : A Sample of 103 articles was drawn from six key geriatric cohort studies: Health ABC, InCHIANTI, LASA, BLSA, EPESE and KLoSHA. The selected publications were classified according to missing data methodologies and summary statistics were used. Results : 77% of the articles described the selected analysis data set, yet only 28% used a statistical method capable of handling all available observations per case. Missing data dedicated methods were rare, (< 10%) these few studies conducted single or multiple imputations with respect to baseline variables. None of the studies reported the use of advanced methods such as Inverse Probability Weighting or Selection Models. Studies with longer follow-up period more often employed longitudinal analysis methodologies to handle missing data. Conclusion : Despite the recognition that missing data is a major problem in studies of older persons, few published studies account for missing using limited methodologies. Keywords : missing data, geriatric cohort studies, methodologies review , longitudinal analysis

PP26 R-014

IMPACT OF SELF-RATED HEALTH ON MEDICAL AND CARE COSTS IN OLDER JAPANESE

Hiroto YOSHIDA¹, Yoshinori FUJIWARA², Mariko NISHI², Taro (FUKAYA², Shoji SHINKAI² (1. Faculty of Medical Science & Welfare, Tohoku Bunka Gakuen University, Japan. 2. Research Team

for Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology, Japan)

Introduction : This study examined the impact of self-rated health (SRH), which was categorized as very good, good, fair, and poor, on medical and long-term care expenditures in Japanese older adults. Method : A total of 916 subjects aged ≥ 70 years responded to the baseline survey conducted in 2001 in Kusatsu, Gunma, Japan. Sixty-six percent of the respondents at baseline (n=609) used medical or care service at least one time both in 2002 and 2004. They were followed through the end of February, 2004. The impact of SRH on medical and long-term care expenditures was examined by fitting multiple regression models. The dependent variable was the logarithmic transformed 2004 annual medical and long-term care expenditures per month. The independent variable was the baseline SRH. Control variables included the 2002 baseline annual medical and long-term care expenditures per month, gender, age, history of stroke, heart disease, hypertension, diabetes, and so on. Results : Fair or poor SRH at baseline was significantly associated with future medical and long-term care expenditures. We estimated that the decline of very good or good SRH to fair or poor would increase mean medical and long-term care expenditures per capita per month by approximately 22.7%. Conclusion : Prior studies have shown associations between fair or poor SRH and adverse health outcomes in Japanese older adults. This study found that fair or poor SRH was not only a significant predictor for adverse health outcomes in Japanese older adults, but it had a strong impact on the future medical and long-term care expenditures. Keywords : self-rated health medical and long-term care expenditures

PP26 R-015

DIFFERENCES AMONG PROFESSIONALS IN RESPONDING TO THE COMPLEX NEEDS OF THE COMMUNITY-DWELLING ELDERLY IN JAPAN

Junko WAKE (Social Welfare, Tokyo Metropolitan University, Japan)

Introduction : Community care support centers have been founded since the 2005 amendment of the Public Long-term Care Insurance law in Japan. They provide preventive care management as well as various support measures to frail elderly people in the community. Three kinds of professionals are placed in each center: a chief care manager (CM), a social worker (SW), and a public nurse (NS). The professionals are expected to carry out their own duties, while collaborating where elderly clients have the complex needs. Method : The study analyzes differences and similarities in the roles and functions of the three professionals in responding to the complex needs of the elderly. A nationwide mailing survey directed at 700 randomly selected centers was conducted in 2012. Response rates were 34% (CM), 35% (SW), and 34% (NS), respectively. Results : The results indicate that: (1) the three professionals have different roles and functions, as expected; (2) SWs are younger and have less experience, but have a heavier load of complex cases; (3) SWs regard elder abuse as the most difficult component, and; (4) SWs recognize the need for stronger collaboration with related institutions and professionals in the community, including with the local government. Conclusion : The results highlight the need to support younger social workers by providing necessary skills and training, as well as appropriate supervision. Keywords : Collaboration Complex needs Long-term care insurance Japan

PP26 R-016

VISUALIZATION OF HOSPITAL DEMAND CHANGE IN SUPER AGING SOCIETY IN JAPAN

Shunsuke DOI¹, Katsuhiko TAKABAYASHI² (1. Division of

Healthcare Policy of Aging Society, Chiba University Hospital, Japan.
2. Department of Medical Informatics and Management, Chiba University Hospital, Japan)

Introduction : Recent medical advances and hygiene improvement gave Japanese people the longest life span in the world. As the result, however, Japanese elderly population has been growing very rapidly, at the highest rate in world history. This similar phenomenon will occur in other western countries though the speed is not so fast, and in the eastern Asia such as Korea and China will have the same phenomena, while it will occur more than 10 years later than Japan. Especially Chiba prefecture, east part of the great Tokyo Metropolitan area this change is more drastic. To prepare for these circumstances we have to estimate elder population change and their demands in healthcare more precisely in this area. **Method :** We defined the patients' access area of each hospital by geographical information system (GIS) and demonstrated the area that demand exceeds. We simulated the number of inpatients and their hospital accommodation in Chiba prefecture from 2015 to 2035. The number of estimated hospital inpatients is calculated by using national census and expected population in every 500 meter square mesh and visualize this change on the map yearly. By changing the variables, we can estimate several simulation results. **Results :** Hospitals can afford to accept the patients in most area until 2015, while in 2030, 9,000 patients cannot be admitted to the hospitals in Chiba prefecture. **Conclusion :** In this study, we estimated the area that demands exceeds by using GIS especially in northwest part of Chiba Prefecture. **Keywords :** Geographic Information System, Access Area, Expecting Demand of Medicine

PP26 R-017

LONG-TERM FINANCIAL SECURITY AMONG OLDER LOW-INCOME ASIAN IMMIGRANTS IN THE UNITED STATES

Yunju NAM¹, Eun Jeong LEE², Jin HUANG³ (1. Social Work, University at Buffalo, USA. 2. National Asian Pacific Center on Aging, National Asian Pacific Center on Aging, USA. 3. Social Work, Saint Louis University, USA)

Introduction : Asset ownership, financial knowledge, and information on social programs are important in planning for post-retirement finance. This study examines older Asian immigrants' retirement readiness by investigating their assets, financial knowledge, and understanding of social programs and benefits. **Method :** This study uses survey data from low-income Asian immigrants in employment support programs in Los Angeles, Orange County, and New York City (N=160). The data were collected through group surveys conducted at mandatory meetings of program participants. The survey offered the questionnaire in three languages: Chinese, English, and Korean. This study uses regressions on three types of outcome measures: asset ownership and savings, knowledge on social program eligibility and benefits, and confidence in post-retirement economic conditions. **Results :** Asset ownership rates are very low: 21% own a home and 36% have financial assets (e.g. savings accounts). The percent of regular savers is 18%. About a quarter reported that they are comfortable with four basic financial activities (opening a bank account, depositing and withdrawing money, and applying for a credit card). More than half (52%) do not give any correct answers to 4 basic financial knowledge questions, while roughly a quarter give no correct answers to 5 questions on Social Security and Medicare. Only a minority of respondents report confidence in meeting post-retirement consumption needs (26% in meeting basic consumption needs; 17% in covering medical expenses). **Conclusion :** Results indicate that older

Asian immigrants' long-term financial security is precarious, calling for policy intervention to enhance their financial capacities. **Keywords:** financial security, Asians

PP26 R-019

PRIMARY FACTORS FOR IMPROVEMENT OF COGNITIVE TASK PERFORMANCE IN DOHSA-HOU FOR THE ELDERLY

Masaki ADACHI¹, Koji NAKANO² (1. Clinical Psychology, Graduate School of Human Relations Tokaigakuin University, Japan. 2. Department of Psychology, Social Welfare Corporation Ryuseikai clinic, Japan)

Introduction : This study investigates the improvement of cognitive performance reported as a result of Dohsa-hou (A Japanese Psycho Rehabilitation Method) for the elderly, taking into consideration changes in posture control abilities and situational anxiety. Additionally, it investigates the primary factors responsible for these improvements. **Method :** Using the Mini Mental State Examination and Berg Balance Scale, the study divided elderly participants who cleared the cognitive impairment cutoff point and had moderately unstable upright balance into two tests groups: an experimental group (N = 9) that attempted to improve upright balance by performing dohsa-hou, and a control group (N = 9) to establish the drop-off period for the effect of performing the given activities. Body sway and situational anxiety during task processing of Stroop test questions (black and white or color) were measured before and after the dohsa-hou activities and drop-off period. Also, the task processing time of Stroop test was measured. **Results :** Repeated-measure mixed-design two-way ANOVA and subsequent simple main effect tests showed that only the experimental (Dohsa-hou) group improved in body sway, had a shorter Stroop Color Test processing time ($F=35.87, p<.001$) and lower situational anxiety ($F=20.00, p<.001$). **Conclusion :** From this study, it has been identified that: 1) information-processing capacities spared for posture control are affected by distribution of processing resources towards solving other cognitive tasks, and 2) the effect of the release of attention from threat-related information due to a decrease in attentional bias, which accompanied the decrease in situational anxiety, are primary factors in improving cognitive task performance. **Keywords :** Dohsa-hou for the elderly, posture control abilities, cognitive task performance

PP26 R-020

OUTCOMES EVALUATION SYSTEMS FOR DEMENTIA CARE -OUTCOME CHANGE AFTER ONE YEAR-

Ayami SATO¹, Yoko UCHIDA¹, Kenichi INOUE², Rie HURUGOURI², Michiyo KOBAYASHI², Rieko NAGAI², Kyoko INOUE², Masami AOKI², Michiko HIROTA², Yuriko YAJIMA², Noriko NAKAJIMA² (1. Graduate School of Health Sciences, Gunma University, Japan; 2. JANPENPON, Non Profit Organization, Japan)

Introduction : The purpose of this study was to identify changes in outcomes of elderly clients with dementia after one-year use of multi-functional home care and day care services in small-scale facilities. **Method :** We used the Outcomes and Assessment Scale for Dementia Care (OASDC) for outcome evaluation. Of 56 clients with dementia who used services in small-scale facilities and measured OASDC at two time points (August and October, 2010), 43 clients, whose OASDC data were available at one year (October, 2011), were the subjects of this study. **Results :** Higher deterioration rates at one year were observed in Eating, Fulfillment of One's Role, Smile, Grooming and Caregiver's Stress and Fatigue, while higher maintenance rates were found in Bathing, Preventing Accidents, Rest/Sleep, Caregiver's Stress and Fatigue, and Maintaining Appearance. **Conclusion :** Although

elderly clients in small-scale facilities received care to improve and maintain their physical conditions and functions in daily life, several measures including eating and fulfillment of one's role could be deteriorated. Development and implementation of the action plan are needed to improve and maintain their physical conditions and functions in daily life. Keywords : Outcomes and Assessment Scale for Dementia Care, small-scale facilities, outcome change

PP26 R-021

COMPRESSION OR EXPANSION OF MORBIDITY? RURAL-URBAN DIFFERENCES IN DISABILITY AMONG THE ELDERLY IN TAIWAN BETWEEN 1989 AND 2007

Chen-Fen CHEN¹, Charlotte WANG², Pau-Ching LU³ (1. Department of Social Welfare, Chinese Culture University, Taiwan; 2. Institute of Epidemiology and Preventive Medicine, National Taiwan University, Taiwan; 3. Graduate Institute of Social Work, National Chengchi University, Taiwan)

Introduction : The objectives of this research are to explore residential disparities between disabled older persons aged 60 years and over in rural and urban areas in Taiwan, as well as to test the theories of compression or expansion of morbidity on the basis of this data. Method : The data was sourced from a national survey of 3,893 aging people above 60 years of age in Taiwan. Data was collected in 1989, 1993, 1996, 1999, 2003 and 2007. A linear mixed model was applied for trend analysis. Results : Not controlling for the independent variables, the long-term care needs for the rural participants was greater than those of the subjects in urban areas. After controlling for socioeconomic status and reported health indicators, and considering the implementation of National Health Insurance (NHI) from 1995, the disparity became greater over time: the rural elderly were more vulnerable to disability than their counterparts. Furthermore, the disparity in long-term care needs between the elderly in different areas will continue to grow as the lifespan of the elderly steadily increases. Conclusion : This study supports the "compression of morbidity" hypothesis for urban areas, but "expansion of morbidity" in rural areas. The results also suggest that Taiwan's public policymakers should be required to better understand that the elderly in different areas face various barriers in acute care and long-term care service utilization. For instance, what is needed is that NHI be revised to better balance the differences due to residential disparity and to design community-based long-term care programs. Keywords : Rural-Urban, Disability

PP26 R-022

THE COMMONWEALTH OF VIRGINIA'S RESPONSE TO ALCOHOL MISUSE IN LATER LIFE

Nancy BROSSOIE¹, Constance L. COOGLE² (1. Center for Gerontology, Virginia Tech, USA; 2. Virginia Center on Aging, Virginia Commonwealth University Medical Center, USA)

Introduction : The impact of alcohol and medication misuse on public health is arguably extensive. With a rapidly growing population of older adults who grew up in an era of increased illicit drug and alcohol use, there are reasons to believe that their continued alcohol use may have deleterious effects on their health. In a proactive response, the Department of Alcoholic Beverage Control (Virginia, United States) established the Alcohol and Aging Awareness Group (AAAG) to focus on the special risks of alcohol misuse among older adults and become the leader in Virginia to provide education, training and resources on the use of alcohol and medications as adults age. Since 2007, AAAG members from government, private, and non-profit organizations have collaborated to identify strategies to meet the informational and service needs of healthcare providers, community

service professionals, and consumers across Virginia. Method : In this presentation we describe actions taken to build organizational capacity within the AAAG using the World Bank's result management framework to train, educate, and raise awareness among community professionals and consumers of problems associated with alcohol use in late life. Results : Areas addressed include enhancing and sustaining membership, creating regional groups for improved outreach, training leaders within the organization, building upon evidence-based practices in the development of programs, using multimedia to raise consumer awareness, offering publically accessible referral and resource lists, and developing training curricula to reach community providers outside of the traditional healthcare professions. Conclusion: Success, challenges, and next steps to achieving goals are identified for each activity. Keywords : alcohol misuse, capacity building, community response

PP26 R-023

ASSOCIATIONS BETWEEN SARCOPENIA AND MORPHOMETRIC/PHYSICAL/FUNCTIONAL PARAMETERS IN COMMUNITY-DWELLING OLDER PEOPLE

Nariaki SHIRAIISHI¹, Yusuke SUZUKI², Kiwako OKADA³, Jun HASEGAWA⁴, Hiroyuki UMEGAKI¹, Maki AOYAMA², Masafumi KUZUYA² (1. Rehabilitation, Nihon Fukushi University, Japan; 2. Community Healthcare & Geriatrics, Nagoya University Graduate School of Medicine, Japan; 3. Nutritional Sciences, Nagoya University of Arts and Sciences, Japan; 4. Geriatrics, Nagoya University Hospital, Japan)

Introduction : To investigate the associations of sarcopenia(SP) with physical/functional characteristics in community-dwelling older adults. Method : Two hundred sixty seven independent community-dwelling older adults aged 65 or older (84 males , 183 females, mean age±SD: 75.5±6.0) were divided into SP (n=45) and non-SP (n=222) according to a modified EWGOP criteria and morphometric/physical/functional characteristics between the two groups were compared. Results : Significant differences of all morphometric and physical parameters except time to keep standing with a single leg were observed between SP and non-SP subjects. Regarding functional parameters, being able to use staircases, get up from the chair, walk for more than 15min without a break, BMI < 18.5, overt swallowing difficulties, subjective sense of fatigue and total score of MNA-SF were found to be significantly related to SP by univariate analysis. A logistic regression analysis revealed that upper arm and calf circumference, feeling fatigued, being able to get up from the chair remained as significant variables to predict the existence of SP. Conclusion : With respect to appropriate prescription of rehabilitation program for the prevention of SP in old age, the present study suggested particular importance of exercise requiring both balance function and muscle strength/range of motion of lower extremities. Also those who are prone to feeling fatigued may have increased risk of SP according to the present study. Keywords : sarcopenia, community-dwelling older adult

PP26 R-024

VALIDITY OF THE CAMBRIDGE NEUROLOGICAL INVENTORY AMONG OLDER JAPANESE INDIVIDUALS

Shingo SHIRATORI¹, Nobuo HOSHIYAMA¹, Hiromi NAKAMURA-THOMAS², Motohiko HARA² (1. Rehabilitation, DAINI HOKUSO Hospital, Japan; 2. Health, Medicine and Welfare, Saitama Prefectural University, Japan)

Introduction : Neurological Soft Signs (NSS) are undetectable neurological deviations under classical examinations. The Cambridge Neurological Inventory (CNI) has the ability to assess NSS and it is

used to assess patients with schizophrenia and cognitive impairments. No study with CNI has been currently reported in Japan, thus this study examined the compatible validity of CNI to discuss clinical applicability. Method : The research protocol was reviewed and approved in the first author's organization. The original CNI with 29 items was translated into Japanese after obtaining permission from the founder. Semantic compatibility of the Japanese version was reviewed by a neurologist and an occupational therapist with more than 20 years experience as well as being examined through 10 healthy Japanese older participants (6 men and 4 women) to see whether they were able to follow instructions. Performances among older participants were individually observed and they were interviewed to clarify what was difficult to understand. Results : Some sentences were revised based on feedback from the 2 professionals. All older participants easily performed 23 items out of 29; however there were 6 items which older participants had difficulties to perform because of complexity of instructions; 2 items (Glabellar tap and Stereognosis) for all participants, Lower limb strength for 8 participants, Arm drift for 5 participants, Finger agnosia for 3 participants and Wink with other eye open for a participant. Conclusion : It was suggested that CNI had a potential applicability in older Japanese individuals to assess NSS when the Japanese version was revised based on results in this study. Keywords : Neurological Soft Signs, Cambridge Neurological Inventory, older individuals

PP26 R-025

EFFECTIVE ACTION PLAN SYSTEMS FOR IMPROVING OUTCOMES IN OLDER PERSONS WITH DEMENTIA

Yoko UCHIDA¹, Kenichi INOUE², Ayami SATO¹, Rie HURUGOURI³, Michiyo KOBAYASHI², Rieko NAGAI², Kyoko INOUE², Masami AOKI², Michiko HIROTA², Yuriko YAJIMA², Noriko NAKAJIMA², Manami KAMIYAMA¹ (1. Graduate School of Health Sciences, Gunma University, Japan; 2. JANKENPON, Non Profit Organization, Japan)

Introduction : The objective of this study was to introduce the Outcome and Assessment Scale for Dementia Care and Action Plan Systems (OASDC) for quality improvement, and to identify action plans for improving outcomes in persons with dementia in small scale facilities with quality improvement activities. Method : The subjects were 56 older persons with dementia who used either of the following facility services of "A" organization: 3 group homes, one small multi-functional home care, or one day care service, and agreed to participate in the survey. Investigators planned and implemented action plans for quality improvement with facility staff. We assessed client outcomes using OASDC before and after implementing the plan. Results : After implementing the action plan for 3 months, 25 persons improved, 9 persons both improved and deteriorated, 14 persons only deteriorated, and 8 persons had no change in outcome measures. Conclusion : The most improved outcome was caregiver's stress followed by playing one's role, hobby, smiling, mental health, behavioral disorder, and grooming. The most effective plan was care to help people playing one's role, and having hobby followed by improvement of communication, toileting care, rehabilitation, family care, going out, and maintaining good health condition. Keywords : dementia, outcome, evaluation

PP26 R-026

WHAT ARE RISK FACTORS FOR AGE-RELATED HEARING IMPAIRMENT IN OLDER ADULTS?

Yoonmee JOO, Oi Saeng HONG, Margaret WALLHAGEN (School of Nursing, University of California, San Francisco, USA)

Introduction : Age-related hearing impairment (ARHI) can be delayed, if we identify risk factors of hearing loss and provide early intervention. Purpose: To determine risk factors interacting with age in ARHI among older adults Method : The PubMed database was searched using the term "age-related hearing impairment." Multiple combinations of terms were searched with the MeSH database using "hearing loss, aged" or "presbycusis" and "risk factors." Then, limits were applied to the literature search: 1) written in English, 2) human subjects, 3) individuals over the age of 18 years as the target population, and 4) clinical trials, randomized controlled trial and meta-analysis as a type of article for research articles. Review articles were excluded. Results : The identified key themes are: genetic factors (genes, race, and gender), environmental factors (noise, chemicals), individual health factors (cardiovascular diseases, diabetes, and obesity, ototoxic medications) and lifestyle factors (smoking, alcohol, diet). The findings lead that environmental, individual health, and lifestyle risk factors can accumulate over a lifetime and contribute to the hearing loss experienced by older people. In addition, genetic factors and the aging process itself are associated with degeneration in hearing ability. However, attempts to correlate specific risk factors to ARHI have resulted in conflicting results. Conclusion : Although some of the risk factors for hearing loss cannot be changed, many risk factors are modifiable and are possible targets for prevention of ARHI. Identifying the genetic, environmental, individual health, and lifestyle risk factors for ARHI and improving appropriate interventions will be a worthy goal for further research. Keywords : Age-related hearing loss, risk factors

PP26 R-027

SOCIOECONOMIC PROFILE AND TRAINING BACKGROUND OF CAREGIVERS OF NURSING HOME IN NORTHEASTERN BRAZIL

Andrea Mendes ARAUJO¹, Marcia Virginia Di Lorenzo FLORENCIO¹, Maria Betanea De Sousa SANTOS¹, Temistocles Bezerra DE SOUSA NETO², Angelo Jose G. BOS³ (1. Escola Tecnica de Saude, Universidade Federal da Paraiba, Brazil; 2. Psicologia, CEFOR-PB, Brazil; 3. Institute of Geriatrics and Gerontology, Pontifical Catholic University of Rio Grande do Sul, Brazil)

Introduction : The growing demand for nursing homes incorporates a new scenario of assistance to this population, especially when there is limited functionality and increased complexity of care, requiring a specialized caregiver, who provides comprehensive care for him. This study aimed to describe the socioeconomic profile and training of caregivers of nursing home elderly working in a state in northeastern Brazil. Method : We applied a questionnaire about socioeconomic data and training of elderly caregivers. Results : Seventy caregivers were interviewed, 65% female, 71.4% aged between 30 and 49 years, 48.6% had completed high school. The monthly income was 87.1% prevalent than the minimum wage, 90% had over than 44 hours of work weekly, 71.4% had no technical training and 70% did not undergo a training course after admission to the institution. The difficulties reported were lack of human resources (51.4%), workload (45.7%) and poor pay (42.9%). There were complaints of health impairment (31.4%), with predominance of back pain (27.1%). It was found statistically significant associations between technical training and other variables such as: education ($p < 0.001$), income ($p = 0.013$), weekly workload ($p = 0.002$) and training course after admission to the institution ($p < 0.001$). Conclusion : These research findings point to the need to formulate new public policies directed to training of elderly caregivers of nursing homes, according to the context in which they live, also the organization of this job class, who can foster recognition and better conditions for the performance of activities of formal care. Keywords :

Homes for the Aged, Caregivers training, Long term care institution

PP26 R-028

PROMPTED VOIDING (PV) IN MANAGING URINARY INCONTINENCE (UI) IN RESIDENTIAL CARE: CAN IT BE SUSTAINED

Claudia Ky LAI (*School of Nursing, The Hong Kong Polytechnic University, China*)

Introduction : PV has been found to be an effective non-invasive measure in managing UI but there is no reported study examining its efficacy in Hong Kong. Method : This was a quasi-experimental study examining the effect of PV in promoting continence for nursing home residents with UI. Forty-eight recruited residents were randomized into the intervention and control groups. All nursing home staffs were trained to ensure that they could correctly deliver the intervention, which was carried out during daytime once every two hours for 12 hours. Physical checks for wetness and measurement of voided volume were performed at an two-hourly interval from 7am to 7pm at the baseline and at 3- and 6-months post-intervention. Each period of data collection lasted three days. The outcome measures include the (i) incontinence rate, (ii) number of self-initiated toileting, (iii) number of continent voids, and (iv) the number of wet episodes. Results : The median numbers of wet episodes and self-initiated voids at 6 months post-intervention were 3.5 and 0.7 per day for the intervention group and 4.5 and 0.2 for the control group, respectively. Also the day time incontinence rate was 60.9% in the intervention group and 76.6% for the control group. There were significant differences in the number of wet episodes/day ($p = .043$) and in the day time incontinence rate ($p=.009$) between the two groups. Conclusion : PV has been shown to have some effects in its use in Chinese communities but its effect of PV was not found to be as effective as compared to Western populations. Keywords : Prompted Voiding, Urinary Incontinence, Behavioral Intervention, Residential Care

PP26 R-029

CAN ALZHEIMER'S PATIENTS' QUALITY OF LIFE BE IMPROVED BY INTER-GENERATIONAL MAINTENANCE? A STUDY OF THE RELATIONSHIP BETWEEN CHILDREN AND THE ELDERLY WITH DEMENTIA

Kazumi WATANABE¹, Katsuyoshi TAKAHASHI¹, Yukari SEKI², Sayuri KOBAYASHI², Ryoko ROKKAKU², Akira HONMA³ (*1. Dementia Care Laboratory, Japan; 2. Tokyo University of Technology, Japan; 3. Dementia Care Research and Training Tokyo Center, Japan*)

Introduction : In Japan over the recent years, interaction between children and senior citizens has been decreasing. It is particularly low with respect to the elderly with dementia. This paper reports the results of a four-month intervention of continuous, daily interaction between children from a nursery and the dementia-suffering elderly at an adjacent facility, finding that it can help maintain or improve the quality of life of Alzheimer's Disease (AD) sufferers, as measured along the Affect Balance Rating scale (ABRS). Method : (1) Conduct lifestyle interviews with the AD sufferers, the children, the families, and the managers of the nursery school and the day care center care. (2) With the intervention group, conduct activities with children one hour each morning. (3) Use ABRS to assess and compare the mood before and after the four-month intervention. Results : There was no significant difference between the pre-intervention and post-intervention ABRS findings for either the control or intervention group. However, subjects in the intervention group showed amazement with the words of the children and relayed them joyfully to the care

staff. On the days when the children could not visit, the subjects would say sadly, "Today, the children are not coming, right?". Conclusion : Even within the short, four-month period, the AD elderly were increasingly interested in the children and with their active involvement with the children, suggesting the possibility that this two-year intervention study could improve the quality of life of the intervention group. Keywords : quality of life

PP26 R-030

THE RELATIONSHIP BETWEEN FALLS AND PSYCHOLOGICAL WELL-BEING IN SOUTHERN BRAZILIAN ELDERLY

Patricia MORSCH¹, Dena SHENK¹, Julie MCLAUGHLIN², Angelo Jose G. BOS³ (*1. Gerontology, University of North Carolina at Charlotte, USA; 2. Gerontology, Queens University, USA; 3. Institute of Geriatrics and Gerontology, Pontifical Catholic University of Rio Grande do Sul, Brazil*)

Introduction : One in three older adults fall each year in Brazil. Falling is associated with increased hospital and nursing home admissions and disability rates. Therefore, falls can have devastating outcomes for older adults, their families and health care systems. Research has identified many risk factors for falls, including physical and environmental hazards. However, less research has addressed the relationship between psychosocial factors and falls. Objective: to verify the relationship between psychological well-being and falls in community dwelling older adults. Method : Using a secondary dataset from the study 'Older Adults' Profile in RS' conducted between the years 2010 and 2011 by the State Government in partnership with the Institute of Gerontology and Geriatrics of PUCRS and the School of Public Health of the RS, we tested the relationship between psychological well-being and falls in community dwelling older adults. The data were used to test whether the independent variables representing demographics and psychological well-being (age, gender, race, educational attainment, monthly household income, if respondents reduced activities due to emotional problems, frequency with which respondents feel calm and relaxed and presence of depression or anxiety) are associated with the dependent variable of falls. Analysis was conducted using bivariate cross tabulation and noting of chi-square values. Results : Psychological wellbeing has a relationship with falls and the relationship varies in different groups. Conclusion : These research findings are important to increase the existing knowledge about falls and provide important information for professionals working in fall prevention. Keywords : Falls, Community based research

PP26 R-031

UTILIZATION PATTERNS OF COMMUNITY HEALTHCARE SERVICES OF SENIOR NURSING HOME RESIDENTS IN TAIWAN

Shinn-Jang HWANG¹, Chia-Hui LIN², Hsiao-Ting CHANG³, I-Hsuan HWANG⁴, Mei-Man HO⁵ (*1. Department of Family Medicine, Taipei Veterans General Hospital and National Yang-Ming University School of Medicine, Taiwan; 2. Department of Family Medicine, Taipei Veterans General Hospital, Taiwan; 3. Department of Family Medicine, Provincial Taipei Hospital, Taiwan; 4. Department of Health Care Management, National Taipei University of and Nursing and Health Sciences, Taiwan; 5. Home Care Institute, Taipei Veterans General Hospital, Taiwan*)

Introduction : Population ageing with its associated health care problems and financial burden is becoming an important issue in Taiwan. As people ageing progress, disability will increase and thus

making community long-term care more demanded. Method : This study examined the utilization patterns of community healthcare visits and services of senior nursing home residents in Taiwan by analyzing the Taiwanese National Health Insurance Database. Results : There were 4,335 nursing home residents aged 65 years (44.7% male and 55.3% female) receiving a total 25,441 community healthcare visits with an average of 5.0 visits per subject during 2004. Subjects aged 75-84 years received more community healthcare visits (48.5%) than subjects aged 85 years (26.1%) and subjects aged 65-74 years (25.4%). Women received more community healthcare services and visits than men in all age groups. Cerebrovascular disease was the most frequent diagnosis (51.2%) of residents, and the majority of community healthcare services were provided by the community home nursing care institutions (81.7%). The most common provided nursing services were resource utilization group-2 (general nursing service and one skilled nursing service). As for skilled nursing services, nasogastric tube replacement (56.4%), urinary indwelling catheter replacement (30.5%), and tracheostomy tube (13%) replacements were the leading skilled nursing services provided for elder residents in nursing home. The tube replacement accounted for 97.7% of all skilled nursing services. Conclusion : There were age and gender differences in the community healthcare services utilization among senior nursing home residents in Taiwan. The high percentage of tube replacement among community healthcare services in nursing home residents deserves more attention. Keywords : Community healthcare services; Nursing home residents; Tube replacement

PP26 R-032

EXPENDITURE OF HOME HEALTH CARE UTILIZATION AMONG DIABETES PATIENTS WHO AGED 65 AND OLDER - A THREE-YEAR FOLLOW UP STUDY IN TAIWAN

Shu Hui LIN¹, Jengyuan CHIOU² (1. Nursing department, Department of Healthcare Admini, Chung Shan Medical University Hospital, Asia University, Taiwan; 2. Health Policy and Management, Chung Shan Medical University, Taiwan)

Introduction : With the changes of population structure and the diet and lifestyle in Taiwan, diabetes has become a chronic disease with many complications, which also has a high incidence, high prevalence, and high economic burden nationwide. After the implementation of National Health Insurance (NHI), most patients discharged from the hospital with multiple long term diseases need persistent health home care. Method : The 2005 Longitudinal Health Insurance Database (LHID) from National Health Insurance Research Database (NHIRD) is used to explore the expenditure of home health care utilization among the elderly 65 and older diabetes patients in Taiwan. After deleting missing data, there are 273 diabetes patients who received home health care during 2005. Their utilizations of home health care and medical care are analyzed by a three-year follow-up. Results : Our study concludes that there are 273 people who have diabetes and receiving home health care. Most of them are women, insured within the North district of NHI, scored 2 in Charlson Comorbidity Index (CCI), grouped in resource utilizing group (RUG) level 2. The results of regression models show that, when holding the other variables constant, those with catastrophic illness utilizing more home health care services had a greater number of outpatient- total services points, and had shown significantly higher in the consecutive three years. Conclusion : Policy makers need to design more comprehensive programs and integrate discharge preparations and diabetic caring network to provide continuous care for diabetes with diabetes. Keywords : Home Health Care, National Health Insurance Research Database (NHIRD), Diabetes

PP26 R-033

PERCEIVED LIFE SATISFACTION OF THE KOREAN ELDERLY - A QUALITATIVE STUDY

Minsun SUNG¹, Mihye CHOP² (1. Emeritus Professor, Dept. of Social Welfare, The Catholic University of Korea, Korea; 2. Lecturer, Dept. of Social Welfare, The Catholic University of Korea, Korea)

Introduction : As South Korea is fast becoming an aged society, the quality of life for the elderly is deteriorating dramatically. It is estimated that about half of people age 65 and over are likely to be the victims of poverty, and the suicide rate among elderly Koreans steadily increased. The main reasons they choose suicide are illness, economic status, and loneliness. The aims of this study are: (1) to find out how the elderly subjectively perceive their current life situations, whether they are satisfied or not with their later life, and (2) to figure out what factors could contribute to their life satisfaction. Method : The method of the study is a qualitative study based on the Grounded Theory. Primary data are autobiographies of 15 elders which were collected by graduate students in one of the authors' classes in Spring and Fall 2012. Each student was assigned to select a participant who was able, and willing to talk his or her life story. Student wrote autobiography on behalf of the elderly who later approved it. Results : Through analysis, it is tentatively assumed that the most participants reach a settled inner state of consciousness like peace or equanimity in their later life, no matter what difficulties they faced in the past and present, by accepting their realities and by putting down many unfilled wishes, while trying to increase their own internal strengths and utilizing outside supports. Conclusion : Interpretation and implication of these results need to be discussed further in detail. Keywords : autobiography, life satisfaction, peace or equanimity

PP26 R-034

THE EFFECTS OF BABY BOOMERS' RETIREMENT PREPARATION AND LEISURE ACTIVITIES WITH SPOUSE ON LIFE SATISFACTION

Meehye KIM, Soonhyeon NAM (Graduate School of Social Welfare, Ewha Womans University, Korea)

Introduction : As the baby boomer generation joins the elderly population, it is estimated that the elderly population will reach 10 million by 2030. In this study, we investigate the effects of baby boomers' lifestyle, retirement preparation and leisure activities on their lifestyle satisfaction, thereby helping them to prepare a plentiful and active ageing. Method : The study was conducted from Oct 3 2011 to Nov 30 2011 on 1,021 baby boomers living in 15 large cities across the country. A proportional quota based sample was drawing utilizing residential listings from Korea's 2010 Population Census. Results : The results are as follows from using path analysis and SEM on the AMOS 18.0 statistics program. First, baby boomers' lifestyle revolving around work and leisure affected their degree of life satisfaction and they preferred work-lifestyle to leisure-lifestyle. Second, baby boomers' awareness of retirement preparation, retirement planning, and leisure activities with their spouses affected their degree of life satisfaction, and those with stronger awareness of retirement preparation were receiving more related retirement preparation education. Third, those who enjoy freetime with their spouse and a lifestyle centered around leisure not only affected the baby boomers' leisure satisfaction level, but also life satisfaction level. Conclusion : As a result, this study is suggested the importance of lifestyle, retirement preparation and leisure activities as an elderly in enjoying life after retirement by baby boomers who many will live up to 100. Keywords : Babyboomer generation, retirement preparation, leisure activities for old aging, active aging, life satisfaction, lifestyle, leisure

activities with spouse

PP26 R-035

THE EFFECT OF LEADERSHIP STYLE AND JOB SATISFACTION ON AFFECTIVE COMMITMENT

Chiu-Fen LAI¹, Meilan CHEN¹, Ying-Tsun HUNG² (1. *Institute of Health Industry Management, Ching Kuo Institute of Management and Health, Taiwan*; 2. *the Department of Senior Citizen Service in Management, Ching Kuo Institute of Management and Health, Taiwan*)

Introduction : It is an important issue for each organization to keep good employees and their own commitment. Every organization has their own distinctive culture which can influence employees' behaviors. The aim of the study is to investigate the moderating role of organizational culture and personality in the relationship among leadership, organizational commitment and job satisfaction. The study also explores the mediating role of job satisfaction in the relationship of leadership with organizational commitment. **Method :** The study use the quantitative studies analysis. By interviewing and recording seven employees' viewpoint toward their leader's management methods in the long-term care facility, the researcher analyzes the interview. **Results :** The aim of the study is to explore the impact of leadership style and job satisfaction, and affective commitment in the long-term care facility. **Conclusion :** The results of this study include: (1) Innovative culture has positive moderating effort in the relationship between transformational leadership, affective commitment, and so does Supportive culture. Supportive culture moderates the relationships of transactional leadership with affective commitment. (2) The moderating effects of conscientiousness personality influence in relationship between transformational leadership and job satisfaction significantly. (3) Job satisfaction mediates the relationship between transformational leadership and organizational commitment, as well as between transactional leadership and organizational commitment. The supervisors' leadership can influence affective commitment directly and influence affective commitment through job satisfaction indirectly. **Keywords :** Leadership Style, Job Satisfaction, Long-term care facility

PP26 R-036

HOW TO MANAGE DEHYDRATION/ELECTROLYTE IMBALANCE OF RESIDENTS IN NURSING HOME - BUILDING PRACTICAL ALGORITHM

Eun Young KIM, Su Jung LEE, Sung Ok CHANG (*College of Nursing, Korea University, Korea*)

Introduction : The elderly in nursing homes easy to get dehydrated and turn up electrolyte imbalance than the elderly in community, due to not to intake fluids sufficiently. Dehydration/electrolyte imbalance to the elderly should be recognized as a serious public health problem associated with increased morbidity and mortality. This study was conducted to identify type of emergency situation due to dehydration/electrolyte imbalance in nursing home and to develop nursing practice algorithm for emergency nursing management related to resident's dehydration/electrolyte imbalance in nursing home. **Method :** Nursing literatures review was done, 20 experienced nurses in 6 nursing home were interviewed and analyzed. We checked work flow and the preliminary algorithm were developed and this was evaluated by the expert group and modified. **Results :** In total, 80 literature were searched, that is, articles published in 12 kinds of academic nursing journals, 19 kinds of guidelines and 49 kinds of textbooks on nursing and medicine related to resident's dehydration/electrolyte imbalance in nursing home. The major

diseases that cause dehydration/electrolyte imbalance was stroke with dysphasia, dementia, gastrointestinal problems, end-stage cancer/bedridden state. Preliminary algorithm is consisted of assessment, intervention, evaluation part that includes 47 items. Finally, 42 items were constructed to the modified algorithm after the expert group was evaluated. **Conclusion :** The algorithms developed in this study will not only improve the quality of nursing care but also provide evidence for effective health care. This research was supported by Basic Science Research Program through the National Research Foundation of Korea(NRF) funded by the Ministry of Education, Science and Technology(2010-0009022). **Keywords :** Hemodynamic Homeostasis Management, Nursing home, Practical algorithm

PP26 R-037

DEVELOPMENT OF APPROPRIATE CASE MANAGEMENT MODEL IN LONG-TERM CARE SERVICES FOR THE ELDERLY

Ji Young HWANG, Mee Hye KIM, Soonhyeon NAM (*Graduate School of Social Welfare, Ewha Womans University, Korea*)

Introduction : Adoption of case management and establishment of system is required to continuously improve long-term care service insurance for the elderly, enhance effect and efficiency of long-term care services for the elderly and promote the welfare of the elderly and families. We explained problems that can be fixed and solved through initial contact, inspection, planning, intervention, review and evaluation by adopting case management from the problems arising from the implementation of long-term care services for the elderly. **Method :** In this research we discussed the goals, function, role, case management personnel education and their professional level and source of revenue by forming three models: long-term care services for the elderly, National Health Insurance Corporation, and health center & resident lifestyle support center combination. Central to the models were the main topic of case management, with case management range set all over the communities based on previous studies. **Results :** Models provided in the research results will not limit case management to only subjects of long-term care services for the elderly. Rather, integrated services will be provided to the regional community at large, leading to resolution of dead zone related to diverse services provided by communities, various use of resources by those communities and long-term care services for the elderly and provision of policy effect and efficiency. **Conclusion :** This research is suggested that it may contribute the continuous improvement of long-term care services insurance for the elderly by emphasizing the need for case management and developing appropriate case management models in long-term care services for the elderly. **Keywords :** long-term care service insurance for the elderly, long-term care services, case management

PP26 R-038

THE STUDY OF THE OPTION OF THE ELDERLY ON LONG-TERM CARE MODES AND INFLUENCING FACTORS

Liu NINA (*School of Sociology and Population Studies, Renmin University of China, China*)

Introduction : With the arrival of aging and advanced-aging in China, the amount of disabled senior citizen is obviously rising. Long-term care will be the key point of social care service for old people in the future. However, there were less studies on long-term care modes of the elderly. **Method :** I make regression analysis in elements that influence long-term care model of disabled old people. **Results :** The group that is taken care of in the institutions mainly is urban long-term care with good financial conditions, high-disabled level and poor inter-

generational relations in the south. Conclusion : Home long-term care is still main modes of senior citizens on long-term care, so it's very important for intervention of community service. The group that is taken care of in the institutions mainly is urban long-term care with good financial conditions, high-disabled level and poor inter-generational relations in the south. The institutional care may have to orient more clearly and play complementary roles. In addition, financial support of children and the amount of children can't hinder old people to choose institutional long-term care. Keywords : long-term care; old people needing long-term care; long-term care model

PP26 R-039

DEVELOPMENT OF PROTOCOL FOR EMERGENCY NURSING MANAGEMENT OF AIRWAY OBSTRUCTION BY FOREIGN BODY IN NURSING HOME

Su Jung LEE, Mi So KIM, Sung Ok CHANG (*College of Nursing, Korea University, Korea*)

Introduction : The purpose of this study was to draw a protocol on the emergency nursing management about airway obstruction by foreign body in nursing home. Method : The protocol was developed based on a literature review and experts' knowledge. Nursing management categories were developed from interviews with practice nurses, grouped in to five areas about the condition of residents. Reflecting the experiences of clinical nursing practice and literature review, a protocol were developed, as were algorithms displaying the flow of nursing process. We selected health experts who had prior experience related to gerontological nursing on emergency. Panels were consisted of emergency physician(1), family medicine(1), neurologist(1), nursing professor(6) and specialist nurses of nursing home (6). They assessed the protocol content validity and priority on management independently. Based on the content validation, the protocol for the emergency nursing care of airway obstruction by foreign body was modified and finalized. Results : Of the 38 items constituted, 33 items were determined to be appropriate. The protocol of airway obstruction by foreign body comprised 33 items for assessment domain(16), intervention domain(12), evaluation domain(5). The hierarchical assessment priorities of protocol are listed in 'judgement about looking appearance', 'physical assessment', 'Check the resident's history', 'Check the resident's behavioural habits'. Conclusion : The protocol developed in this study can be used for the elderly care and for training nursing students and novice nursing home nurses. This research was supported by Basic Science Research Program through the National Research Foundation of Korea(NRF) funded by the Ministry of Education, Science and Technology(2010-0009022). Keywords : nursing home, emergency, airway obstruction

PP26 R-040

ANALYSIS OF SPACE ORGANIZATION AND SCALE OF JAPAN'S GROUP HOME

Taeil KIM (*Faculty of Architecture, Jeju National University, Korea*)

Introduction : The population with dementia is consistently increasing. However, there is no specific facility standards though a variety of welfare facilities has been proposed according to an amendment. The purpose of the study is to prepare facilities for the aged with dementia and set facility standards of group home in order to improve the environment of facilities. Method : As Japan and Korea have similarity in living space, it is considered useful to make practical application from Japan's case in setting standard of architectural space for the aged. We collected 130 group home data in total. We figured out architectural features by analyzing and arranging data in detail. Results: First, location type of facilities could be sectionalized suburb

type and general residence type in town. Especially the latter has higher percentage which means many facilities are located near downtown. Second, small-scale(9 people) and middle-scale(18 people) of facilities capacity are the most, which make homelike atmosphere. Third, the typical feature of group home, unit is mostly composed of one unit or two units. 90% of researched case shows this. Fourth, each II type and L type accounts for 37.3% and 30%. Conclusion : Construction plan should reflect features as mentioned above. Research plan for the aged with dementia in Korea has just started. Many things in architecture can be applied from the empirical research through analyzing Japan's facilities. But complete design should contain actual Korean cultural background. Far more research about facilities atmosphere that is proper to Korea's sentiment and so on is required. Keywords : Japan, group home, unit

PP26 R-041

REPORTING ADVERSE EVENTS AT GERIATRIC FACILITIES: CATEGORIZATION BY TYPE OF INCIDENT AND FUNCTION OF REPORTING PERSONNEL

Tali SHMUELI¹, Ronit HAR NOY¹, Merav BEN NATAN², Joshua BEN-ISRAEL³ (*1. Nursing, Shoham Geriatric Center, Israel; 2. Nursing School, Israel; 3. Shoham Geriatric Center, Israel*)

Introduction : Adverse events and patient care-related incidents are a challenging universal problem, among elder residents of geriatric facilities. The aim of this study was to examine which types of adverse events are characteristic of the geriatric center studied and which of the nursing staff reported such incidents. Method : Data were retrieved from the computerized incident management system at a large geriatric center in central Israel, and all adverse events reported over the past three years were examined. Results : The study findings indicate that the most common type of adverse event was falls. Older nurses with greater seniority in the facility show a higher tendency to report adverse events. In addition, registered nurses were found to report more often than practical nurses. Conclusion : This study highlights the important role that nurses can play in reporting and reducing adverse events. The role of the nurse is becoming increasingly complex, especially in geriatric facilities, which serve people with complex mental and physical states who are more susceptible to adverse events to begin with. Keywords : Adverse events, geriatric facilities, nurses

PP26 R-042

UNINSURANCE AMONG PRERETIREMENT ASIAN AMERICANS: IDENTIFYING THE ROLE OF SOCIAL AND CULTURAL CONTRIBUTORS

So-Young PARK¹, Duy NGUYEN¹, Sunha CHOF (*1. Silver School of Social Work, New York University, USA; 2. College of Social Work, University of Tennessee, USA*)

Introduction : Despite nearly universal insurance coverage for older Americans over 65, the pre-retirement age cohort is susceptible to gaps in coverage. Related to the Patient Protection and Affordable Care Act (ACA), this study investigates heterogeneity in insurance status within pre-retirement Asian immigrants by examining the interacting effects of Asian ethnicity and employment type, a major factor that determines an individual's insurance status in the U.S. Method : Data from the 2009 California Health Interview Survey on 1,024 Asians between 50 and 64 were analyzed. Asian immigrants from Chinese, Vietnamese, Filipino and Korean backgrounds were included in the study. Results : The findings indicate significant moderating effects between employment type and Asian ethnicity. However, regardless of employment type, the highest rate of uninsurance was among Koreans.

Conclusion : To effectively reach the ACA's goal of reducing the uninsured, targeted interventions specific to Asian subgroups are essential. Keywords : Immigrants, insurance, capital

PP26 R-043

A REVIEW OF THE USE OF POPULATION PHARMACOKINETIC ANALYSIS IN OLDER ADULTS: AN IMPORTANT TOOL FOR DOSE OPTIMIZATION

Claire JOHNSTON¹, Carl Mj KIRKPATRICK², Andrew J. MCLACHLAN³, Sarah N. HILMER⁴ (1. Department of Clinical Pharmacology, University of Sydney/Royal North Shore Hospital, Australia; 2. Centre for Medicine Use and Safety, Monash University, Australia; 3. Faculty of Pharmacy/Centre for Education and Research on Ageing (CERA), University of Sydney/Concord RG Hospital, Australia; 4. Department of Clinical Pharmacology and Aged Care, University of Sydney/Royal North Shore Hospital, Australia)

Introduction : Older people are major users of medicines and often require dose adjustment due to age- and disease- related physiologic changes, inter-current disease and polypharmacy. Understanding and characterizing variability is key to optimal dose selection in older and older frail people. In population pharmacokinetic (PopPK) analyses the population of people is studied to determine average values and while still gaining an understanding of the causes of variability. The aim of this review was to investigate the utilization of PopPK studies in people over 65 years of age. Method : A MEDLINE and PubMed search identified 245 papers using the search term "population pharmacokinetics". Restrictions were set on papers describing research in: age > 65 years; in English; published 2005-2011; in humans; and full-text was available. Two papers were excluded because they were reviews, 75 because the maximum age of participants was <65 years and 3 due to not using population pharmacokinetic modeling. Results : The median(range) number of older people in the studies was 101(5-3355). Amongst the 16 studies that primarily focused on older adults, antimicrobials (7/16) were the most commonest drug class, most studies used sparse blood sampling methods and participants were generally acutely unwell. Some studies were translated into dosing guidelines specific for older people, although these were generally at a local level. No studies were identified which utilised PopPK to determine the impact of frailty on pharmacokinetics. Conclusion : The use of PopPK in older people is still limited despite a significant gap in knowledge on optimal dosing for older people, particularly the frail. Keywords : Population modelling, Review, New technology

PP26 R-044

DRUG USE REVIEW AMONG ELDERLY PATIENTS UNDERGOING LAPAROSCOPIC CHOLECYSTECTOMY THROUGH PREOPERATIVE COMPREHENSIVE GERIATRIC ASSESSMENT

Haerin PARK¹, Soh Mee PARK¹, Dam Kyoung LEE¹, Yewon SUH², Eunsook LEE², Kwangil KIM³, Byungkoo LEE¹ (1. College of Pharmacy, Ewha Womans University, Korea; 2. Department of Pharmacy, Seoul National University Bundang Hospital, Korea; 3. Geriatric Center, Seoul National University Bundang Hospital, Korea)

Introduction : A greater number of elderly patients undergo surgical operations, and their preoperative medication needs to be managed with careful attention. The role of pharmacist in Preoperative Comprehensive Geriatric Assessment(Preop-CGA) is to complete a full medication list, identify medications that require discontinuation and provide information to the geriatrician and patients. Method : Among patients who visited Geriatric Center for PreOp-CGA from

September 2011 to August 2012, 94 who had undergone laparoscopic cholecystectomy (LC) after the assessment was involved in this study. 79 elderly patients who had undergone LC without receiving PreOp-CGA were selected as the control group. All data were collected from the Electronic Medical Record(EMR). Results : The average number of medications taken by the study group was 6.0. 64(68.8%) were taking more than 4 medications (polypharmacy). 68.8% were taking at least one medication that requires discontinuation in the preoperative period. 57.0% and 82.8% were taking at least one medication that can cause delirium and that are known to increase risk of falls, respectively. Average age was significantly higher in the study group. Postoperative bleeding event was significantly lower in the patients in the study group(p=0.028). There was one patient who had postoperative delirium in each group, and one patient in the control group fell in the postoperative period. Conclusion : More than 50% of the patients were taking medications that may require discontinuation regarding bleeding, delirium or falls. Postoperative bleeding event was significantly lower in those who had their medication reviewed. Pharmacists' intervention in the preoperative period of elderly surgical patients is needed. Keywords : Preoperative Comprehensive Geriatric Assessment, Drug Use Review

PP26 R-045

A SUGGESTION FOR OPTIMAL CONTROL OF TUBERCULOSIS IN THE ELDERLY

Haesook SEO¹, Chongkyung KIM¹, Jaerak HONG¹, Jeongeun SEO¹, Youngsoo CHO¹, Ohwoo KWON², Hansun KIM³ (1. TB Department, Seoul Metropolitan Government Seobuk Hospital, Korea; 2. Cardiothoracic Surgery, Seoul Metropolitan Government Seobuk Hospital, Korea; 3. General Surgery, Seoul Metropolitan Government Seobuk Hospital, Korea)

Introduction : This poster's objectives are to implement TB control successfully through the early detection of TB and the effective management of TB by identifying the characteristics of the target elderly TB patients and organizations and control measures providing TB services for them. Method : The study design is consisted of literature review, the baseline survey, interview and focus group workshop for organizations and elderly TB patients to build mapping and directories of organizations, and establish the TB patient pathway. The baseline survey was conducted by questionnaire to the representative staff of each of the organizations and to elderly patients. The interviews were proceeded with multiple themes. The research also held focus group workshops for discussion barriers to managing TB patients. Results : The organizations and elderly TB patients were 13 and 41, respectively. The mapping of TB organizations and their directories provided systemic ways to address the distribution of organizations, link with the patients and medical institutions effectively, and enhance patients' accessibility to medical institutions. In addition, focus group workshops pointed to the main barriers of TB control and resolution of them. Conclusion : Main barriers of TB control in this research were lack of publicity activities and education, insufficient education and problems related to care giving. In advance, efforts for resolving these barriers will significantly improve TB management and eventually, lead to achieving the optimized TB Patient Pathway. Keywords : Tuberculosis control, The elderly, TB Patient Pathway

PP26 R-046

THE EFFECTS OF COVERAGE ON ATYPICAL ANTIPSYCHOTIC UTILIZATION AMONG MEDICARE PART D BENEFICIARIES WITH SCHIZOPHRENIC AND BIPOLAR DISORDERS IN WASHINGTON STATE, USA

Indira PINTAK (School of Social Welfare, University of California Berkeley, USA)

Introduction : Medicare Part D is an insurance program in the USA for qualified people who are either disabled or over 65 years old or suffer from End Stage Renal Disease. It provides coverage for outpatient prescription drugs. Unlike traditional Medicare program (Parts A and B) in which the federal government runs the program, benefits are uniform, and payments are based on fee-for-service plans, Part D is intended to spur competitive drug pricing and plan designs that would curb escalating drug costs, and at the same time improve quality of care and treatment adherence. Coverage includes a minimum drug formulary requirement, co-sharing of financial risks with the government, and a standard Part D benefit or an actuarially equivalent plan that may offer more benefits than the standard or stand-alone prescription drug plan (PDP). Standard components of such plans have annual deductibles, coverage up to a government pre-determined level, a gap in coverage when beneficiaries must bear 100 percent out-of-pocket costs, and a period of catastrophic coverage. On the beneficiaries' side it is not yet clear whether the program has benefited specific groups on particular prescription drugs. Additionally it is also unclear whether beneficiaries are making cost-effective decisions in choosing their drug coverage plans. The study examines the choices in coverage plans made by beneficiaries with schizophrenic and bipolar disorders and also takes a closer look at the patterns of select antipsychotic utilization. Federal claims data is used for analyses. **Method :** Cross-sectional analyses of claims data. **Results :** To be announced. **Conclusion :** To be announced. **Keywords :** American prescription drug insurance, Medicare Part D

PP26 R-047

INTRODUCTION OF FISH AND GOAL MANAGEMENT PORTFOLIOS TO BOOST THE MORALE OF DEMENTIA CARE PROFESSIONALS

Katsuyoshi TAKAHASHI¹, Kazumi WATANABE¹, Yukari SEKI², Sayuri KOBAYASHI³, Ryoko ROKKAKU³, Akira HONMA⁴ (1. Dementia Care Laboratory, Japan; 2. Tokyo University of Technology, Japan; 3. University of Technology, Japan; 4. Dementia Care Research and Training Tokyo Center, Japan)

Introduction : The purpose of dementia care is to support suffers live safely and normally. To accomplish this, it is most important for the patient to appreciate their need to continue to learn. This report exams the progress of eleven staff members of Day Center A, which introduced portfolios (a goals management system) and FISH (a customer correspondence manual) in 2010. **Method :** (1) Day Care Center A staff attended a seminar on portfolios-FISH in April 2010. After using brainstorming and the KJ method, the subjects came to a common understanding of goals for the next operational year. (2) Focusing on the annual goals, individual staff members envisioned their roles and acted to realize them.(3) Each staff fills in their vision, goals, process, etc. in a personal file. (4) The files are kept to allow all staff free access. (5) Using FISH's "gratitude" code of conduct, "Thank you." Seals were used among staff used. (6) Every three months, administrators conducted interviews with the staff in order to check progress towards their visions. (7) The portfolios were collated and each staff member presented their own. (8) The staff was surveyed. **Results :** The staff, after closely listening to each other's different visions, learned to reorient themselves and to use time more effectively. They realized the difficulty of maintaining their portfolios despite their busy workdays. However, through the creation and presentation of the portfolios, the staff improved their empathy with their dementia patients and confirmed both their learning and personal

development. Moreover, utilizing FISH helped them create a work environment of interpersonal awareness and appreciation. **Conclusion :** They expressed the desire to continue this work approach, in order to manage their future goals. **Keywords :** education

PP26 R-048

THE SERVICE MODEL OF AGED CARE UNIT IN A COMMUNITY HOSPITAL FOR THE CARE OF THE ELDERLY IN HONG KONG

Kwun Man LO¹, Lai Wan TONG¹, Siu Yin CHAN², Lai Fong IP¹, Kit Hoi CHAN³, Yuk Lun CHENG³ (1. Department of Medicine, Alice Ho Miu Ling Nethersole Hospital, Hong Kong; 2. Community outreach services team, Alice Ho Miu Ling Nethersole Hospital, Hong Kong; 3. Department of Medicine & ICU, Alice Ho Miu Ling Nethersole Hospital, Hong Kong)

Introduction : An Aged Care Unit (ACU) was established in a community hospital in Hong Kong. It aims at providing an elder-friendly environment for elders who are admitted to the hospital. A clinical care pathway based on the care needs of elders is adopted. ACU provides an environment for the community outreach services team (COST) to have early participation in formulating the discharge plan. **Method :** A 24-bed Aged Care Unit was specially designed and incorporated into a medical ward which was renovated in an elder-friendly environment. This included the installation of ceiling hoist with walking brace, flooring with embedded padding materials and adding the handrails in the corridors. A clinical care pathway was designed to target on the patients' needs. A comprehensive geriatric collaborative round with early participation of COST led by a geriatrician serves to provide early intervention and formulate the discharge plan. **Results :** The average length of stay (ALOS) of the designated medical ward incorporating the ACU was decreased by 8.7% from 4.6 days in 2010 to 4.2 days in 2011. The emergency admission rate of the patients from the designated residential care homes for elderly (RCHE) was decreased by 10% and the unplanned readmission rate was decreased by 25%. **Conclusion :** The results demonstrate that the ACU is a promising service model for the care of the elders. It can improve the care journey of the patients and lessen the hospital service demand. **Keywords :** aged care unit

PP26 R-049

DEVELOPMENT OF A CLINICAL JUDGMENT RUBRIC FOR FALL PREVENTION CONSTRUCTED BY MULTIPLE PROFESSIONS

Mayumi KATO¹, Yoshimi TANIGUCHI¹, Mizue SUZUKI², Yasuyoshi ASAKAWA³, Tomoko HIRAMATSU¹, Tome IKEZOE⁴, Akiko SEKII⁵, Tadahiko KAMEGAYA³ (1. School of Health Sciences, Kanazawa University, Japan; 2. Department of Medicine, Hamamatsu University School of Medicine, Japan; 3. Graduate School of Medicine, Gunma University, Japan; 4. Graduate School of Medicine, Kyoto University, Japan; 5. Division of Health Sciences, Niigata University, Japan)

Introduction : Falls can cause various serious outcomes in the elderly. Elderly people in care facilities usually face multiple intrinsic and extrinsic factors because of their fragility and lack of ability to adapt to changing environments. Therefore, fall prevention interventions should involve clinical judgments related to individual risks. The aim of this study was to develop a clinical judgment rubric for fall prevention based on Lasater Clinical Judgment Rubric (2011) using viewpoints from multiple professions. The objective of the rubric was to facilitate learning and evaluation of skills and competencies for task training of fall prevention among novice staff. **Method :** The

professions were represented by nurses, physiotherapists, and an occupational therapist. Each participant was independently investigated to determine what was necessary for clinical judgment in fall prevention. Motor skills, cognitive skills, incontinence, environmental risks, a tool for fall risk assessment, team approach, and nursing administration were explored and integrated. Results : The dimensions of the rubric were adopted for the beginning, developing, accomplished, and exemplary stages. Expectations were integrated with “being able to observe and estimate fall risks,” “being able to detect unusual differences,” “being able to prioritize information,” “being able to interpret and integrate information,” “being able to intervene according to circumstances,” and “being able to make changes for improvement.” Conclusion : We need to examine whether this rubric would be valid to construct a method for clinical judgment for fall prevention. Keywords : fall prevention, clinical judgment rubric, multiple professions

PP26 R-050

DEVELOPMENT OF HOME CARE SUPPORT SYSTEM USING THE IPAD

Momoe UTSUMI¹, Satoshi SASAYAMA¹, Hiroshi DEKIGAI², Shinichi NOMOTO¹ (1. Department of Human Health Sciences, Kyoto University, Graduate School of Medicine, Japan; 2. Director, Dekigai Clinic, Japan)

Introduction : In home care, close interactions between doctors/nurses/caretakers, and patients/their family members are indispensable. Currently, however, a paper notebook is used among them in Japan. As a result, information sharing is not made on a timely basis. We developed an iPad application named “e-Renraku Notebook” (e-Communication Notebook, e-RN) for home care. The “e-RN” enables home-care patients and their families input their daily status and exchange information with healthcare staff on a timely basis. We report the study result of its usefulness. Method : Cloud computing is used for data management of this system. Home-care patients and healthcare staff were given “e-RN”-installed iPad for 2 months to input schedule, daily status such as vital signs. We carried out a survey before and after usage and analyzed the result of the survey. Results : Seven home-care patients and 6 healthcare teams participated in the trial. Home-care patients can input their information in the “e-RN” at home by iPad, and healthcare staff can do the same by iPad or PC. 66% of the information input was performed by home-care patients and their families, 30% by nurses, and 3% by medical doctors. 30% of the communications were about daily life excluding health information or inquiries. The communication was made mainly between patients /families and nurses. Conclusion : With the “e-RN” iPad application, we developed a new system allowing home healthcare information to be shared by anyone, anytime and anywhere. Effective usage of “e-RN” has a potential to improve the quality of home health care. Keywords : Home care, Information sharing, iPad

PP26 R-051

OLDER PERSONS TRANSITIONS IN CARE (OPTIC): CHALLENGES IN MEASURING TRANSITIONAL CARE ACROSS MULTIPLE SETTINGS

Greta CUMMINGS¹, Robert Colin REID², Carole ESTABROOKS¹, Peter NORTON³, Garnett CUMMINGS⁴, Adrian WAGG⁵, Brian ROWE⁴, Joanne KONNERT⁶, Glenda COLEMAN-MILLER⁷ (1. Nursing, University of Alberta, Canada; 2. Health and Exercise Sciences, University of British Columbia, Canada; 3. Department of Family Medicine, University of Calgary, Canada; 4. Department of Emergency Medicine, University of Alberta, Canada; 5. Division of Geriatric Medicine, Department of Medicine, University of Alberta,

Canada; 6. Interior Health Authority, Canada; 7. Alberta Health Services, Canada)

Introduction : The OPTIC study aims to identify: successful nursing home-to-emergency department (NH-ED) transitions from multiple perspectives, organizational and individual factors related to transition success; and improvements in care for frail elderly residents during NH-to-ED transitions. Review of Literature: NH residents frequently transition between NHs and EDs. Care during transitions is often suboptimal, and is complex due to involvement of different professionals, and this frail population’s degree of dementia and other chronic conditions. Method : OPTIC is a mixed method researcher/decision-maker partnership study. Phase 1 used qualitative methods to investigate residents’, family caregivers’, and healthcare providers’ perspectives of NH-to-ED transitions in each setting. Phase 2 consisted of pilot testing all data collection tools and then tracking transitions over a one-year period in two Western Canadian provinces. Phase 3 consists of data cleaning and analyses to identify successful transitions, avoidable transitions and factors influencing both, as well as making recommendations for implementation, policy and future research. Results : In Phase 1, 71 participants were interviewed, and 55 transitions were tracked over a 3-month pilot period. Results reflected differences by city demographics, organizational and provider characteristics, resident characteristics and other factors. NH-to-ED transitions were not universally successful. In Phase 2, full data collection was completed on 600 transitions from 41 nursing homes. Phase 3 analyses are currently underway. Conclusion : Patient care records and provider interviews are a valuable source to evaluate transitions. This presentation focuses on challenges to capturing data from multiple sources, settings and providers across transitions, and our results in identifying successful/unsuccessful transitions. Keywords : transitions nursing homes

PP26 R-052

SWISS PERSPECTIVE ON FUTURE REQUIREMENTS FOR RESEARCH ON APPLIED GERONTOLOGY

Stefanie BECKER¹, Mike MARTIN² (1. Institute on Ageing, Bern University of Applied Sciences, Switzerland, Swiss Society of Gerontology, Switzerland; 2. Department of Psychology - Gerontopsychology, University of Zurich, Switzerland, Switzerland)

Introduction : The Swiss Society of Gerontology (SSG) is a national society with several active working groups. The concern of the SSG mainly focuses on interconnecting professionals as well as private persons interested and working in all fields of applied gerontology and providing them with expert information. The SGG currently has 1.600 members in all parts of the quadrilingual country. Method : Since the SGG claims political guidance in the aging theme it is the duty of a national society to formulate political recommendations. Last year we set on our agenda the development of position papers for the future perspective of several topics in applied gerontology. One of these is the view on future requirements for research in applied gerontology. Results : The stated requirements in this position paper range from the better cooperation between basic and applied research as well as overall recommendations for research policy to promote the implementation of efficient research programs (use of national available data), the successful distribution of research funding up to the promotion of young academics in the field of gerontology. Conclusion : This contribution will discuss the national recommendations in a broader international context and ask the question of sustainability of research findings. Keywords : research, policy, internationalization

PP26 R-053

ANALYSIS ON THE INFLUENCE FACTORS OF LEISURE OF THE ELDERLY'S AND PREFERENTIAL POLICY OF CHINA

Hong WANG (*Institute of Gerontology, Renmin University of China, China*)

Introduction : This paper will make a study of the leisure preferential policy for the elderly in China based on the survey of China Health and Nutrition Survey for the Elderly conducted in 2006. Analysis on the influence of age, sex, marriage, education level, self-report health and Body Function and IADL (Instrumental Activities of Daily Living) for the leisure activities choice of elderly of china. Method : (1)Descriptive Statistic. (2)Multiple Logistic Regressions. Results : We will find that age, marriage, education level, employment status, self-report health, source of income and IADL have significant impacts on the leisure activities choice of elderly of China. Conclusion: We should consider fully these factors such as age, marriage, education level, employment status, self-report health, source of income and IADL when we make the leisure preferential policy for the Elderly. Keywords : leisure, preferential policy

PP26 R-054

TOWARDS COLLABORATION IN HEALTHCARE AND WELFARE ACROSS THE NETHERLANDS: THE NIJMEGEN NETWORK WITH VETO RIGHT FOR THE ELDERLY AS THE SOLUTION TOWARDS EMPOWERMENT OF OLDER SUBJECTS

Minke NIEUWBOER¹, Dick HERFST², Marcel OLDE RIKKERT³
(1. PVI, UMC St Radboud, Netherlands; 2. RvB, ZZG Zorggroep, Netherlands; 3. Geriatrics, UMC St Radboud, Netherlands)

Introduction : Older subjects are rarely partners in innovation. However, this changed in the Dutch National Care for the Elderly. This program stimulated the formation of regional networks of health services, and stimulated participation by older persons. Method : As one of the 8 networks, 15 partners in healthcare and welfare services around the University Medical Centre Nijmegen, started a network called "100, Welfare en Care for the elderly". A group of 12 older subjects formed the most important committee with a veto right for all developments. The network developed two main interventions: an Integrated Care Program for frail elderly, including EASYcare-Two Step Older frailty screening, and an e- health tool (Health and Welfare Information Portal, ZWIP) to facilitate older subjects in directing their own care, and improve coordination of their complex healthcare arrangements. Results : The 100-network succeeded in implementing the Two Step Older frailty screening in over 1500 subjects, because it was reliable (Cohen's Kappa 89%), valid (correlation .63 with Frailty Index), and most efficient, as only a minority (< 40%) of subjects needed explicit screening. The ZWIP e-tool was successfully implemented and used by over 300 frail elderly and their professionals, which greatly facilitated the development of multiprofessional care-plans. Conclusion : The Nijmegen Network gave older subjects the veto right in health and welfare innovations, which made them best partners in development, evaluation and implementation of health care innovations. Efficient frailty screening and e-tool implementation first target on elderly, who have active problems and are motivated to adopt innovations. Keywords : Patient participation, Network, Innovation

PP26 R-055

STUDY ABOUT EFFECTS THAT OLDER WORKERS HAD ON YOUTH EMPLOYMENT

Liu NINA (*School of Sociology and Population Studies, Renmin*

University of China, China)

Introduction : The study starts from the perspective of human capital theory and active aging, based on the absorption of domestic and foreign literature, focuses on the effects that old workers have on youth employment while estimating feasibility of delaying retirement with the size of it. It includes two descriptions and a demonstration: Two descriptions: the true state of China's urban elderly population in employment, the actual impact of retirement for the urban elderly employment; The demonstration is whether the elder prolong their career will squeeze the youth employment. Method : descriptive analysis; panel data regression(the key point); secondary data analysis. Results : Urban elderly employment is very low and retirement have strong effect on labor force participation rate. What's more, the old choose to continue to work in elastic retirement system, their industry contribution is absolutely different from the young's, excluding some minority industries. Conclusion : First, later retirement can release people's tremendous potential working capacity, which does good to maintain Chinese demographic dividend and to retain talents for industry's transformation and upgrading. Second, even though we carry out the later retirement policy, the old have not crowded the young out of job market. Delaying retirement has feasibility. Third, in minority of industries and areas, the elderly's employment has evident crowding-out effect on youth employment. In order to alleviate practical resistance of later retirement, the policy options should also involve differences in some industries and areas to properly protect labor force participation of younger people. Keywords : crowding-out effect, old workers, youth employment

PP26 R-056

PARTICIPATORY RESEARCH AS TOOL FOR DEVELOPING AGE-FRIENDLY POLICIES: THE CASE OF THE BELGIAN AGEING STUDIES

Nico DE WITTE¹, Liesbeth DE DONDER², Tine BUFFEL², Sarah DURY², An-Sofie SMETCOREN², Emily VERTE², Dominique VERTE² (1. University College Ghent, Belgium; 2. Adult Educational Sciences, Vrije Universiteit Brussel, Belgium)

Introduction : This contribution seeks to reflect on the challenges and opportunities of involving older people in aspects of research, policy and social change at a local level. The focus is the 'Belgian Ageing Studies', a research program which monitors the needs, as well as issues of quality of life, among home-dwelling older people in order to provide tools for evidenced-based 'age-friendly' policies at a local level. Method : The research program was developed in co-creation with older people, senior associations, senior advisory boards, local authorities, and other stakeholders. Older people are involved in this research as experts and actors by playing a role as voluntary poll-takers (peer-research). Every sample is representative in the municipality, offering local governments tools for evidenced-based policy. 159 municipalities (N=75319) in Belgium, the Netherlands and Italy participated in the research program. Results : The BAS-method is found to be a tool for creating community networks and empowerment of older people. The development of a community network between local authorities, members of local senior associations, third sector agencies and other community stakeholders is crucial for developing broadly based support around the theme of age- friendly environments. Empowerment is promoted through a cycle of research, participation, education, community action and policy-making. Conclusion : The process of the BAS-program in which older people actively engage as participants and develop a sense of co-ownership shows how participatory research can play a role in developing age-friendly policies. In particular, it is argued that certain

aspects of the BAS-method increase the opportunities for older people to participate in policymaking-processes. Keywords : Participatory research, age-friendly policy, evidence-based policy

PP26 R-057

THE DEVELOPMENT OF APIAS APPRAISAL SYSTEM: A POLICY APPRAISAL FOR MIPAA

Cheung Ming Alfred CHAN (*Asia-Pacific Institute of Ageing Studies, Lingnan University, Hong Kong*)

Introduction : In response to UNESCAP's calling to enact policies with reference to Shanghai Implementation Strategy (SIS), which was developed in echo of the Madrid International Plan of Action on Ageing (MIPAA), the Asia Pacific Institute of Ageing Studies (APIAS), Lingnan University Hong Kong, developed an appraisal system for both a comprehensive indicator of policy implementation and a validated instrument for end users' appraisal of life (i.e. Policy Implementation Index) and service quality as a result of services provided. Method : Adopting MIPAA's three policy pillars: older people and development, advancing health and well being, and enabling supportive environment, the research team has developed 88 policy indicators for policy-makers to score. Positive response scores a mark, making the maximum total of 88 marks. A service satisfaction survey consisting 156 items on a 4-points Likert developed from the WHO quality of life scale is used to tap users (N=500) appraisal for public services. The resultant scores are consolidated into an overall indexed score for 100 maximum. Results : The results show that government policy/services studied (i.e. social services in Macao) are fairly well implemented, as both policy-makers and elderly service users rated good (77% Vs 71%). Discrepancies are areas for further service refinements. reliabilities of both measures good. Conclusion : The appraisal system consisting two measures (i.e. the 88 items on policy implementation, and the 156 items on service satisfaction) is a simple and effective policy appraisal mechanism including both policy-makers and elderly inputs. Keywords : policy appraisal, elderly

PP26 R-058

PREPARATION AND RETIREMENT ADJUSTMENT

Ehsan FARIDI (*Law department, Shiraz University of Medical Science, Iran*)

Introduction : Retirement is a complex, and progressive transition phenomenon. The goal of this study is to explain how we can improve retirement adjustment by retirement preparation to prevent the negative consequence of retirement. Method : This review of literature on retirement preparation has been done to find the successful strategies for improving retirement adjustment. the research is structured around the key concepts of retirement consequence, retirement adjustment, and retirement preparation. Implication for practice and suggestions for future research are presented. Results : Retirement planning is the first, and the most important step of retirement preparation, that several years before retirement should be beginning to plan, and develop retirement adjustment by focusing on: finding the ways to meet financial needs and on detecting, exploring the ways to fill available time through part-time employment, leisure activities, volunteer positions, or adoption of a pet. pre-retirement counseling and planning, pre-retirement education, Postretirement counseling programmed such as vocational issues (developing skills for survival and self employment), leisure time activities (participation in community works) and help retirees to re-evaluate their goals and values, occupational therapy, volunteer work, intellectual profession and leisure, partial retirement (Bridge work retirement). Conclusion : Retirement has been projected by researchers in three interrelated

stages included; preparation for retirement; worker-retiree transition; and adjusting to retirement. However the majority of researches are focused on financial planning for retirement, but there are many other strategies for improving retire adjustment. If the article is accepted we will be able to explain more about these strategies. Keywords : retirement consequence, retirement adjustment, and retirement preparation

PP26 R-059

OLDER ADULTS' ONLINE TECHNOLOGY USE AND SOCIAL AND PHYSICAL ACTIVITIES PARTICIPATION

Jeehoon KIM¹, Hee YUN LEE² (*1. Dept. Sociology, Social Work and Criminal Justice, Idaho State University, USA; 2. School of Social Work, University of Minnesota, USA*)

Introduction : Zickuhr and Madden (2012) reported American older adults have been increasing to use the Internet or email over the past ten years. This study examined how older adults' online technology use was associated with engaging in social and physical activities. We explored its association with participation in various types of social activities and different levels of physical activities. Method : Using data drawn from the first round of the 2011 National Health and Aging Trend Study, this study used a nationally representative sample of Medicare beneficiaries aged 65 and older (N=5,039). Older adults actively engaged in social and physical activities over the last month. Majority of older adults visited to friends or family and went out for enjoyment. While 62% attending at religious services, about one third attended at clubs or voluntary activities. Majority of older adults either engaged in vigorous activities (40%) or walking (30%). 41% have used the Internet or texts using mobile phone. Results : We separately employed binary logistic regression analysis for each social activity, and multinomial logistic regression analysis for two levels of physical activities (base outcome=inactive group). Older adults who used the Internet or text were positively associated with participating in most of social activities except religious services and any level of physical activities. Conclusion : In the current technology driven environment, older adults and the boomer generation also have become technology savvy. Findings imply that online technology use would be a useful intervention tool for enhancing social and physical activities among older adults living in the community. Keywords : Online technology use, social activities, physical activities

PP26 R-060

A KNOWLEDGE EXCHANGE PROJECT - THE DEVELOPMENT OF THE NICE DIGITAL POCKET TOOLS

Lynn MCDONALD¹, Elsa MARZIALI², Lawrence KRYZANOWSKI³, John RIETSCHLIN⁴, Madelyn IRIS⁵, Gail WIDEMAN⁶, Peter DONAHUE⁷, Gloria GUTMAN⁸, Marie BEAULIEU⁹, Ariela LOWENSTEIN¹⁰, Corey MACKENZIE¹¹, Ronald BAECKER¹², Esme FULLER-THOMSON¹³, Karen KOBAYASHI¹⁴, Tal SPALTER¹, Sander HITZIG¹, Raza MIRZA¹⁵ (*1. Social Work, University of Toronto, Canada; 2. Kunin-Lunenfeld Applied Research Unit, Baycrest Centre for Geriatric Care, Canada; 3. Finance, Concordia University, Canada; 4. Policy Research Directorate, Social Research Division, Human Resources and Skills Development Canada, Canada; 5. Council for Jewish Elderly, Leonard Schanfield Research Institute, USA; 6. School of Social Work, Memorial University of Newfoundland, Canada; 7. School of Social Work, Renison University College, Canada; 8. Gerontology Research Centre, Simon Fraser University, Canada; 9. Service social, Universite de Sherbrooke, Canada; 10. Faculty of Welfare and Health Sciences, University of Haifa, Israel; 11. Psychology, University of Manitoba, Canada; 12. Computer Science, University of Toronto, Canada;*

13. Factor-Inwentash Faculty of Social Work, University of Toronto, Canada; 14. Sociology, University of Victoria, Canada; 15. Pharmacy, University of Toronto, Canada)

Introduction : The National Institute for the Care of the Elderly (NICE) developed evidence-based social pocket tools (PTs). To broaden the accessibility of these tools to healthcare practitioners, community agencies, and seniors and their families across the globe, digital versions have been developed. **Method :** The development of the PTs was led by different NICE theme teams. The Caregiving Team developed tools aimed at health care practitioners and for informal support providers. The Mental Health Team developed tools related to the diagnosis/treatment of depression among seniors. The End-of-Life Issues and Elder Law teams developed tools supporting healthcare practitioners and family in the care of a dying person and with legal issues. The Elder Abuse Team worked on tools around the detection and prevention of elder abuse. Similarly, the Dementia Care Team worked on a dementia screening tool. The Financial Literacy Team built tools to improve the financial literacy and preparation of older adults for retirement. Digital versions of these PTs were uploaded onto the NICE website (www.nicenet.ca). **Results :** The digital PTs have been programmed to be used on various devices (i.e., smartphones, tablets), with some being embedded with interactive features to better support the decision-making process (i.e., screening tools). Preliminary usability assessment of the tools has been promising, and work is on-going to identify opportunities for further development/refinement. **Conclusion :** The translation of the PTs into digital formats has the potential to maximize the health and well-being of aging populations in Canada and internationally. Next we will develop an implementation strategy to maximize their uptake by stakeholders. **Keywords :** Digital Pocket Tools, NICE, Knowledge Mobilization

PP26 R-061

A STUDY OF COMPARING CARE WORKERS WORKING AT ELDERLY CARE FACILITIES IN AUSTRALIA AND JAPAN

Megumi YAMAMOTO¹, Kimika USUI¹, Mari MIYAKE², Miyo KANEDA¹, Midori SHIRAI³ (1. Graduate School of Nursing, Konan Women's University, Japan; 2. Dept. of Public Health, Graduate School of Medicine, Kansai Medical University, Japan; 3. Graduate School of Nursing, Osaka City University, Japan)

Introduction : Aging in Japan has been progressing at a speed unparalleled in the world. As the number of people requiring nursing care increases, necessary care services have become more diversified and upgraded in quality. The number of care workers has increased, but it is expected that further more care workers will be needed. As nursing care is considered to be hard labor with low payment in Japan. **Method :** we used a survey of 43 nursing care workers from S elderly care home in Australia and 37 nursing care workers from A elderly care home in Japan. We asked both to answer the "Quality of Working Life Questionnaire" issued by the National Institute for Occupational Safety and Health(NIOSH). The data were analyzed by using the SPSS program, version 19.0. **Results :** Australian workers showed a significantly higher satisfaction rate than Japanese workers regarding questions about the satisfaction they got from their work, help from supervisors, teamwork, the readiness requirements of their work and whether or not their knowledge is useful in their jobs. On the other hand, stress factors, including the degree of work requirements and physical environment, were significantly higher for Japanese than Australian workers. **Conclusion :** The result of this suggests that there are ways to improve education, teamwork and the physical environments at Japanese care working facilities. **Keywords :** The

National Institute for Occupational Safety and Health, nursing care worker, elderly care facility

PP26 R-062

TELEMEDICINE CONSULTATION FOR PATIENTS WITH CHRONIC WOUNDS

Nathalie SALLES¹, Joanne JENN¹, Martine BARATEAU¹, Ornella SARRY¹, Karine LIBERT¹, Martine BAUDINET¹, Muriel RAINFRAY¹, Isabelle BOURDEL-MARCHASSON² (1. Pole de Gerontologie Clinique, CHU Bordeaux, France; 2. CHU Bordeaux, UMR 5536 Univ Bordeaux Segalen, CNRS, France)

Introduction : Among the 3 themes identified by the Regional Program of Telemedicine, care of patients living in nursing homes was chosen for this experimentation. The project targets the care of older persons with chronic wounds in the context of dependency and polypathology. The aim of this experimentation was to improve both patients' access to care and continuity of care, and to promote training of caregivers. **Method :** This experimentation (September 2012 through September 2013) is based on teleconsultations that are organized two half-days per week by an expert team (geriatrician, nurse, occupational therapist, dietician, and secretary) in the Geriatric Center (CHU Bordeaux, France). In nursing homes, after obtaining patient's consent, the general practitioner (GP) and nurses are connected with the expert team either from the patient's room with a mobile chariot (nursing homes) or in patient's home using mini tablets (hospital at home). Following each teleconsultation, a report is written and sent via secure messaging to the GP. **Results :** A total of six nursing homes (Gironde, Dordogne) and one hospital at home (Landes) were included. Preliminary results showed a total of 16 teleconsultations: pressure ulcers (55.6%), vascular ulcers (33.3%), and traumatic ulcers (11.1%). Telemedicine permitted to reduce the cost of dressings by reducing both the number of classes and rhythm of dressing changes. Without Telemedicine, GP would have sent their patients to specialized consultation (33.3%) or day hospital (66.7%). **Conclusion :** Telemedicine will permit to allow the monitoring of older patients with chronic diseases requiring repeated hospitalizations and to maintain the skills of professionals. **Keywords :** telemedicine, wounds, elderly

PP26 R-063

ASSESSING ABUSE IN OLDER PERSONS IN SOUTH AFRICA

Susan HOWELL, Karen BOROCHOWITZ (Management, Dementia SA, South Africa)

Introduction : Older women in South Africa with dementia are especially vulnerable. Culturally, dementia is so stigmatised that some cultures simply do not recognise it. Some older women are killed as witches as they have developed a dementia and their behaviour has changed. Sometimes older women with dementia are killed and their body parts removed and sold for 'muti' medicine. But many other forms of abuse, for example, physical, emotional and economic abuse also exist, especially geared towards older women. **Method :** The poster will highlight possible signs of abuse and how to identify such abuse. **Results :** The results will be an informative poster. **Conclusion :** The poster will have a title, full colour images and text. **Keywords :** Abuse, Women, Dementia

PP26 S-001

EFFECTS OF VARIOUS DISPLAY CONDITIONS OF TRADITIONAL LCD AND ELECTRONIC PAPER DISPLAY ON VARIOUS AGED USERS' DISCRIMINATING PERFORMANCE

An-Hsiang WANG, Hui-Tzu KUO (Department of Labor Relations,
National Chung Cheng University, Taiwan)

Introduction : This study investigated the discriminating performance of young and elderly users for various text/background color combination, ambient luminance, luminance contrast and polarity by using traditional liquid-crystal (traditional LCD) and color electronic paper display. **Method :** Twenty four participants participated in the experiment, including 12 young participants and 12 elderly participants aged greater than 60. Participants were asked to distinguish the direction of the Landolt-C gap on the displays. **Results :** The results of this study showed that, participants had significantly better discriminating performance under negative polarity than positive polarity as using color electronic paper display; polarity had no significant effect on the participants' discriminating performance while as using traditional LCD. Under the ambient illuminance of 50 and 500 lx, participants have significantly better discriminating performance as using traditional LCD than using color electronic paper display; while under the ambient luminance of 12,000 lx, display had no significant effect on the participants' discriminating performance. Additionally under the ambient illuminance of 50 lx, participants have significantly better discriminating performance under blue-on-white than under black-on-white; while under the ambient luminance of 500 and 12000 lx, color combination had no significant effect on the participants' discriminating performance. Under the ambient illuminance of 50 and 500 lx, participants have significantly better discriminating performance under negative polarity than using positive polarity; while under the ambient luminance of 12,000 lx, polarity had no significant effect on the participants' discriminating performance. **Conclusion :** The results of this study may be the guides for the designers of color electronic paper displays. **Keywords :** color electronic paper display, text/background color combination, ambient illuminance, polarity

PP26 S-002

PREDICTION MODEL ON CAUSING FACTORS FOR DELIRIUM IN ICU PATIENTS

Dahye PARK (School of Nursing, Chung-Ang University, Korea)

Introduction : The purpose of this study was to make optimum prediction model of various causing factors for the delirium, and identify risk factors for the development of delirium in ICU by many kind of analysis from multi-point views and to offer theoretical framework for clinical nursing practice which would enable to prevent delirium in ICU. **Method :** The data collection period of this study was from January 1st, 2011 to September 30th, 2012. The subjects were 3,721 patients in medical and surgical intensive care unit and they were admitted to Chung-Ang University Medical Center in Seoul. The Collected data were analyzed by using SPSS program and SPSS Modeler program. **Results :** As a result of data analyses, Prediction model of causing factor of delirium presents the following 7 pathways. The analysis from these 7 pathways reveals next prediction factors which cause delirium in ICU. First, patient related prediction factors are history of operation and paralysis and weakness. Secondary, disease related prediction factors are conscious level, seductive drug, pain killer drug, mechanical ventilator, agitative state, blood pressure, pain. Lastly, environment related prediction factors is restraint. **Conclusion :** Thus, since the prediction model of delirium was suggested in this study can promote a patient's comfort and make a better recovery in ICU. It will be able to be screened high risk for delirium and utilized more usefully and effectively in clinical nursing practice. In addition, it is expected that the better result will come out in terms of the quality of post-ICU treatment and cost effective.

Keywords : Delirium, MICU & SICU Patients, Prediction Model, Decision Tree

PP26 S-003

EVALUATING READABILITY AND READING COMPREHENSION OF ELDERLY INPATIENTS WITH PRINTED HEALTH INFORMATION MATERIALS

Ga Eon LEE¹, Yu Jeong KIM² (1. Dong-A University, Nursing Department, Korea; 2. Dong-A University Hospital, Nursing, Korea)

Introduction : The purpose of this study was to evaluate the readability and reading comprehension of elderly inpatients with printed health information materials. **Method :** The subjects of this study were 138 elderly Korean inpatients aged over 60years in a General Hospital. Printed health materials were the sheet for hospital life guideline and the informed consent form for use of CT contrast media. Readability was measured using with Gwang-Hae Kim's Korean language classification book and reading comprehension was measured with the reading comprehension items of Kim and Lee's(2008) functional health literacy scale and the items were revised for these health information materials. **Results :** The score of elderly inpatients' readability for CT media consent form(18.2±20.12points) was higher than that of hospital life guideline(7.2±9.61points). The mean score of reading comprehension was 1.9±1.57 on a 5 point scale. There were statistically significant differences in readability according to education, religion, social activities, monthly income, the sources of health information, friend, and the times of hospitalization in the last year. Reading comprehension was different according to age, education, religion, type of residence, social activity, monthly income, friend, and the times of hospitalization. The score of readability and reading comprehension of printed health information materials were negatively correlated, implying that the easier elderly inpatients reading the information materials, the higher their reading comprehension for the materials. **Conclusion :** Printed health information materials should be designed easy for the elderly inpatients to consider their reading comprehension and be tailored by their characteristics of the elderly. **Keywords :** readability, the aged, health literacy

PP26 S-004

THE CORRELATION BETWEEN THE LIFE SATISFACTION LEVEL AND SELF EVALUATION OF VOICE AMONG THE KOREAN ELDERLY: COMPARISON BETWEEN THE ELDERLY FROM URBAN AND RURAL REGIONS

Hyeju JANG, Sarang PARK, Taegyun KIM, Taeyeon KIM, Hyojong YOU, Jungwan KIM (Dept. of Speech & Language Pathology, College of Rehabilitation Sciences, Daegu University, Korea)

Introduction : This study is designed to look closely into the relation between the satisfaction level of life and self evaluation of voice for two aged groups in Korea respectively from a metropolitan city, which is Daegu, and rural regions, which are Hongcheon and Yecheon. **Method :** The targeted objects, who participated in the survey were 237 senior citizens over 65 years old. **Results :** First, the relation between the life satisfaction level and self voice evaluation for the elderly shows its possibility that they are in direct proportion. Second, the elderly from a major city are likely to appraise themselves more negatively in subjective voice recognition than the elderly from a rural area. Third, the elderly who live in rural areas show the high satisfaction level for their life quality as they are more positive in self voice evaluation than those who are in urban areas. **Conclusion :** These results suggest that the subjective satisfaction of one's own voice can be a significant factor for the satisfaction of life, and influences from

environmental characteristics of one's habitation should be thoroughly considered as well to verify the correlation between self voice evaluation and life quality. Keywords : Elderly, Life satisfaction, Voice

PP26 S-005

THE INTERVAL PERFORMANCE OF THE GENERATIVE NAMING TEST OF NORMAL ELDERLY: THE RELATIONSHIP BETWEEN AGE, LEVEL OF EDUCATION AND COGNITIVE ABILITY

Jaeho HWANG, Jungwan KIM (*Department of Speech-Language Pathology, Daegu University, Korea*)

Introduction : The semantic verbal fluency (SVF) test is a very useful test on detection and discrimination for degenerative dementia patients with memory disorders and for patients with word retrieval dysfunction due to frontal lobe damage. In addition, these cognitive processes can be explained through the SVF test within the normal elderly. But the total number of produced words alone cannot explain cognitive processes. Method : In this study, we examined the total number and the interval performance based on the result of an animal naming test of normal elderly women over 65 years (N=49, age=76.37±6.15, edu=3.51±3.39, MMSE=23.86±2.92) for 30 seconds, and then examined the relationship between age, education level and cognitive abilities. Results : First, it was found that the total number of produced words was 9.08 (±2.47) words, with most words produced in the first 10 sec interval (5.60 words), and fewest in the third 10 sec interval (1.44 words). Second, there was no significant correlation between the total number of produced words and demographic variables. However, we found a positive correlation ($r=.400$) between the performance of the first 10 sec interval and cognitive ability, and we found a negative correlation ($r=-.335$) between the performance of the third 10 sec interval and age. Conclusion : When the process was premised with changing from automatic information processing to controlled information processing as time goes on in the SVF test, word retrieval of automatic information processing is considered to be sensitive to cognitive ability and word retrieval of controlled information processing is considered to be sensitive to age. Keywords: normal elderly, generative naming test, interval performance

PP26 S-006

INDIVIDUAL DIFFERENCES IN WITHIN-PERSON VARIATION AND CO-VARIATION IN PAIN AND DEPRESSION LINKAGES OVER TIME

Jeong Eun LEE¹, Boaz KAHANA², Eva KAHANA³ (*1. Elderly Care Research Center, Case Western Reserve University, USA; 2. Psychology, Cleveland State University, USA; 3. Sociology, Case Western Reserve University, USA*)

Introduction : Pain and depression are prevalent physical and psychological symptom based disorders among older individuals. However, their reciprocal relationships and moderating factors have been inadequately studied, as most studies have relied on cross sectional data. The goals of this study were to 1) test whether arthritis related pain is an influential factor in producing depressive symptoms; and 2) to consider the moderating role of cognitive function on the association between pain and depressive symptoms. Method : Data are derived from annual interviews with 395 older adults (M= 85; SD=4.63) over 4 years as part of a long term study of residents of Florida retirement communities. Between-person and within-person variation in self-reported arthritis pain and depressive mood were examined using multilevel models. Results : Pain and depressive symptoms increased over time. There was also substantial between and

within person variation in both pain and in depressive mood. There was a significant linear fixed effect of cognitive function on the association between pain and depressive symptoms. After controlling for pain, persons with better cognitive functioning reported lower levels of depressive symptoms, and less within person variation in depressive mood over time. Interestingly, both between and within person co-variation of pain and depressive symptoms was stronger (i.e., more negative) in persons with lower cognitive abilities. Conclusion : The study found that arthritis pain and depressive symptoms co-varied over four years. It underscores the influence of intact cognitive functioning in shaping how pain influences depressive symptoms in late life. Keywords : Arthritis pain, Depressive symptoms, Cognitive Decline

PP26 S-007

WILL SIMPLIFIED TAI-CHI REDUCE PAIN AND THEREBY IMPROVE THE WAY ELDERLY PEOPLE WITH CHRONIC JOINT PAIN PERCEIVE THEIR HEALTH? : A RANDOMIZED CONTROL TRIAL

Justina Yat Wa LIU (*School of Nursing, The Hong Kong Polytechnic University, Hong Kong*)

Introduction : Chronic pain in older adults is common. It affects them physically, psychologically and socially and, by so doing gives them a false view of their general health. Tai Chi, a traditional mind-body exercise, has been shown to benefit health. This study evaluates the effect of Simplified Tai Chi exercises on reducing chronic joint pain and on improving self-perceived health in community-dwelling older adults. Method : A randomized controlled trial study is performed in Hong Kong. The intervention group (n=27) receives 1-hour Tai-chi training every week for 12-weeks. Subjects in the intervention group are divided into groups of 10 and Tai Chi is guided by researchers trained by a qualified instructor. The control group (n=22) receives no intervention. Data is collected at baseline and after 12 weeks. The pain intensity is measured by a Brief Pain Inventory focusing on different joints (neck, shoulder, back, hip and knee). Self-perceived health is measured by Chinese (HK) SF-12 Health Survey version 2. Results : The finding of this study showed that the intervention group reported significant reduction in both pain severity [-2.082 (0.0476), $p<0.001$] and interference of pain [-1.368 (0.329), $p<0.001$] in their daily lives, on normal work [-1.759(0.438), $p<0.001$] and enjoyment [-1.715(0.451), $p<0.001$]. The intervention group also showed significant improvement in self-perceived physical [5.247(1.7), $p=0.003$]. Conclusion : The 10-form modified Tai Chi reduces the chronic joint pain level of community dwelling older adults significantly and thereby leads to a significant improvement in self-perceived health. Keywords : Tai Chi, Pain Management, Exercise

PP26 S-008

WHAT DO OCCUPATIONAL THERAPISTS AND PHYSIOTHERAPISTS USE STANDARDIZED TESTS FOR IN GERIATRIC CARE?

Kariann KROHNE¹, Sandra TORRES², Ashild SLETTEBØ³, Astrid BERGLAND¹ (*1. Faculty of Health Sciences, Oslo University College of Applied Sciences, Norway; 2. Department of Sociology, Uppsala University, Sweden; 3. Nursing and Sports Sciences, University of Agder, Norway*)

Introduction : Health professionals are, nowadays, required to collect standardized data when assessing older patients' functional ability. Such data provides quantifiable documentation on health outcomes, and is believed to function as an objective base for communicating and discussing results with colleagues and patients. Little is known,

however, about how physiotherapists and occupational therapists test administrators use standardized tests and test scores in their daily work. Method : Drawing on seven months of fieldwork and observations of 26 test situations, interviews were performed with 14 physiotherapists and occupational therapists administering standardized tests on two geriatric hospital wards in Norway. Results : Physiotherapists and occupational therapists in acute geriatric care administer standardized tests on a daily basis, and they maintained that the test situation provided them with a general functional assessment of their older patients which proved useful in planning individual training and rehabilitation schemes. The test situation, also, enabled observation of patients' coping strategies; strategies often rendered invisible in test scores. While the test situation was considered clinically beneficial, skepticism towards test scores was noted. The therapists argued that a quantifiable test result did not provide a full picture of the patient. Nevertheless, test scores were found useful when comparing test results on patients admitted anew, in communication with colleagues, and, even, as means for admitting patients to care and rehabilitation institutions. Conclusion : The test administrator's perspective provides new knowledge on how standardized tests and test scores guide clinical practice since it offers insight into the difference between the test situation and its outcomes. Keywords : geriatric care, professionals, standardized tests

PP26 S-009

A CORRELATION WITH ACTIVITIES OF DAILY LIVING, COGNITIVE FUNCTION, DEPRESSION OF THE ELDERLY RESIDING HOME IN KOREA

Yeun Mi KIM¹, Mi Joon LEE² (1. Women Health Research Center, Hanyang University Nursing department, Korea; 2. Insurance Medical Center, Samsung Life Insurance, Korea)

Introduction : There has been a rapid graying in South Korea with 10.3% of elderly population rate in 2008 and expected to enter elderly society in 2018 with 14.3%, to become super-aged society in 2026 with 20.8%, also. The aim of this study was to identify the degree of activities of daily living, cognitive function, depression of the elderly residing home, then ultimately to help developing nursing intervention program that can promote their ADL and cognitive function, prevent their depression. Method : The subjects were 92 people were from the elderly residing home. The data was received question in some parts of area K Province, Korea. The instruments used for respective factors were: K-ADL, K-IADL, MMSE-DS and Short form Geriatric Depression Scale. The data was collected from June 13 to 30, 2012. The data was analyzed through SPSS WIN 18.0 program. Results : The elderly residing home was appeared ADL mean 8.25 score, IADL mean 14.71 score, cognitive function mean 22.97 score, depression 6.30 score. And there was observed positive correlations between ADL and depression, between IADL and depression. But there were observed negative correlations between ADL and cognitive function, between IADL and cognitive function, and between cognitive function and depression. Conclusion : It is significantly important to discover and manage the ADL dependency, cognitive function, and depression. Furthermore, concrete visiting nurse education guideline and development of visiting nurse intervention program is necessary for healthy and active aging in physical, emotional, mental aspects. Keywords : Elderly, Activities of Daily Living, Cognitive Function, Depression

PP26 S-010

PROSPECTIVE STUDY OF THE EFFECTS OF LONG- TERM CARE INSURANCE SERVICES AND INSTRUMENTAL ACTIVITIES OF DAILY LIVING ON ELDERLY COGNITIVE

CHANGE

Miki FUKUMA¹, Kuninori SHIWAKU², Kiyoko ADACHI³ (1. Faculty of Medicine, Shimane University, Japan; 2. Board of Directors, Shimane University, Japan; 3. Regional Comprehensive Support Center, Utsunomiya City, Japan)

Introduction : This study aimed to clarify how long-term care insurance services (Services) and IADL are related to elderly cognitive change. Method : A five-year prospective study of 1520 elderly persons (Home-group;1317 persons, Facility-group;203 persons)who were new recipients of elderly care insurance payments. The test was used to test associations with cognitive change after five years. The risk of cognitive change was analyzed using binomial logistic regression with subject characteristics, Services, and IADL as explanatory variables. Results : Cognitive deterioration was seen in a significantly higher proportion of the facility-group (48.8%) than the home-group(20.5%). A significantly greater cognitive decline in the Home-group was associated with: female sex; being non-users of Services at visit-care, visit-homemaking, visit-nursing, rehabilitation, and short stay; and being elderly with decreased IADL for swallowing, walking, eating, and insomnia. A significantly greater cognitive decline in the Facility-group was associated with: no baseline cognitive decline; non-users of Services at the health facility; and decreased IADL for swallowing, eating, and sleeping. In the Home-group, sex, baseline cognitive status, visit-care, walking, and eating were significantly related to cognitive change. In the Facility-group, care levels and baseline cognitive status were significantly related to cognitive change. Conclusion : Cognitive deterioration was less common in the Home-group than in the Facility-group. However, the results of cognitive function in the Home-group are not valid for general use day-care. Deterioration in cognitive function has been shown to result in deterioration in eating and walking. In the Facility-group, worsening of cognitive function was more common, as age and cognitive care levels were higher. Keywords : Cognitive function, care levels, long-term care insurance services

PP26 S-011

EVALUATION OF THE KOREAN VERSION OF THE STROKE DRIVERS' SCREENING ASSESSMENT: A PILOT STUDY

Myoungouk PARK¹, Young-Sun JIN², Hwa-Kyung SHIN³, Joonwoo SON⁴ (1. HumanLAB, Daegu Gyeongbuk Institute of Science and Technology, Korea; 2. Department of Psychology, Kyungpook National University, Korea; 3. Department of Physical therapy, Catholic University of Daegu, Korea; 4. HumanLAB, Daegu Gyeongbuk Institute of Science and Technology (DGIST), Korea)

Introduction : Driving is important activities of daily living affected by the motor and cognitive deficits after stroke. But, there are no standard practices of generally accepted and valid screening tools for stroke patients in Korea. This study presents the potential for predicting driving ability following stroke using an adapted version of the Stroke Drivers' Screening Assessment (SDSA), which is a set of cognitive tests to evaluate fitness to drive in stroke patients. Method : In this study, we adapted the original United Kingdom (UK) version of the SDSA to make it suitable for use in Korean road traffic environment by replacing all UK-specific traffic situations and road signs with their Korean equivalents. In order to apply the pass/fail SDSA equations of the original UK version of the SDSA, the road sign recognition subtest of K-SDSA was carefully investigated with healthy older drivers and revised the road scenarios to match with their UK peers' scores. The prediction accuracy of SDSA was evaluated by comparing 9 stroke patients' driving performance in a driving simulator. Results : The K-

SDSA predicted drive-to-fitness of stroke participants with higher accuracy than general cognitive impairment assessment tools such as mini mental status evaluation (MMSE). Conclusion : The results suggested that the K-SDSA had high potential for predicting stroke patients' drive-to-fitness and further study is required with the extended numbers of participants. Keywords : Screening Assessment, Driving Rehabilitation, Stroke patients

PP26 S-012

REGIONAL CEREBRAL GLUCOSE METABOLIC ASSOCIATED WITH LOCOMOTIVE ABILITIES IN HEALTHY COMMUNITY-DWELLING OLDER WOMEN

Ryota SAKURAI¹, Yoshinori FUJIWARA¹, Naoko SAKUMA², Shoji SHINKAI¹, Keiichi ODA³, Muneyuki SAKATA³, Jun TOYOHARA³, Kiichi ISHIWATA³, Kenji ISHII³ (1. Research Team for Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology, Japan; 2. Research Team for Promoting Independence of the Elderly, Tokyo Metropolitan Institute of Gerontology, Japan; 3. Research Team for Neuroimaging, Tokyo Metropolitan Institute of Gerontology, Japan)

Introduction : The objective of this study was to investigate the association between the locomotive abilities and the cerebral glucose metabolism in the regions related to motor control and gait function in healthy community-dwelling older women with functional independence of instrumental activities of daily living (IADL). Method : One hundred and sixty-eight community-dwelling older women without IADL/ mobility limitation (69.5 ± 6.7) underwent 18F-FDG Positron Emission Tomography (FDG-PET) at rest and tests for locomotive abilities. We measured regional cerebral glucose metabolism in 15 regions of interest. Each regional value was standardized by that of the cerebellum. Within 6 months of the FDG-PET, we measured comfortable/maximum walking speed (with step length) and assessed the Timed Up & Go test (TUG) as indices of locomotive ability of the participants. Association between each region's glucose metabolism and locomotive indices were examined by multiple linear regression analysis adjusted for demographics such as age, education, past illness, blood pressure, and body mass index. Results : Maximum walking speed was associated with the glucose metabolism in prefrontal, posterior cingulate, and parietal cortices (positive correlation). The TUG results were associated with the metabolism in occipital and parietal cortices (negative correlation). However, there was no significant association with comfortable walking speed and step length (both comfortable and maximum walking) and cerebral glucose metabolism. Conclusion : Cerebral glucose metabolism in specific regions was associated with individual differences in gait function, even in healthy older women. Understanding the cerebral glucose metabolism in these brain regions may be useful for planning an interventional strategy to prevent gait disturbance. Keywords : gait function, cerebral metabolic activity, FDG-PET

PP26 S-013

RELATED FACTORS ON NUTRITIONAL STATUS IN OLDER ADULTS RESIDING IN NURSING HOMES IN KOREA

Gwi-Ryung Son HONG, Sang Hee JEON (School of Nursing, Hanyang University, Korea)

Introduction : Nutritional status in older adults residing in nursing homes is one of the critical factors that can lead to the frailty and to even death. The purpose of the study is to investigate the related factors on nutritional status in nursing home residing older adults in Korea. Method : Descriptive study design was used through face-to-

face interviews. A convenience sample of 306 older adults were recruited from 7 nursing homes more than 80 beds, and if they were over 65 years of age, and had agreed to participate in the study. Main variables were included nutritional status using Mini-Nutrition Assessment (MNA), activities of daily living (ADL), mobility, mood, grip-strength, number of medical illness, physical condition, perceived health and personal control. Data were analyzed using one-way ANOVA with Scheffe test. Results : Mean age of the participants was 80.3 (SD=7.16), and the majority was female (73.9%). Nutritional status was categorized by the score of the MNA, representing 31.7% as malnourished, 56.5% as at risk of malnutrition, and 11.8% as no nutritional problem. All variables were only significant between malnourished and normal groups: ADL (F=76.03, p=.000), cognitive function (F=23.54, p=.000), mobility (lying to sitting) (F=6.08, p=.003), mobility (sitting to lying) (F=6.56, p=.002), mood (F=3.49, p=.032), grip strength (F=29.32, p=.000), number of medical illness (F=6.12, p=.003), physical condition (F=28.35, p=.000), perceived health (F=11.71, p=.000), and personal control (F=11.55, p=.000). Conclusion : In conclusion, it is important for nurses to identify related factors on nutritional status of older adults living in long-term care facilities to develop intervention and nutrition screening program. Keywords : nutrition, older adults, nursing home

PP26 S-014

RESIDENT AND FACILITY FACTORS RELATED TO RESIDENTS' LENGTH OF STAY IN SENIOR HOUSING IN SEOUL

Seung Youn HONG¹, Seung Kwan LIM² (1. Division of Senior Industry, Kangnam University, Korea; 2. Institute for Silver Industry Research (ISIR), Kangnam University., Korea)

Introduction : Despite the rising number of senior over 50 and their interest in retirement housing, determinants of the length of residency of older persons rarely are studied. The aim of this study was to examine demographic, sociobehavioral, health and functional capacity that predict length of residency in senior housing. Method : Design: cross-sectional Setting: S senior housing, Seoul Participants: 142 residents (Mean(SD) age: 82.66(6.56); Range: 64-97 years, 69% female) completed questionnaire Measure: Frequency of service utilization in senior housing, number of contact person, frequency of family contact, number of clubs joined in senior housing were collected by questionnaire. Perceived health, ADL, IADL, MMSE, GDS-K for depression, length of residency in month, health behavior, income status, BMI data collected from senior housing database. Analysis: Hierarchical regression analysis was conducted with SPSS 17.0. Results : 142 residents lived between 1997 to 2012 and the average length of residency was 107.45+59.91 month. The model for health behavior accounted for only 5.7% of the incremental variance in length of residency. The model for physical and cognitive function found 17.7% of the incremental variance in length of residency (F=4.72, p<.05), especially perceived health status (t=-2.207, p<.05), and ADL (t=-2.942, p<.01). The model for formal & informal social support networks for residents found that only 13% of the incremental variance in the length of residency (F=2.24, p<.01) with only ADL as a significant variable (t=-2.79, p<.01). The number of friends in senior housing was marginal significance variable (t=1.94, p=.055). Conclusion : Physical function was most important determinant predicting length of residency in senior housing. Keywords : senior housing, service network, physical function, MMSE

PP26 S-015

DIABETES SELF-MANAGEMENT ACCORDING TO THE DISC PERSONALITY TYPE AND DIABETES-RELATED

DISTRESS IN OLDER ADULTS WITH TYPE II DIABETES

Soo Jin LEE, Misoon SONG (*College of Nursing, Seoul National University, Korea*)

Introduction : It has been demonstrated that type II diabetes is the major chronic disease of older adults in Korea. Diagnoses of diabetes in older adults require changes in health behaviors. Self-management is essential for taking care of patients with diabetes. The performance of self-management shows individual differences, one of which is the personality type. **Method :** The purpose of this study was to identify differences in the personality type, diabetes-related distress, and diabetes self-management among older adults with type II diabetes. The personality type was measured by a instrument developed by Hong (2007) based on the Dominance, Influence, Steadiness, Conscientiousness (DISC). Diabetes-related distress was measured by the Diabetes Distress Scale. Diabetes self-management was measured by the Summary of Diabetes Self-Care Activities Questionnaire. The data of 180 older adults was collected at S senior center from between August 14 and October 14 of 2012. All statistical analyses were performed using an SPSS 20.0 program. **Results :** There were significant differences in self-management between individual personality types. The self-management level was lower in the dominance personality type than in the steadiness and conscientiousness types. There was no significant difference in diabetes-related distress, as assessed by the overall score or the mean score for each item, between individual personality types. **Conclusion :** The personality type was significantly related to diabetes self-management. The results of this study will provide appropriate intervention in terms of the personality type, diabetes-related distress, and diabetes self-management. In particular, simple and self-initiated intervention which focuses on the dominance personality type would be of great help in effective self-management. **Keywords :** Type II diabetes, DISC Personality, Diabetes-related distress, Diabetes self-management

PP26 S-016

EFFECTS OF SWANSON'S CARING ON ACTIVITIES OF DAILY LIVING AND WELL-BEING OF THAI ELDERLY STROKE SURVIVORS

Unchulee CHAIWONGNOI¹, Pornchai JULLAMATE², Waree KANGCHAI² (*1. Gerontological Nursing Department, ChaophyaAbhaibhubejhr Hospital, Thailand; 2. Gerontological Nursing Department, Faculty of Nursing, Burapha University, Thailand*)

Introduction : Elderly stroke survivors in Thailand are increasing rapidly and need more specific and effective nursing care so to meet their optimal functional status and well-being. It is very crucial and challenges nurses to find the appropriate nursing intervention to help them meet their optimal goals. This nursing intervention applied core domains of Swanson's caring theory: knowing, being with, doing for, enabling, and maintaining belief. **Method :** This two-group pretest and posttest quasi-experimental research aimed to study the effects of Swanson's caring on the ability in performing activities of daily living (ADL) and well-being of elderly with stroke. Forty - four Thai elderly diagnosed as first stroke were randomly selected and assigned into experimental and control group equally. The control group received usual nursing care whereas the experimental group received the nursing care base on Swanson's caring theory elaborated by the researcher. The instruments used included The Demographic Questionnaire, The Well-being Scale (reliability .83), and The Modified Barthel ADL Index (reliability .94). Frequency, percentage, mean, standard deviation, and independent t-test were computed for

data analysis. **Results :** Findings revealed that when finished this nursing intervention, the mean scores of well-being and ability in performing ADL of the experimental group were statistically higher than the control group ($t = -6.385$, $p < .001$; $t = -5.109$, $p < .001$). **Conclusion :** This proficient and practical Swanson's caring nursing intervention should be implemented for effectively taking care of older adults with stroke. In addition, it should be applied in other chronic ill patients for further study. **Keywords :** Elderly with stroke / Swanson's caring / Activity of Daily Living/ Well-being

PP26 S-017

CHRONIC DISEASE STATUS MODULATING ADVERSE RISK OF LIFE STRESS AND APO LIPOPROTEIN 4 VARIANT FOR SELF-REPORTED HEALTH AMONG OLDER ADULTS

Wen HU, Jiehua LU (*Department of Sociology, Peking University, China*)

Introduction : If-reported health has been widely used to measure overall health status among older adults. Most studies have focused on socioeconomic status, health behaviour or even genetic variants such as Apo lipoprotein (APOE), without considering chronic health conditions that may have intermediate effect on self-reported health. **Method :** In this study, based on data from a population-based representative survey of Taiwan in 2000, we examined association of chronic health conditions along with their interactions with APOE gene and life stress on self-reported health using logistic regression model. Several chronic diseases including diabetes (15.6 %), heart disease (16.5%), stomach ulcer (22.3%) and chronic obstructive pulmonary disease (12.8%) were found prevalent in older adults. **Results :** We found that those chronic diseases interacting with life stress and APOE gene significantly affected self-reported health. Specifically, life stress such as having monthly financial difficulty had significant interaction with status of diabetes (OR=4.36, $P=3.72 \times 10^{-4}$), heart disease (OR=3.73, $P=0.001$), ulcer (OR=3.68, $P=4.94 \times 10^{-5}$) and chronic obstructive pulmonary disease (OR=8.03, $P=6.86 \times 10^{-7}$) on self-reported health; and individuals who experienced housing damage by the earthquake in 1999 tend to have significant interaction with three chronic diseases of diabetes (OR=4.27, $P=0.006$), ulcer (OR=6.66, $P=9.6 \times 10^{-5}$), or chronic obstructive pulmonary disease (OR=2.74, $P=0.057$). Further, APOE4 gene carriers had significant interaction with diabetes (OR=2.48, $P=0.057$), heart disease (OR=5.09, $P=0.002$), ulcer (OR=3.65, $P=0.001$) and chronic obstructive pulmonary disease (OR=6.74, $P=0.001$). **Conclusion :** Our study indicate that chronic diseases significantly increase the likelihood of life stress factors and APOE gene as risk for self-reported health, and therefore should be included in the future study. **Keywords :** Self-reported health; chronic diseases; life stress

PP26 S-018

SLEEP PROBLEMS AND ITS CORRELATES AMONG THE COMMUNITY DWELLING ELDERLY IN KOREA

Ye Sun LEE, Young Ran TAK (*Department of Nursing, Hanyang University, Korea*)

Introduction : To examine the sleep problem among the elderly and its association with psychological, physical, and functional factors. **Method :** This study is the secondary data analysis based of 2011 National Studies on the Elderly Population and participants were 9,526. Instrument used this study were Geriatric Depression Scale(GDS-K), Mini Mental State Examination(MMSE-KC) Activity of Daily Living(K-ADL), Instrumental Activity of Daily Living (K-IADL), experience of fall down, fear of fall down, the practice and time of exercise , subjective health condition and health in comparison

to their peers. Results : Normal were 68.3%persons, 31.7%persons had sleep problems which is less than 5 hours sleep in night time and more than time 9hours all day. There are significant between group difference in depression($t=291.51$, $p<.0001$), cognition ability($t=77.60$, $p<.0001$), Activity of Daily Living($t=85.41$, $p<.0001$), Instrumental Activity of Daily Living($t=124.71$, $p<.0001$), experience of fall down($t=43.31$, $p<.0001$), fear of fall down($t=4.067$, $p<.0001$), subjective health condition($t=118.64$, $p<.0001$), and health condition in comparison to their peers($t=106.26$, $p<.0001$). Conclusion : Sleep disorders are a predictive factor for physical, psychological, and functional disturbance of the elderly. Further research on sleep disorders in different fields needs to be conducted to discover and prevent sleep disorders, and nursing intervention developed to improve the quality of life for the elderly. Keywords : Sleep disorder, elderly, Community dwelling

PP26 S-019

A COMPARATIVE STUDY ON THE FUNCTIONAL AND DISABILITY STATUS OF FILIPINO ELDERLY IN DIFFERENT CARE SETTINGS

Maria Luisa Tumandao UYAN¹, Masayo MATSUZAKI², Sayuri KOBAYASHI³, Sachiyo MURASHIMA⁴ (1. College of Nursing, University of the East Ramon Magsaysay Memorial Medical Center, Inc., Philippines; 2. Midwifery and Women's Health, The University of Tokyo Graduate School of Medicine, Japan; 3. Nursing School of Health Sciences, Tokyo University of Technology, Japan; 4. President, Oita University of Nursing and Health Sciences, Japan)

Introduction : The unstable economic condition of the Philippine government does not allow provision of appropriate home environment for the growing population of elderly Filipinos. There is a significant cultural controversy in placing elderly relatives in an institutional setting as well. The study aims to evaluate the outcome of institutionalized and home-based care provided to Filipino elderly. The study may also help Filipino families to choose better options for taking care of the elderly members of the family with changing needs. Method : Descriptive-correlation of the functional and disability status of institutionalized and home-based Filipino elderly were evaluated using the Late Life Functional and Disability Instrument. Purposive sampling was done to get 21 elderly community-based participants and 15 institution-based participants. Results : Community-based elderly Filipinos have significantly higher level of functionality, compared with institutionalized elderly Filipinos. Community-based elderly Filipinos reported that they were more involved with their social activities and had fewer limitations in performing life tasks compared with those residing in institutionalized geriatric facility. Under the Late Life Functional and Disability Instrument measure, both groups fall under a "warning zone" with their functional status. Conclusion : This study shows that community-based care provided by nuclear families to their elderly member promotes higher degree of functionality and fewer disabilities in performing life tasks. There is a need to evaluate institutional elderly care in order to assure quality care throughout the lifespan of Filipinos. Keywords : Filipino , elderly, health care setting

PP26 S-020

THE FUNCTIONAL STATUS OF THE ELDERLY IN CHINA

Wenjuan ZHANG (Institute of Gerontology Research, School of Sociology and Population Studies, Renmin University of China, China)

Introduction : The life expectancy of Chinese elderly in increasing stable and the oldest old population size is enlarging rapidly in recent decades. However living long doesn't meaning living healthy, the number of the elderly with functional disability in adding with the

development of population aging process in China. What about the trend in functional disability of Chinese elderly in recent years? Does the prevalence of functional disability in increasing simultaneously with life expectancy among the elderly? Further study should be done to the highlight this trend of the elderly. Method : Employing the data from "sampling survey of the aged population in urban/rural China" conducted in 2000, 2006 and 2010 respectively, this study analyzed the disability in items of ADL and IADL of the Chinese elderly, as well as the trends of functional disability in different aging population cohorts. Gender difference and rural-urban diversities in age specific prevalence of functional disability have been taken into consideration. Results : The analysis results indicated that the prevalence of functional disability of the Chinese elderly in increasing in recent ten years, more and more people with disabilities in ADLs and IADLs are able to live longer than before. The proportional of the elderly with functional disabilities is higher in female elderly than that in male ones and the functional disability is more freelanced in urban elderly than that in rural older people. Conclusion : The elderly with functional disability will grow up rapidly in the recent future in China which will bring great challenges to social aging support system. Keywords : functional disability, ADL, IADL

PP26 S-021

THE REALITY OF THE CENTENARIANS' LIFE IN YAMAGUCHI, JAPAN: EXAMINATION OF THE RELATIONSHIPS OF GENDER AND ADL FUNCTIONS

Makiko TANAKA, Nobuko YOSHIKANE, Miyuki GOTO, Kazuko KASAOKA, Chie NAKAMURA, Yuji NAGASAKA, Kotaro TANAKA (Health and Welfare, Yamaguchi Prefectural University, Japan)

Introduction : The changes of the elderly population is on the increase as shown in Figure 1, which shows the number of centenarians in Japan. Purpose: To clarify important factors in relation to "health support to living a vibrant life" based on the actual conditions of centenarians' life. Method : Preceding studies indicate significant differences in terms of sex and a daily life activities of centenarians. Therefore, these two factors were designated as independent variables with the latter having three groups: Excellent ADL, Medium ADL and Poor ADL. The statistical. Results : Cancer and diabetes have been pointed out to be factors to disturb longevity. Because the hypertensive prevalence is high even among the Excellent ADL group, it is thought to be important to control and manage lifestyle-related diseases in order to realize healthy longevity. Moreover, it also seems important to maintain the standing position functions because the proportions of the standing position and walking were equal for both Excellent and Medium ADL groups. Finally, hearing abilities, eyesight, conversation, and memory are related to activation of stimulation and therefore enrich life. It is an important factor for healthy longevity that such functions are maintained. Conclusion : 1) Diseases must be prevented and complications avoided. 2) A certain level of healthy teeth are required for healthy food life as well as sense functions such as hearing and sight for receiving stimuli. 3) It must be made sure that desirable life and eating habits be established. 4) Conscious awareness of longevity needs to be held and must be made sure of. In order. Keywords : centenarians' life, actual conditions, awareness of longevity

PP26 S-022

RISK FACTORS OF ALL-CAUSE MORTALITY AMONG NONAGENARIANS/CENTENARIANS IN DUJIANGYAN REGION OF SICHUAN PROVINCE: A COHORT STUDY

Yan ZHOU¹, Birong DONG², Yan ZHOU² (1. Geriatric Department,

West China Hospital, SCU, China; 2. Geriatric Department, West China Hospital, China)

Introduction : Researchers focused on risk factors of mortality in the elderly, but few studies were conducted among nonagenarians/centenarians. Our study was carried out in Dujiangyan, one of the famous “Native longevity places”, it may provide valuable information on longevity. **Method :** It was a cohort study. We recruited 872 people older than 90 years old. Data were collected at the beginning and mortality information was obtained 49 months later. SPSS 15.0 was used for statistical analysis. and the difference among groups was defined as statistically significant if $P < 0.05$. **Results :** we got survival information of 825 (dropout rate: 5.39%) persons after 49 months, and found (1) After single factor analyses, we found that age, the number of chronic diseases, personality, cognitive function, activity of daily living, housework, watching TV and listening to the radio, physical exercise and vegetarian diet were related to mortality. (2) We did log-rank tests and found that the personality of amiable and optimistic and doing housework were protective factors. (3) By using Cox proportional hazards model, We found that the number of chronic diseases (RR=1.08, 95%CI: 1.007~1.175), the score of mini-mental state examination, (RR=0.963, 95%CI: 0.939~0.987) (time orientation (RR=0.851, 95%CI: 0.770~0.941), language score (RR=0.884, 95%CI: 0.808~0.968)), ADL (RR=1.023, 95%CI: 1.006~1.040) and score of IADL (RR=1.030, 95%CI: 1.010~1.051) were factors influence mortality. **Conclusion :** The number of chronic diseases, impairment of cognitive function and activity of daily living are associated with increased mortality of the elderly older than 90y, and the personality of amiable and optimistic and doing housework are protective factors. **Keywords :** mortality, risk factors, elderly

PP26 S-023

PERSONALITY TRAITS AND EATING HABITS IN OLD PEOPLE

Yumi TSUJI¹, Yasuyuki GONDO¹, Takeshi NAKAGAWA¹, Hitomi OKUBO², Chisato INOMATA³, Ryosuke KAGAWA³, Yukie MASUI⁴, Kazunori IKEBE³, Kei KAMIDE⁵, Yasumichi ARAI⁶, Ryutaro TAKAHASHI⁷ (1. Graduate School of Human Sciences, Osaka University, Japan; 2. Department of Social and Preventive Epidemiology, The University of Tokyo, Japan; 3. Graduate School of Dentistry, Osaka University, Japan; 4. Human Care Research Group, Tokyo Metropolitan Institute of Gerontology, Japan; 5. Graduate School of Medicine, Osaka University, Japan; 6. School of Medicine, Keio University, Japan; 7. Research on Social and Human Sciences, Tokyo Metropolitan Institute of Gerontology, Japan)

Introduction : Previous studies suggested that personality traits contribute to longevity by influencing health-related behavior, but their influence on food choices in old people remains unclear. Hence, this study explores the relationships between personality traits and nutrient intake in old adults. **Method :** Participants were 1,000 Japanese persons (men 479; age: 69-71 years). The Japanese version of the NEO-FFI was used to assess the Big Five personality traits. Nutrient intake was assessed with the Brief-type Self-administered Diet History Questionnaire (BDHQ). It comprises 80 items, on the kinds of foods and nutrients consumed in a month. BDHQ data were adjusted using the energy density method. Food items were classified into three groups on the basis of nutritional value: low, medium, and high. A one-way ANOVA was conducted to compare the mean scores for each personality trait among the three groups. Stratified analysis was conducted for gender, marital status, and residential status.

Results: Individual who ate more fruits and vegetables showed higher openness in both men and women except men living alone, who took more fat showed higher extraversion in men living alone, who ate more vegetables showed higher conscientiousness in men living with their spouse. **Conclusion :** Personality traits, gender, and marital status are related to eating habits in old adults. Previous reported association between personality traits and longevity may be mediated by food intake. **Keywords :** personality traits, eating habits, longevity

PP26 S-024

CONTINUING BONDS BETWEEN ELDERLY AND THEIR COMPANION ANIMAL

Chie NIKAI¹, Takatoshi ANDO² (1. Environment and Information Science, Yokohama National University Graduate School, Japan; 2. Faculty of Education and Human Sciences, Yokohama National University, Japan)

Introduction : Living with companion animal(CA) is not already special experience in Japan, so grief followed by of pet loss are being accepted. It is pointed out that some social supports by close relatives, passage of time, funeral of CA, visit to a grave, and routine like offering water and flower can recover sadness by pet loss of elderly people (Nikaido & Ando 2012). It seems particular in Japan for feeling grief to keep its mind to gone CA like pray to the picture of it after going. In addition Japanese opinion on death seems novel and shocking Western opinion on death which defines pathology on keeping relationship with the deceased. This viewpoint is the core of Continuing Bond Theory which Klass and Silverman did indoctrination. So the purpose of this study is if there is Continuing Bond in covering phase from facing death of its companion animals to have interview to elderly people who lost their CA. **Method :** 20 elderly people engaged in audio-recorded interviews that were conducted using a semi-structured interview guide mainly about rearing history of the CA and current mental state. Then worksheet for qualitative analysis revealed themes. **Results :** By the analysis of the interview, it found that all participants have continuing bond with deceased CA. **Conclusion :** Significant findings included some categories have ambivalent aspects. For example one of the main categories “Funeral and burial” have been mentioned by all participants, but it gets only available when brought to the timing they wanted. **Keywords :** Pet loss, Continuing Bond

PP26 S-025

KNOWLEDGE AND EXPERIENCE ON ADVANCE DIRECTIVES AMONG KOREAN ELDERLY

Jaewon PARK, Jun-Ah SONG (College of Nursing, Korea University, Korea)

Introduction : Although advance directives(AD) have been used to respect elderly patients' autonomy for end-of-life treatment in many countries, there have been no standardized guidelines or laws regarding AD in Korea. Considering increased interests and concerns about AD in Korea society today, it is necessary to understand knowledge and experience of Korean elderly regarding AD. **Method :** In this study, 181 elderly(mean age =78.61±7.16, Female = 65.7%) were recruited from senior citizens' centers, community welfare centers, and nursing homes located in the city of Seoul and Gyeonggi province. Face to face interviews with a structured questionnaire were performed to investigate knowledge and experience about AD including living will (LW), various life-sustaining treatments (LST) and durable power of attorney for health care (DPAHC). Data were analyzed using descriptive statistics and Chi-square tests. **Results :** Community dwelling elders (CDEs) knew AD (9.6%), LST (43.2%-

65.2%), LW (43.0%), and DPAHC (31.9%); while nursing home elders (NHEs) were aware of AD (3.5%), LST (12.8%-60.5%), LW (14.0%), and DPAHC (8.1%). As for experience, 36.8% of CDEs and 23.3% of NHEs had thought about their LST preferences; 31.6% of CDEs and 16.3% of NHEs had discussed these preferences with someone else; and most of CDEs (97.9%) and NHEs (100%) had never made a written document about their preferences on LSTs. Conclusion : Results of this study showed that most of the Korean elderly had limited knowledge and experience about AD. Therefore, various educational programs, consultations, and communication channels regarding AD for the elderly are needed. Keywords : advance directives, terminal care, aged

PP26 S-026

ETHICAL ANALYSIS OF LITERATURE OF EMPIRICAL STUDIES ON END-OF-LIFE CARE FOR KOREAN OLDER ADULTS

Myoung Sheen KANG¹, Youn-Suck KOH² (1. College of Dentistry, Gangneung-Wonju National University, Korea; 2. Dept. of Pulmonary & Critical Care Medicine, Dept. of Social Science and Medicine, Ulsan University College of Medicine, Korea)

Introduction : Many documents of empirical studies including cross-cultural studies on end-of-life care for Korean elderly have treated with value conflicts between traditional confucian family values like filial piety and 'reportedly' western values. This study reviews the literature of empirical studies on end-of-life care for Korean and other Asian elderly. And through analyzing the apparent conflicts especially on the medical futility issue from the ethical viewpoint, some critical considerations are drawn. Method : Systematic review approach to sociological, anthropological and cross-cultural studies on end-of-life care for Korean elderly. Focusing on the futility issue, the family dynamics around the traditional values, doctor-patient relationship, and doctor-family relationship are analyzed in terms of doctor's professional role. Results : Those studies chiefly concerns about cultural influence on clinical decision making process and result. They didn't intimately investigate doctor-patient relationship, which is the center of medical relationships. Too much emphasis on family values may bring about stereotyping and prejudice, which would turn out clinically unattended needs of patients and family. Considering the changes in Korean medical field, individual rights awareness increase, and Korean contemporary culture, those worries are warranted. Conclusion : Most results of the empirical studies seem to be helpful to understand Korean culture and to provide end-of-life care to Korean older adults. But viewpoint taken from the authors might tend to make prejudices not intended. Care for the best interest of patient and respect for patient autonomy are almost universal doctor's duties. And so are public education and sound criticism for public policy. Keywords : end-of-life care, empirical studies, ethical analysis, Korean older adults, value conflict

PP26 S-027

END-OF-LIFE CARE STRESS AND STRATEGIES OF COPING AND RELIEF AMONG CLINICAL NURSES

Soo Young PARK¹, Bo Kyoung KIM¹, Ju Hee KANG¹, Yoon Ji KIM¹, Jung Hwa SONG¹, Ji Hye KIM¹, Yu Jung LEE¹, Jung A. LEE¹, Jung Sun YOON¹, Yoon Sun CHOI¹, Kyungsook PARK² (1. Graduate School Student, Red Cross College of Nursing, Chung-Ang University, Korea; 2. Professor, Red Cross College of Nursing, Chung-Ang University, Korea)

Introduction : This study tried to provide basic materials to find positive and proper countermeasures against the stress factors

experienced during end-of-life care by identifying the stress of nurses in end-of-life care and how to deal with and release it. Method : The subjects were 150 nurses of 4 general hospitals in Seoul and Gyeonggi-do who have experience in end-of-life care were selected as subjects by convenience sampling. Using self-report type questionnaires, a survey was executed from November 14 to 23, 2012. Results : The major results of this study are as follows. 1)End-of-life Care stress of nurses was high as 152.11 ± 19.86 when full score is 200. 2)Nurses caring end-of-life patients used problem-entered coping more frequently. 3)When the difference in problem-entered coping according to general characteristics of nurses, those who have leisure activities or experience of education of care for oncologic patients for 1~4 weeks used emotion-entered coping more often. 4)There was positive correlation between the difficulties to allot time to end-of-life patients and emotion-entered coping. To Summarize the above results, nurses perceived high stress in end-of-life care and the biggest conflict area in the stress was found to be the conflicts against the medical limitation. In handling the end-of-life care stress, emotion-entered coping was more frequently used. Conclusion : Conclusively, to enable the nurses experiencing end-of-life care stress to properly respond to and cope with those stresses, professional support program in the dimension of organization as well as educational programs of death, end-of-life care, hospice care to make the nurses prepared for end-of-life care stress are needed. Keywords : End-of-life Care, Stress, Clinical nurse

PP26 S-028

HOW DO JAPANESE ELDERLY PEOPLE UTILIZE "ENDING NOTE"?

Tai TSUJIMOTO, Jun NAKAHARA (Clinical Thanatology and Geriatric Behavioral Sciences, Osaka University, Japan)

Introduction : It is important for the elderly to prepare for death. Recently, "Ending Note" (ED) have attracted attention as a useful tool for these preparations in Japan. An ED is a notebook for recording one's preferences in case of death or a serious illness that would lead to an inability to make decisions or communicate. Although not legally binding, an ED can be helpful to determine a person's preferences in the later stages of life. This study investigated how Japanese elderly people intend to utilize ED to prepare for death. Method : A sample of 169 elderly persons registered with a Silver Human Resource Center completed a questionnaire that asked them to rate their willingness to provide 17 kinds of information required in an ED, on a 5-point Likert scale. Results : Cluster analysis conducted using Ward's method, applying Euclidean distances, revealed four clusters: active utilization (N = 14), middle utilization (N = 73), passive utilization (N = 41), and irregular utilization (N = 41). Conclusion : Except for the active utilization group, each other group had a low or moderate average of score for each kind of information. We found that ED, despite the public attention they have attracted, are not widely accepted by elderly people. However, the existence of the irregular utilization group, which indicated interest in specific items (a funeral service and a burial method), imply that some elderly people think it important to prepare for specific aspects of their own death. Keywords : "Ending Note", death preparation

PP26 S-029

FACTORS MOTIVATING CANCER PATIENTS' PARTICIPATION IN GROUP THERAPY

Tomoko MATSUI¹, Kei HIRAI², Masako SHOKOJI³, Madoka TOKUYAMA³ (1. Graduate School of Human Sciences, Osaka University, Japan; 2. Support Office for Large-Scale Education & Research Projects, Osaka University, Japan; 3. Psychiatry, Toyonaka

Municipal Hospital, Japan)

Introduction : The prevalence of cancer in older adults is increasing. Physically ill individuals such as cancer patients are likely to be socially isolated and experience loneliness, which may have negative consequences such as depression. In an attempt to resolve this situation, we expect group therapy because it's said that it could increase patients' social support and help build social support networks. This study extracted the factors that contribute to cancer patients' motivation to participate in, route of, and expectations regarding group therapy. **Method :** Five cancer patients (mean age = 63 years; SD = 10.2) who participated in group therapy were interviewed about the above three topics. **Results :** Content analysis of the interview data revealed thirteen elements related to the above three topics: changes in daily life, mental distress, aspiration to break away from one's present state, perceived need for support, implementing new actions, interest in and concerns about the support program, interest in and concerns about psychotherapy, interest in and concerns about program content, invitation and introduction from the therapist, perception of notices, environmental factors, and physical factors. **Conclusion :** Many of participants already have contact with staff before taking part in group therapy, so it's important to make opportunity that patients and staff set aside time to be with each other and environment that patients are easy to have a talk. It's suggested that patients can use group therapy as a trigger to try new things and go outdoors. **Keywords :** cancer patients, group therapy

PP26 S-030

PREFERENCES AND ACTUAL PLACE OF DEATH AND CARE OF THE END-OF-LIFE FOR FRAIL ELDERLY IN JAPAN AND SOUTH KOREA

Jung-Nim KIM (*Social Welfare, Tokyo University and Graduate School of Social Welfare, Korea, Democratic Peoples' Republic*)

Introduction : The primary aim was to clarify determine the factors related to the preferences and actual place of death and care of the end-of-life for frail elderly with social support by family caregivers at home in Japan and South Korea. **Method :** The total sample size of research was 1500 in Japan and 930 in South Korea. I have used probit model. The dependent variables included preferences and actual place of death and care of the end-of-life for frail elderly. The independent variables included in-home services of 5 kinds: home help service, home visit bathing, day care service, short stay service, and rental service for equipment. **Results :** The results of the probit model analysis were as follows, in Japan, levels of care needs, emotional support from family and children of frail elderly, and purchasing and rental of equipment had statistically positive effects between the preferred and the actual place at home of death and care of the end-of-life for frail elderly. In Korea, co-residence of three generations had only statistically positive effects between the preferred and the actual place at home of death and care of the end-of-life for frail elderly. **Conclusion :** Regular discussions with frail elderly, family and children of frail elderly on family caregivers are needed. Social and professional support is of importance in meeting of preferences and actual place of death and care of the end-of-life for frail elderly. **Acknowledgements Funding sources:** this work was supported by Japan Society for the Promotion of Science KAKENHI Grant Numbers 21330121. **Keywords :** Preferences and actual place, death and care of the end-of-life, frail elderly

PP26 S-031

IS PERFORMANCE OF STANDARDIZED LANGUAGE TESTS REFLECTIVE OF SUBJECTIVE LANGUAGE COMPLAINTS

IN THE NORMAL ELDERLY?

Hyang Hee KIM¹, Bo Seon KIM² (*1. Graduate Program in Speech and Language Pathology, Department of Rehabilitation Medicine, Yonsei University College of Medicine, Korea; 2. Graduate Program in Speech and Language Pathology, Yonsei University, Korea*)

Introduction : Subjective language complaints (SLCs) are frequently reported in elderly people, and SLCs appear to be related to language abilities and cognitive function. Therefore, the aim of this study is to test whether SLCs are associative with performance of standardized language tests and clinical variables such as the Geriatric Depression Scale (GDS) and the Mini-Mental State Examination (MMSE). **Method :** Two questions about SLCs (i.e., "How are you satisfied with your speaking/listening/reading/writing abilities?" "How are your speaking/listening/reading/writing abilities compared with one year ago?"), the Boston Naming Test (BNT), verbal fluency task, GDS, and MMSE were performed by 294 normal elderly (age: 75.44±6.3, range: 57~94). Responses of SLCs were rated as 'very dissatisfied (0 points),' 'dissatisfied (1 points),' 'neutral (2 points),' 'satisfied (3 points),' or 'very satisfied (4 points).' Pearson correlation coefficients were computed to investigate the association between SLCs score and scores of BNT, verbal fluency, GDS, and MMSE. **Results :** Results showed that SLCs were positively correlated with BNT ($r = .275$), verbal fluency ($r = .118$), and MMSE ($r = .223$) ($p < .001$). In addition, SLCs were negatively correlated with GDS ($r = -.287$) ($p < .001$). **Conclusion :** The elderly who rated lower SLCs score are likely to perform worse in standardized language tests. Thus, this study might indicate that SLCs about one's language abilities are not subjective but reflective of performance of language abilities. In addition, the elderly with higher GDS score are more discontent with their language abilities. **Keywords :** subjective language complaints, aging, language abilities, cognition

PP26 S-032

COMPARISON OF PHYSICAL FUNCTION BETWEEN CANCER SURVIVORS AND THE GENERAL ELDERLY PERSONS

Bumjo OH¹, Dongwook SHIN², Belong CHO² (*1. Department of Family Medicine, SMG-SNU Boramae Medical Center, Korea; 2. Department of Family Medicine, SNUH, Korea*)

Introduction : To the authors' knowledge, few data currently are available regarding the physical and social function in older cancer patients. Instrumental activities of daily living (IADLs) are the complex skills needed to successfully live independently. This study evaluated the changes in instrumental activities of daily living(IADL) in geriatric oncology patients compared to general public. **Method :** We surveyed the patients who received care services related to cancer in Korea. Control individuals were selected from participants in the first round of the fourth Korea National Health and Nutrition Examination Survey and were matched with cancer patients using the propensity score method to optimize our comparative analysis. Self-reported Instrumental activities of daily living (IADLs) was surveyed, and multivariate logistic regression analysis was used to evaluate the relationship between cancer survivorship and each outcome measure. **Results :** Compared with the general population, cancer survivors were more likely to be dependent in "Laundry" (7.0% vs. 19.1%; adjusted odds ratio (aOR) 0.29; 95% confidence interval (CI), 0.14-0.62) and "Outgoing for a short distance" (3.8% vs. 13.3%; adjusted odds ratio (aOR) 0.22; 95% confidence interval (CI), 0.08-0.57). Functional impairment was found significantly in cancer survivors, and increasing "age" and "the married state(single)" had a negative influence on the function. **Conclusion :** Our results show that the cancer survivors

experience health problems related to physical and social function. Undertaking a few simple baseline assessments in elderly cancer patients may help predict their risk of worsening physical function. However, several methodological limitations of our study prompt further research on this issue. Keywords : Cancer survivors, IADL, Elderly person

PP26 S-033

HOME BASED OCCUPATIONAL THERAPY OF PHYSICAL FUNCTION IN PATIENTS WITH TERMINAL CANCER

Daisuke SATO (*Rehabilitation Sciences, Chiba Prefectural University of Health Sciences, Japan*)

Introduction : The objective of this study was to evaluate the effectiveness of a structured home based occupational therapy program on physical function and quality of life patients with terminal cancer after 1 and 3 months' follow up, and to compare these results with those for a concurrent control group who receive ordinary occupational therapy program. Method : Physical function was measured by Physical Performance Test battery (PPT battery) at baseline and after 1 and 3 months' follow up. PPT battery comprised a series of 11 tasks (50-foot fast walk, 50-foot preferred speed walk, unloaded forward reach, loaded reach, timed repeated sit-to-stand, sock test, timed repeated reach up, timed belt tie, distance walk in 6 minutes). Additionally, QOL was evaluated using a self-administered questionnaire consisting of the European Organization for Research and Treatment of Cancer QLQ-C30 (EORTC QLQ-C30). Comparison of the groups was using propensity scoring. Results : One hundred ninety-four patients with terminal cancer started the structured home based occupational therapy program, of whom 142 (77%) completed 3 months' follow up. The mean relative improvement compared with baseline was statistically significant after 3 months' follow up for 50-foot preferred walk and timed belt tie ($p < 0.05$), and EORTC QLQ-C30 ($p < 0.05$). Conclusion : Structured home based occupational therapy program is effective in improving both physical function and QOL in patients with terminal cancer and may be considered as a valuable alternative to ordinary occupational therapy program. Keywords : terminal cancer, occupational therapy

PP26 S-034

WORK OUTCOMES OF PATIENTS WITH TERMINAL CANCER WHO RECEIVE COMPREHENSIVE OCCUPATIONAL THERAPY

Daisuke SATO (*Rehabilitation Sciences, Chiba Prefectural University of Health Sciences, Japan*)

Introduction : Work disability is a serious consequence of terminal cancer. We conducted a 6 month, prospective randomized controlled trial comparing assessments of disease activity, function, work, and coping in employed patients with terminal cancer receiving occupational therapy versus usual care. Method : Employed patients with terminal cancer with increased perceived fatigue and stress of work were identified by the Cumulative Fatigue Symptoms Index (CFSI ; score > 30). Patients were stratified into medium fatigue and stress (score > 30 and < 50) and maximum fatigue and stress (> 50) groups, then randomized into occupational therapy or usual care groups. Assessments were conducted at baseline and 1 month. The primary outcome was the Canadian Occupational Performance Measure (COPM), and a standardized patient self-report of function was the MD Anderson Symptom Inventory (MDASI). Results : We recruited 78 employed patients with terminal cancer. At baseline the groups were well matched. At 1 month the improvement in the occupational therapy group was significantly greater than that in the

usual care group for all functional outcomes (COPM satisfaction $p < 0.05$, COPM importance $p < 0.05$, FIMp < 0.05) and most work outcomes (CFSI $p < 0.05$, VAS work satisfaction $p < 0.05$, VAS work performance $p < 0.05$). Conclusion : Comprehensive occupational therapy improves functional and work related outcomes in employed terminal cancer patients at risk of work disability. Keywords : terminal cancer, function, work

PP26 S-035

THE EFFECTS OF THE EVIDENCE-BASED FALL PREVENTION PROTOCOL ON FALL KNOWLEDGE, FALL ATTITUDE, AND FALL PREVENTION SELF-ESTEEM OF CARE WORKERS IN A LONG-TERM CARE FACILITY

Dukyoo JUNG, Rye-Won MA, Hea-Jin KIM (*Division of Nursing, Ewha Womans University, Korea*)

Introduction : Introduction: Falling is one of the most devastated accidents in nursing home. Applying practice guideline for fall prevention was an effective way to identify the risk factors of falling and implement interventions. Therefore, the purpose of the study was to examine the effects of the evidence-based fall prevention protocol (EBFP) on fall knowledge, fall attitude, and fall prevention self-esteem of care workers in a long-term care facility. Method : Method: The design of this study is nonequivalent control group with repeated measuring by quasi-experimental study. The experimental group participated in a 12-week EBFP program. The subjects of this study, composing of experimental group of 27 and control group of 31 were collected from two long-term care facilities in Seoul. Fall knowledge, attitude, and fall prevention self-esteem were measured with standardized measurements. The data were analyzed by repeated measure ANOVA. Results : Results: The experimental group taking the EBFP reported the significant difference in fall knowledge ($F=5.291, p=.002$), fall attitude ($F=9.045, p=.000$), and fall prevention self-efficacy ($F=4.127, p=.014$) as time goes by. Conclusion : Conclusion: The effects of EBFP on increasing fall knowledge, fall attitude, and fall prevention self-efficacy of care workers were supported from this study. Nurse can imply the EBFP in the long term care facility to minimize the fall rates and provide systematical fall prevention approach. Furthermore, nurse can educate care workers how they apply fall EBFP. Keywords : fall prevention, evidence-based protocol

PP26 S-036

THE IMPACT OF FRAILTY ON HEALTH RELATED QUALITY OF LIFE AMONG COMMUNITY-DWELLING ELDERLY IN KOREA

Gyeong-Suk JEON¹, Soong-Nang JANG² (*1. Department of Nursing, Mokpo National University, Korea; 2. Red Cross College of Nursing, Chung-Ang University, Korea*)

Introduction : Verifying the effect of frailty on health-related quality of life may help us better understand the impact of frailty. Therefore, the present study was to explore the relationship between frailty and health-related quality of life among community-dwelling Korean elders. Method : Older adults aged 65 years or over recruited by judgment sampling of the population of Seocho-gu in Seoul were surveyed in 2011. The Korean frailty index measure developed by Korean geriatric society was used as an outcome variable. Proportional odds model was used to evaluate the relationship between health-related quality of life and frailty. Results : We found that, after adjusting for sociodemographic covariates, being pre-frail or frail significantly increased proportional odds for lowering health-related quality of life than being non-frail. In addition, among five

components of health-related quality of life, the magnitude of the adverse effects of frailty on HRQOL was largest for pain/discomfort and next was for anxiety/depression. Conclusion : When compared to persons who are not frail, older Korean individuals identified as frail and pre-frail exhibit significantly lower health-related quality of life scores. Such an association between Korean frailty measures and a generic measure of the HRQOL may offer new information to understand frailty within the broader context of frailty. Keywords : frailty, pre-frailty, health-related quality of life

PP26 S-037

EFFECTIVENESS OF FALL PREVENTION IN RESIDENTIAL CARE CENTER

Hae Sung KIM¹, Hyunah KIM² (1. College of Social Welfare, Kangnam University, Korea; 2. Care Service Team, Seongam Center of Senior Health, Korea)

Introduction : Falls are growing health concern in residential care facilities. However, few studies exist effectiveness of fall prevention programs in residential care services. The purpose of this study is to investigate the effectiveness of fall prevention program located in Seoung Nam Si in South Korea. Method : Participants were assigned to the experimental group(11) based on their consent of participation of program, otherwise to the control group(18). The experimental group received program which includes providing information how to seek helping behavior and making practices in daily situation. Main focus of this program is the tailored intervention in order to consider individual circumstances such as cognitive ability and physical function. The control group received regular care services. Results : There was a significant decrease of fall rate in the experimental group from 21.21% to 7.27%. In the control group, there was a weak increase of fall rate from 11.1% to 13.33%. Conclusion : Fall prevention program turns out to be effective in reducing falls among elderly in residential care facility. Especially, there needs to develop fall prevention program which combine strongly with cognitive and physical therapy. In process evaluation, participants report frequently uncomfortable and shameful feeling when they cannot move by themselves, therefore they try not to seek help which may induce falls. Further study should consider how to enhance cultural sensitivity in developing fall prevention for fragile elderly. Keywords: Fall prevention residential care center

PP26 S-038

DIFFERENCES IN SLEEP PATTERN, PHYSICAL ACTIVITY, AND MOBILITY BETWEEN OLDER ADULTS WITH CANCER AND WITHOUT CANCER

Hye-A YEOM¹, Sang-Young ROH², Carol BALDWIN³, Myung-Ah LEE² (1. The Catholic University of Korea College of Nursing, Korea; 2. The Catholic University of Korea College of Medicine, Korea; 3. Arizona State University College of Nursing and Health Innovation, USA)

Introduction : Mobility is a major indicator of frailty in older adults and is prevalent in geriatric patients with multiple chronic illnesses. However, association of lifestyle profiles including sleep patterns and physical activity with the level of mobility has not been clearly explored in older adults with chronic illnesses including cancer. Method : This study was designed to examine differences in sleep pattern, physical activity, and walking mobility between community-dwelling older adults with cancer and without cancer. This was a cross-sectional descriptive study. A total of 284 community-dwelling older adults with multiple chronic illnesses including cancer participated in this study. Participants completed semi-structured

interviews focused on sleep pattern measured using Sleep Habit Questionnaire, physical activity measured using American College of Sport Medicine criteria, and walking mobility measured using 6 Minute Walk Test. Results : Of 284 participants, 56 older adults (19.7%) were cancer patients and 229 were non-cancer patients. The mean age of the participants was 74 years, ranging from 64 to 95 years. Sixty one percent (n=173) were female. Overall sleep quality was moderate with the mean score of 2.3 on 4-point Likert scale. Walking mobility in older adults was negatively correlated with older age ($r = -.27, p = .000$). There was no difference in the level of physical activity between cancer and non-cancer patients. Conclusion : Findings of this study may show that sleep quality and mobility in cancer patients are not significantly less than older adults with other chronic illnesses. Keywords : Mobility, Physical Activity, Aged

PP26 S-039

TEMPORAL INCOORDINATION OF PHONATION AND ARTICULATION IN KOREAN NORMAL ELDERLY: VOICE ONSET TIME ANALYSIS OF STOP CONSONANTS

Hyunji YOO¹, Hyanghee KIM² (1. Graduate Program in Speech and Language Pathology, Yonsei University, Korea; 2. Graduate Program in Speech and Language, Department and Research Institute of Rehabilitation Medicine, Yonsei University College of Medicine, Korea)

Introduction : Changes in speech production in normal elderly might be subtle and gradual. Voice onset time(VOT), one of the widely used acoustic parameters, refers to duration between 'articulator opening' and 'initiation of vocal vibration', which may be indicative of articulatory-phonatory coordination ability. There are three different classes of Korean stop consonants(i.e., lenis /t/, fortis /t*/, aspirated /th/) with distinct VOT values. The purpose of this study is to identify the differences of VOT in three Korean normal women groups. Method : The subjects were 23 women using standard Korean, and are divided into three age groups; 60s(65.50±2.52 y.o.), 70s(74.64±2.65), and 80s(83.00±2.68). Speech sample of 27 randomized one-syllable words [3 places(bilabial, alveolar, velar)•3 phonation types(lenis, fortis, aspirate)•3 following vowels(/a/, /i/, /u/)] per subject was analyzed via Praat (ver.5.2.23). Results : Results showed that the women in their 80s had longer VOT in fortis /p*il, p*ul, t*al/ than those in their 70s, indicating a delay of phonatory initiation. On the contrary, they had shorter VOT in aspirates /thil, thul, khul/ than 70s, implying diminished duration of aspiration. These results indicate that distinct phonetic values of each stop consonant become weaker with advancing age. Conclusion : In conclusion, simple acoustic analysis of VOT of speech sounds might give rich information on temporal incoordination between articulation and phonation in the elderly, which may be a sign of aging on speech motor performance. Keywords : speech, temporal incoordination, VOT analysis

PP26 S-040

CHARACTERISTICS OF HANDWRITING IN THE NORMAL ELDERLY

Ji Hye YOON¹, Sooryon KIM², Jungwan KIM³, Hyanghee KIM⁴ (1. Department of Speech Pathology and Audiology, Hallym University, Korea; 2. Graduate Program in Speech and Language Pathology, Yonsei University, Korea; 3. Department of Speech and Language Pathology, Daegu University, Korea; 4. Graduate Program in Speech Pathology, Department and Research Institute of Rehabilitation Medicine, Yonsei University College of Medicine, Korea)

Introduction : Motor performance for writing requires coordinated

function mediated by the brain in concert with the neuromuscular and visual systems. Even though aging process may affect handwriting performance, handwriting changes due to aging is poorly understood. The aim of this study was to delineate the characteristics of the handwriting of healthy Korean elderly people. Method : One hundred-ninety one healthy adults aged from 62 to 91 years old participated as subjects for the study. Mean(\pm 3.12) years of education was 8.65(\pm 3.12) (range: 6 to 18). The Mini-Mental State Examination (MMSE) was administered to all participants. The subjects were asked to write a standard word to dictation. The test material was a four-syllabic word with one-to-one grapheme to phoneme correspondence. Size (area) of each syllable in the word was measured using Image J program. Word alignment to baseline was assessed using a multiple-choice checklist. Results : As compared to handwriting by the younger subjects in the group, the older subjects showed more variable writing size of the syllables within the word. Furthermore, there was a tendency to orient the words slightly upward/downward or undulating motion relative to the margins. Conclusion : It is assumed that the unequal size (area) between syllables in the elderly may result from irregular control of spatio-temporal handwriting movement. Undulating motion of writing might be due to the disturbance of sensory feedback which controls the line of writing straight and properly oriented on the given template. These data suggest that handwriting may be sensitive in predicting aging process. Keywords : aging, writing, deterioration

PP26 S-041

SWALLOWING, COGNITIVE FUNCTION, AND PHYSICAL ACTIVITY IN THE NORMAL ELDERLY

Ji Hye YOON¹, Jungwan KIM², Hyo Suk NAM³, Hyanghee KIM⁴ (1. Department of Speech Pathology and Audiology, Hallym University, Korea; 2. Department of Speech and Language Pathology, Daegu University, Korea; 3. Department of Neurology, Yonsei University College of Medicine, Korea; 4. Graduate Program in Speech Pathology, Department and Research Institute of Rehabilitation Medicine, Yonsei University College of Medicine, Korea)

Introduction : Dysphagia is a common problem among the elderly that reflects the physical status. In addition to the physical status, cognitive function might be also related with the swallowing function. The aim of this study was to delineate the associations among swallowing, physical activity, and cognitive function of healthy Korean elderly people. Method : Eighty four healthy elderly aged from 58 to 86 years(mean: 73.3 \pm 5.5) old participated as subjects for the study. Mean year of education was 8.1(\pm 3.8)(range: 0 to 16). The subjects were asked to answer for questionnaire of swallowing composing of the following four items: Q1) Have you experienced choking?; Q2) Have you had any trouble with mastication?; Q3) Have you experienced drooling?; Q4) Could you do self-expectoration when you choke? The subjects rated one of five scoring categories; 'not at all', 'seldom', 'quite a bit', 'sometimes', or 'frequently'. In order to measure cognitive functions, the MMSE was administered to all participants. Self-reported physical activity was assessed by a questionnaire on exercise. The participants had to report the average frequency of exercise over the past week. Results : There were significant negative relationships between the MMSE score and difficulty in mastication($r = -.252, p = .023$). There was no relationship between the physical activities and swallowing. Conclusion : The responses to the simple questionnaire of screening for dysphagia might reflect the cognitive conditions in the elderly. Based on the results, efforts to enhance the swallowing-related activity (i.e., mastication) in a daily living might stimulate sensorimotor cortex, thus activating the brain to

work better in the aging process. Keywords : aging, swallowing, cognitive function

PP26 S-042

EFFECT OF THE FALL PREVENTION PROGRAM ON FALL KNOWLEDGE, FALL BURDEN, PREVENTION SELF-EFFICACY, AND FALL PREVENTION BEHAVIORS OF CARE HELPERS IN ELDERLY CARE FACILITY

Min Suk KIM¹, Jeong Sun KIM² (1. Department of Nursing, Graduate School, Chonnam National University, Korea; 2. College of Nursing, Chonnam National University, Korea)

Introduction : This study was done to examine the effects on knowledge of fall, fall burden, self-efficacy on fall prevention, and fall prevention behavior after applying the fall prevention program to care helpers who provide care directly in the care facilities for elderly people. Method : The fall prevention program developed for this study was implemented for 80 minutes per session and four sessions in total. Participants included a total of 47 subjects (the experimental group: 24, the control group: 23). The program application was conducted from July 16 thru August 31, 2012. The collected data were analyzed _-test, independent t-test, and ANCOVA using the SPSS/Win 19.0 program. Results : According to the pre-and post-test, the experimental group participated in the fall prevention program showed an increase in the level of knowledge of fall ($F=92.89, p<.001$), a decrease of the fall burden ($F=14.27, p<.001$), an increase of the self-efficacy on fall prevention, and an increase of the fall prevention behavior ($F=49.50, p<.001$) compared to the control group after the program intervention. Conclusion : From the results, it was verified that the fall prevention program developed for care helpers of care facilities for elderly people in this study was effective intervention to decrease fall burden, and increase fall knowledge, fall prevention self-efficacy, and prevention behaviors related to fall. Therefore, it is suggested that this fall prevention program is provided as an education material for care helpers to prevent fall in care facilities for elderly people. Keywords : Falls, Program Development, Caregivers

PP26 S-043

AGE-DEPENDENT MANIFESTATION OF SEMANTIC FEATURES IN WORD DEFINITION TASK IN NORMAL ELDERLY

Hyang Hee KIM¹, Sooryon KIM² (1. Graduate Program in Speech and Language Pathology, Department of Rehabilitation Medicine, Yonsei University College of Medicine, Korea; 2. Graduate Program in Speech and Language Pathology, Yonsei University, Korea)

Introduction : There are few studies of performance on word definition task in normal elderly in the aspect of semantics of language. They mostly covered quantitative analysis (e.g., total score) or did not subdivide into age groups. The aim of this study is to manifest semantic features in word definition task between two different age groups of normal elderly. Method : The subjects were 15 young-old females (mean age \pm SD = 69.5 \pm 2.5 y.o.) and 15 middle-old females (mean age \pm SD = 78.1 \pm 2.4 y.o.) with the scores above 24 in MMSE. Two groups were matched in years of education. They performed the word definition task comprised of ten words (e.g., train). The verbal outputs were divided into two categories with 'core' and 'supplementary' meaning. The numbers with 'core', 'supplementary' meanings, and 'wrong' responses (e.g., repeating the same meaning) as well as the total scores were obtained. Results : The results demonstrated that there were statistical differences in the numbers of 'core' ($t_{28} = 2.15, p = .040$) and 'supplementary' meanings ($t_{28} = 2.27, p = .031$) between the two groups, but not in total scores ($t_{28} =$

1.84, $p = .077$) and the numbers of 'wrong' responses ($t_{28} = -0.42$, $p = .469$). The middle-old group produced fewer in numbers of 'core' and 'supplementary' meanings than the young-old. Conclusion : In conclusion, the ability of defining a word with abundant and diverse semantic features is declined with age. Keywords : word definition, semantic features, normal elderly

PP26 S-044

THE RISK OF DYSPHAGIA IN THE ELDERLY COMMUNITY, SOCIAL ACTIVITIES, AND NUTRITIONAL STATUS

Sun Woo YIM¹, Young Hae KIM², Youngju JEE³ (1. Pusan National University, Master Student, Korea; 2. Pusan National University, Professor of Nursing, Korea; 3. Kyungnam University, Professor of Nursing, Korea)

Introduction : Dysphagia closely related to aspiration pneumonia in the elderly, and increase mortality risk factors, so important senior health issues. This research survey is performed to provide the basic data needed to prepare, and social activities, and the relationship between nutrition and the risk of dysphagia screening of the Elderly in Nursing interventions for dysphagia risk group to identify the narrative. Method : The sample consisted of 320 older adults recruited by convenience sampling from 6 social welfare centers, 5 senior centers and Park in Busan and Kyungnam. Data were collected from January 3, 2013 to March 20, 2013. The questionnaire used in this study was 23 about dysphagia risks, 1 about social activity, and 6 about short-form mini-nutritional assessment(MNA-SF). Data was analyzed by SPSS WIN 18. Results : The mean score for dysphagia risks was 9.40(SD=7.60), social activity was 3.17(SD=1.13) and MNA-SF was 21.21(SD=5.41). 208 participants(65.0%) were at dysphagia risk and 43(13.4%) were Malnutrition, 201(62.8%) were malnutrition, 76(23.8%) were nutrition usually. There was a statistically significant difference in dysphagia risks according to social activity($\chi^2=34.10$, $p<.001$) and MNA-SF($\chi^2=33.10$, $p<.001$). There were statistically significant associations of dysphagia risks with social activity($r=.165$, $p=.003$) and MNA-SF($r=-.408$, $p<.000$). Conclusion : Findings showed that the vast majority of the study sample had significant relationships were found between dysphagia risks with social activity and nutrition. Future research is warranted to identify risks associated dysphagia in older adults with various health conditions including healthy community dwelling elders. Nursing interventions to prevent dysphagia that are tailored to levels of social activity and nutrition are necessary. Keywords : Dysphagia , Elderly, Nutrition

PP26 S-045

THE EFFECT OF THE EDUCATIONAL PROGRAM FOR RESIDENTIAL ENVIRONMENT IMPROVEMENT FOR FALL PREVENTION OF THE ELDERLY ON FALLS EFFICACY

Miseon JANG, Yeunsook LEE (Housing and Interior Design, Yonsei University, Korea)

Introduction : The increasing number of older people suffering from falls causes increasing medical costs. Almost half of all safety accidents occurring at home can be prevented by eliminating risk factors in the home. However, the elderly tend not to recognize the necessity of renovating their houses. This study intends to identify the effect of the education for residential environment improvement for fall prevention of older people upon the falls efficacy. Method : This study carried out a quasi-experimental research to identify the differences in falls efficacy by implementing the education for residential environment improvement to prevent falls through the fall efficacy scale. The test group participated in the education for 6

weeks: 3 weeks of general education for fall prevention and 3 weeks of education to improve residential environment, with the control group participating in only general education for 3 weeks. Total subjects of the study were 36 older people and their falls efficacy was measured twice, both before and after education was provided. Results : The falls efficacy of the test group and the control group was similar before the education was provided. However, the study revealed that after the education, the test group showed a higher level of fall efficacy than the control group. Generally aged people have a fear of falling but if they attain high falls efficacy, the chances of falling are greatly reduced. Conclusion : This study is meaningful because the education for residential environment improvement developed has promoted fall efficacy of aged people thus improving the chances of fall prevention. Keywords : Fall prevention, Falls efficacy, Education for residential environment improvement

PP26 S-046

CORRELATION BETWEEN SPEECH RATE AND DEPRESSION IN WOMEN IN LATE ADULTHOOD

Yun Kyung HWANG¹, Min Ah BAIK¹, Hyunji YOO¹, Hyanghee KIM² (1. Graduate Program in Speech and Language Pathology, Yonsei University, Korea; 2. Graduate Program in Speech and Language, Department and Research Institute of Rehabilitation Medicine, Yonsei University College of Medicine, Korea)

Introduction : Previous studies have revealed that there is effect of depression on speech. In order to support these findings, this study was designed to identify correlation between articulatory phonetic features (i.e., fundamental frequency (f0), pitch range, speech rate) in numerical counting task and the Geriatric Depression Scale (GDS) scores of the women the late adulthood. The hypothesis predicts that the participants will show negative relationship between the GDS results and articulatory phonetic features. Method : Participants were 64 normal healthy women (age=74.22±4.92). The mean (SD) of the Mini-Mental State Examination (MMSE) scores was 25.51(±2.77). The participants' automatic speech was analyzed by Praat(v5.2.16). Pearson correlation coefficient method was used for statistical analysis. Results : The results demonstrated that speech rate indicated inverse relationship ($p<0.05$) with GDS scores indicating the higher GDS, the slower speech rate. On the other hand, GDS scores did not have any relationship with f0 and pitch range. Conclusion : Slower speech rate might be indicative of depression in women in late adulthood. Further studies utilizing larger sample size and various phonetic features may increase validity of the findings. Keywords : Depression, Articulatory Phonetic, Late adulthood

PP26 S-047

FALL PREVALENCE AND RISK ASSESSMENT AMONG COMMUNITY DWELLING OLDER ADULTS (AGED 50 YEARS AND ABOVE) IN MALAYSIA

Asmidawati ASHARI¹, Keith HILL², Aizan HAMID³, Rizal HUSSAIN³ (1. Institute Gerontology, University Putra Malaysia, Malaysia; 2. School of Physiotherapy, Curtin University of Technology, Australia; 3. Institute Gerontology, Universiti Putra Malaysia, Malaysia)

Introduction : Falls are a major public health problem for older people worldwide, however there is growing evidence the prevalence rate of fall are varies and differences in some risk factors between countries and cultures that mean that data on risk and effective interventions cannot necessarily be translated between countries. Method : A cross sectional study among community dwelling older adult age 50 years and above using convenience sampling. A structured series of self-

administered questionnaires, retrospective recall of fall in previous 12 months, physical assessment and clinical measures of balances were carried out on a single occasion. Results : The prevalence rate of falls was 31.0%, with 26.6% experiencing one fall and 4.4% having two or more falls within the previous twelve months from the date of interview. Almost half (49%) of fallers reported that the falls was due to a slip, 26.5% a trip and 20.0% were reported as caused by loss of balance. More than half (54.5%) falls occurred in the afternoon. The most common area where falls occurred were inside the home (32.7%), outside home (30.6%), and 36.7% were at the community area. Among those who fell, it was noted that 40 (82%) suffered injuries and 18 (36.1%) required medical treatment and 6.1% reported had a severe injury such as fracture or dislocation. Conclusion : In conclusion the prevalence and pattern of falls are common among studied population. Finding could provide baseline information of fall in Malaysia. In future, larger study which focused on fall risk assessment should be tailored culturally appropriate fall prevention program. Keywords : falls, community

PP26 S-048

EVALUATE HEALTH CARE SERVICES PROVIDED FOR OLDER PERSONS IN PRIMARY HEALTH CARE CENTERS IN RIYADH CITY, KINGDOM OF SAUDI ARABIA-A FIRST STEP TOWARDS AGE FRIENDLY PRIMARY HEALTH CARE CENTERS

Adel ALHAMDAN¹, Saad BINDAWAS¹, Saada AL-ORF¹, May AL-MUAMMAR¹, Essam AL-GHAMDI², Maysoun AL-AMOUD², Tariq HAMEED³, Sulaiman ALSHAMMARI¹ (1. *Health Care Development for Elderly Research Chair, King Saud University, Saudi Arabia*; 2. *General Directorate of Primary Health Care Centers, Ministry of Health, Saudi Arabia*; 3. *Community Health Sciences Department, College of Applied Medical Sciences, King Saud University, Saudi Arabia*)

Introduction : In the Kingdom of Saudi Arabia (KSA), the proportion of older persons (≥ 60 years) make up about 5.2% of the total population, and this population is expected to increase to reach 21.8% by the year 2050. The WHO calls for age-friendly primary health care centers (PHCCs), as the provision of necessary health services at PHCCs, for older persons, would inevitably reduce the risk of developing chronic diseases and/or their complications, and would result in a better return for the economy. The present study aimed to evaluate the services provided by PHCCs for older persons, in Riyadh, KSA. Method : The study is a part of a large project, funded by the National Plan for Sciences and Technology (Project No. 10MED121902), King Saud University, to evaluate the services provided for older persons at PHCCs, including their internal environment, and to assess their health status in Riyadh city, KSA, for a period of two years of a total amount of (\$439,950). Results : Preliminary results show that all PHCCs do screening of cholesterol. For osteoporosis screening, the centers do the screening by referral, if required. About 90% of PHCCs use familiar pictures in order to increase recognition, for those with cognitive impairment. none of the centers have dedicated parking lot for older persons. Only 60% of public toilets, in the PHCCs, were accessible to the wheel chair users. Conclusion : We expect that the project will provide a strong base for development of future health-care strategies for the wellbeing of the older-Saudis people towards age friendly PHCCs. Keywords : Older persons, Primary Health Care Centers, Health services

PP26 S-049

KAZAKHSTAN HEALTH STUDY : THE STUDY OF THE DETERMINANTS OF METABOLIC SYNDROME IN

ELDERLY POPULATION

Adil SUPIYEV, Alibek KOSSUMOV, Leila UTEPOVA, Almagul KUSHUGULOVA, Talgat NURGOZHIN, Zhaxybay ZHUMADILOV (Department of Translational Medicine, Longevity and Global Health, Center for Life Sciences, Nazarbayev University, Kazakhstan)

Introduction : The Center for life sciences developed the KHS study as part of a Center's survey program to compile comprehensive information on the health and well-being of adult populations in Kazakhstan. The aim of the project is a comprehensive study of various markers and biomarkers of aging in elderly persons in the Republic of Kazakhstan. Method : a cross-sectional study of random population sample in Astana (Kazakhstan) was conducted. Socioeconomic circumstances and health behaviours were available from 500 pilot subjects aged 50-75 years. Data was collected in a form of standardized questionnaires, clinical data and laboratory results. A standardized questionnaire includes an overall assessment of the patient's health, medical history, lifestyle, socio-economic and psychosocial indicators, as well as physical examination and biometric indicators: height, weight, body length, waist and hip circumference, blood pressure, cognitive function, objective measurements of physical functioning. Also blood samples was collected: Plasma, Serum, Full blood, and Buffy coats (DNA). Results : The associations between socio-economic indicators and health behaviour showed heterogeneity in comparison with countries. Future studies should consider multiple measures of socio-economic position. Population genetics to be analysed this year (2013). Addressing health inequalities is high on international agenda. Our finding of a pronounced social gradient in physical functioning and health behaviours in the population sample in Astana is crucial for policy makers in public health. Conclusion : Investigation of the patterns of socio-demographic aspects of aging population in Kazakhstan is the basis for identifying the ways to address the socio-economic problems. Keywords : aging, epidemiology, health survey

PP26 S-050

A NEW EXPLANATORY MODEL OF EMERGENCY DEPARTMENT USE AMONG COMMUNITY-DWELLING OLDER ADULTS

Andrew P. COSTA¹, John P. HIRDES² (1. *School of Public Health and Health Systems; Department of Medicine, University of Waterloo; McMaster University, Canada*; 2. *School of Public Health and Health Systems, University of Waterloo, Canada*)

Introduction : Emergency department use among older adults is associated adverse outcomes and increased health care costs. Approximately 8% of adults over the age of 65 and 33% of adults over the age of 85 in Canada receive home care services. The objective of this study was to develop and validate an ED risk model for use in home and community care. Method : A multi-year cohort study was conducted on elderly Canadian home care clients in two Canadian provinces (N=617,035). Census-level data from RAI Home Care assessments were linked to census-level emergency department records. Unplanned ED use was totaled for 6 months after each assessment. Decision tree models were created from a regionally stratified data partition using manual Chi-Square Automatic Interaction Detection and based on Andersen Behaviour Model. A final model was validated on a separate partition (N=154,262). Results: Overall, 41.2% of home care clients have at least one unplanned emergency department visit within 6 months of an assessment. The final model showed good statistical performance as well as practical potential at the point of care. It achieved an area under the curve of 0.62 (95% CI: 0.61-0.62) and showed clear

differentiation in Kaplan-Meier plots. The model outperformed existing models that were derived from the data set. Predisposing and enabling characteristics provided very little added differentiation beyond evaluated need. Conclusion : The model serves as a clear articulation of the chronic conditions and symptoms that drive emergency department visits. It can support the targeting of preventative services as well as better communication strategies with primary care. Keywords : emergency department, home care, screening

PP26 S-051

ASSESSMENT OF ELDERLY SELF-PERCEIVED APPETITE IN SOUTHERN BRAZIL

Claudine Lamanna SCHIRMER¹, Maria Marina Serrao CABRAL², Angelo Jose G. BOS¹ (1. Institute of Geriatrics and Gerontology, Pontifical Catholic University of Rio Grande do Sul, Brazil; 2. Nutrition, Federal University of Rio Grande do Sul, Brazil)

Introduction : Self-perceived health includes aspects of physical, cognitive and emotional. In the elderly population, appetite reduction is related to the same, unintentional weight loss and cachexia. Objectives: To assess the perception of appetite elderly. Method : This study is a result of the research 'Older Adults' Profile in RS' involving 7316 older adults from 59 different cities. They answered a questionnaire based on the WHO report "Global Age-Friendly Cities: A Guide". The questionnaire encompassed choice questions simple as: 'I would say that overall, their appetite or desire to eat has been ...' Statistical analysis of data was by Epi Info version 3.5.3. Results : When asked about the desire to eat, most seniors report having a good appetite, among these 59.1% (n = 2,237) of women and 58.4% (n = 2,060) of men, 22.9% (n = 867) of women and 22.6% (n = 796) of men consider their great appetite, 16.8% (n = 636) females and 18.5% (n = 652) of men reported feeling hungry in regular intensity and only 33 women (0.9%) and 18 men (0.5%) consider their appetite bad. Conclusion : It is concluded that most of the elderly have an appetite considered good, enabling better health promotion and healthy aging through good nutrition throughout life. Keywords : Health promotion, Eating habits, Self report

PP26 S-052

ASSOCIATIONS BETWEEN STAGES OF CHANGE FOR EXERCISE AND PHYSICAL FUNCTION AND PHYSICAL ACTIVITY IN COMMUNITY-DWELLING OLD-OLD PEOPLE

Atsushi MIZUMOTO¹, Hikaru IHIRA¹, Keisuke YASUDA¹, Keitaro MAKINO¹, Yoko MIYABE¹, Kaori YOKOYAMA², Shigeyuki SAITO³, Ohnishi HIROFUMI⁴, Takao SUZUKI⁵, Seiji YASUMURA⁶, Taketo FURUNA¹ (1. School of Health Sciences, Sapporo Medical University, Japan; 2. Department of Social Health & Welfare, Bibai City Office, Japan; 3. Department of Nursing and 2nd Department of Internal Medicine, Sapporo Medical University, Japan; 4. Department of Public Health and 2nd Department of Internal Medicine, Sapporo Medical University, Japan; 5. National Institute of Longevity Science, National Center for Geriatrics and Gerontology, Japan; 6. Department of Public Health, School of Medicine, Fukushima Medical University, Japan)

Introduction : The transtheoretical model of behavior change (TTM) is used for clarifying changes of health behavior. Although TTM would be a tool to measure behavior and motivational readiness, there were few studies focusing on the change of exercise behavior in older adults. This study aimed to examine the relationship among stages of change for exercise behavior, physical performance and physical activity in community-dwelling older adults. Method : 273 older adults

aged 75 years and over participated in the first wave of the Population-based and Inspiring Potential Activity for Old-old Inhabitants (PIPAOI) study. To measure behavioral changes of exercise, a questionnaire developed by Oka was employed, which consisted of five scales: Pre-contemplation, Contemplation, Preparation, Action and Maintenance. Physical performances included grip power, knee extension power and 5m maximum walking time. A walking time per day would be a parameter of physical activity. Statistical analyses were performed using ANOVA and a Kruskal-Wallis test. Results : With respect to the distribution of stages of changes for exercise, Pre-contemplation was 27.8%, Contemplation was 14.7%, Preparation was 20.1%, Action was 1.5% and Maintenance was 35.9%. Significant associations were found between stages of change for exercise and grip power (F=6.05, p<0.01), knee extension power (F=4.39, p<0.01), 5m maximum walking time (F=9.21, p<0.01) and physical activity (F=6.07, p<0.01). Conclusion : It is demonstrated that subjects with higher functions and activities are on the advanced stage of changes for exercise behavior. These results show that appropriate interventions for each stage would be important for older people. Keywords : transtheoretical model, behavior change, exercise behavior

PP26 S-053

CANCER LITERACY ASSESSMENT TOOL FOR IMMIGRANT WOMEN

Barbara W.K. YEE¹, Lydia BUKI², Asha RATHINA-PANDI³ (1. Family and Consumer Sciences, University of Hawaii at Manoa, USA; 2. Education and Psychological Studies, University of Miami 312 Merrick Building Coral Gables Florida 33146, USA; 3. Asia Research Institute, National University of Singapore, Singapore)

Introduction : Half of all mortality can be attributed to behavioral factors, lifestyle choices, and health literacy. Western acculturation processes may increase the risk of poorer health. For example, higher breast cancer rates have increased dramatically among Asian, American born women, those who have lived in the U.S. for many years, as well as immigrant women who have adopted an American lifestyle. Method : This poster will describe the development of a breast and cervical cancer literacy measure for Filipina and Mexican American immigrant women who were 39 to 88 years of age, average age of 63 years of age (SD = 12.78), Median length of time in the U.S. @ 34 years (SD = 14.62), average years of formal schooling 7.58 (SD = 13.20) between the 4th to 8th grade. Demographics, Breast and Cervical Cancer Literacy Measure, Acculturation Scale and the Short Test of Health Literacy in Adults. Results : This study found both universal and unique cultural literacy issues among Filipino and Mexican American immigrant women. While some Mexican women were uncomfortable discussing cancer issues, they still discussed it because they felt it was important. In contrast, some Filipina women feared getting cancer by merely talking about cancer. Conclusion : These cultural differences influenced these women's ability to obtain, understand, process, and use health information to promote breast and cervical health. Longitudinal research is needed to examine acculturation processes and its health risk by literacy levels. Keywords: cancer literacy acculturation immigrant women

PP26 S-054

LOGISTIC REGRESSION MODELS TO AID THE DIAGNOSIS OF THE ELDER'S MENTAL HEALTH PROBLEM

Bungon KUMPHON, Anong MANEERONG (Mathematics, Faculty of Science, Mahasarakham University, Thailand)

Introduction : One of the important problem of public health in Thailand is the increase number of the elder's mental health problems.

Method : 425 elders were selected from stratified random sampling and using Thai General Health Questionnaires (GHQ-12) as a instrument. Results : The results from this research revealed that 360 (83.3%) of elderly had no mental health problems and 72 (16.7%) had mental health problems. A pool of 16 variables has been evaluated with logistic regression model for mental health prediction. 8 variables as status, education, region, occupation, source of income, disease, self-care ability and age can be a first aid to diagnose with 88.1 percentage of correction. Conclusion : For the future planning in mental health solving, the stakeholder should be concerned about these variables. Keywords : Mental Health Status, Elderly, Logistic Regression

PP26 S-055

EFFECT OF FIVE-MONTH GROUP-BASED WALKING PROGRAM ON COGNITIVE, HEALTH STATUS AMONG COMMUNITY DWELLERS: A RANDOMIZED CONTROLLED TRIAL

Chiaki URA, Fumiko MIYAMAE, Mika SUGIYAMA, Narumi KOJIMA, Ryo HIRAYAMA, Shuichi AWATA, Ryutara TAKAHASHI (*Research Team for Promoting Independence of the Elderly, Tokyo Metropolitan Institute of Gerontology, Japan*)

Introduction : We have developed an intervention program to help maintain the cognitive functions of community-dwelling older adults through group-based physical activities including walking. Earlier findings indicated that three-month participation in this program has a limited effect; a significant increase in cognitive functions was observed only for those with mild cognitive impairment. Our aim in this study is to identify whether longer (i.e., five months) participation might improve the cognitive as well as other health status of older adults without regard to their pre-intervention cognitive functions. Method : One hundred eighteen community dwellers age 65-79 who were aware of cognitive decline but not diagnosed with dementia were divided randomly into intervention and control groups. After those in the intervention group participated in the program for five months, we conducted ANCOVA to examine whether multiple dimensions of cognitive and health status differed by group. Results : Overall, limited effects of the program were indicated. A significant group difference was found in emotional well-being but not in any index of cognitive functions. Yet, when analyses were restricted to participants with a lower score on Mini-Mental State Examination (MMSE; 26 or under) as well as a smaller number of daily steps at pre-intervention, both verbal fluency and motor functioning improved among those in intervention but not in control groups. Conclusion : Although the cognitive effects did not differ remarkably by the length of the program, five-month participation may improve not only cognitive but also motor functioning. Keywords : Walking Program, Randomized Controlled Trial, Cognitive Functions

PP26 S-056

EFFECT OF EXERCISE PROGRAM FOR ELDERLY DISASTER VICTIMS OF THE GREAT EAST JAPAN DISASTER

Chieko GREINER¹, Kana ONO¹, Chizuru OTOGURO¹, Kyoko CHIBA¹, Noriko KUWADA¹, Chizuru SAKAGUCHI¹, Tokiko ISOWA² (*1. School of Nursing, The Japanese Red Cross College of Nursing, Japan; 2. School of Medicine, Mie University, Japan*)

Introduction : The purpose of this study was to develop an exercise program to achieve sustenance and improvement of physical function for elderly disaster victims of the Great East Japan Disaster and verify the effectiveness of the program. Method : Participants were 45 elderly disaster victims, from whom consent was obtained for this study. A

pamphlet describing stretches and muscle training exercises was developed and distributed to the participants. The exercise classes based on the pamphlet were staged once a week for six months at a facility in a temporary housing area. The one-hour classes held consisted of exercises and tea-time. A portable calendar and a stamp were also distributed to each participant. Functional reach test (FRT), time of standing on one foot (TSF), timed Up & Go Test (UGT), and sit on chair and stand up test (SCST) were measured before, and after three and six months from the exercise classes. Data was analyzed using ANOVA. This study was approved by a research ethics review board at the first author's affiliated university. Results : 27 (female 26) of 45 participants could continue the classes for six months. Mean age was 70.1 (SD£25.0). As results analyzed using ANOVA, FRT (p£0.000), TSF (p£0.007), and SCST (p£0.000) showed significant improvements. Conclusion : Inferior limb muscle power and balance functions improved after participation in the exercise program. The distribution of calendars and stamps to participants was shown to increase participant's motivation for doing exercises. Holding tea-time after classes to promote participants' interaction encouraged participants to continue attending the classes. Keywords : exercise program, elderly disaster victims, physical function

PP26 S-057

IMMEDIATE CORONAL PLANE KINETIC EFFECTS OF NOVEL LATERAL OFFSET SHOES AND LATERAL WEDGED INSOLE SHOES IN HEALTHY SUBJECTS

Jongwoo KANG¹, Haesoo PARK², Chunkyun NA³, Jongwoong PARK⁴, Jungwha HONG⁵, Soonhyuck LEE⁴ (*1. Department of Orthopedic Surgery, Inje University, Korea; 2. Department of Footwear Engineering, Dongseo University, Korea; 3. Bando Hospital, Korea; 4. Department of Orthopedic Surgery, Korea University, Korea; 5. Department of Control and Instrumentation Engineering, Korea University, Korea*)

Introduction : Knee osteoarthritis affects an estimated 20-40% of individuals over the age of 65. Medial compartment knee osteoarthritis is 10 times more common than lateral compartment. This discrepancy is the result of greater load on the medial compartment cartilage of the knee joint. Although, the lateral wedged insole shoes reduce the peak knee adduction moment, they induce excessive ankle abduction moment, and may cause ankle joint problems. The novel lateral offset shoes (trapezoid soled shoes) would not only reduce the peak knee adduction moment but also minimize increases of the ankle and hip abduction moments. In addition, trapezoid-soled shoes may ameliorate the progression and reduce the degree of pain associated with medial compartment knee osteoarthritis, while inducing fewer ankle and hip joint problems. Method : Forty-eight healthy Korean subjects were recruited. Three different types of shoe were tested: conventional shoes (Control), lateral offset sole shoes (Condition A), and lateral wedged insole shoes (Condition B) by using a motion analysis system to check the knee adduction, ankle abduction and hip abduction moments. Results : Both lateral offset sole shoes and lateral wedged insole shoes reduced peak knee adduction moments compared with the Control condition. The peak knee adduction moment was not significantly different in both shoes. However, lateral wedged shoes demonstrated increased ankle abduction moment compared to others. Conclusion : Wearing lateral offset shoes can reduce the peak knee adduction moment with less influence on the ankle joint than wearing lateral wedged shoes. Therefore, the design of our lateral offset sole shoes are more beneficial than others. Keywords : osteoarthritis, lateral offset shoes, trapezoid soled shoes

PP26 S-058

EFFECTS OF PROGRAM INTEGRATING SOUND SCIENTIFIC CONCEPTS WITH HEARING CARE KNOWLEDGE FOR THE ELDERLY IN THE COMMUNITY

Chwen-Chi WANG¹, Jin-Jong CHEN², Chao-Ti HSIUNG¹
(1. Department of Science Education, National Taipei University of Education, Taiwan; 2. Department of Physical Therapy and Assistive Technology, National Yang-Ming University, Taiwan)

Introduction : Hearing loss not only affects the daily life communication, security and social activities closely related to the deterioration of cognitive function and quality of life. Therefore, this study aims to develop a program integrating sound scientific concepts and hearing care knowledge for the elderly. **Method :** Sixteen (6 males, 10 females) healthy elderly residents (70.3 ± 5.2 y/o) were recruited from Beitou Community College as volunteers in this study. Total 200- minute program is divided into two courses. First 100-minute course of sound scientific concepts teaching includes: (1) the generation of the sound; (2) the propagation of the sound; (3) the sound three elements, and (4) noise sound. Second 100-minute course of hearing care includes: (1) the structure of the ear; (2) common hearing problems; (3) hearing care, and the actual hearing test. Two different six-item tests designed for the two courses respectively were conducted before and immediately after the teaching program to evaluate the teaching effects. **Results :** Results revealed that the sound scientific literacy and hearing care knowledge of all subjects were improved significant ($p < .01$). Moreover, the feature of sound scientific concepts teaching emphasis on 'learning by doing' improved their conceptual understanding of sound. In addition, all 16 subjects agreed that these courses coincided to their preference and applicable for their life. **Conclusion :** In conclusion, the program integrating sound science concepts and hearing care knowledge could be interesting and effective for elderly lifelong health education. **Keywords :** sound scientific concepts, learning by doing, lifelong education, hearing care

PP26 S-059

THE EFFECTS OF LIFE STORY WORK ON THE PSYCHOLOGICAL OUTCOMES OF COMMUNITY-DWELLING SENIORS

Claudia Ky LAI, E. Angela CHAN (School of Nursing, The Hong Kong Polytechnic University, China)

Introduction : To date, strong evidence of the benefits of life story work (LSW) is lacking. This study aimed to examine whether LSW for community-dwelling seniors would lead to a higher level of life satisfaction and an increased sense of self-esteem and wellbeing. **Method :** The participants were randomly drawn and recruited from the membership list of 17 community and daycare centers. Participants in the intervention group worked with trained volunteers to produce their life story book through four to six semi-structured sessions either at the senior's home or at the social centers. The outcome measures included: (i) The Life Satisfaction Scale (LSI-A); (ii) the Rosenberg's Self-Esteem Scale (RSES); (iii) the General Health Questionnaire; and (iv) the Geriatric Depression Scale (GDS). Immediate outcomes (T1) of the LSB intervention were compared against the baseline (T0), and measurements taken three months (T2) and six months (T3) post-intervention. **Results :** 244 participants were randomly allocated to the intervention (n=124) and control group (n=120). There was no interaction effect of time and group on any of the outcome variables. Compared to T0, all outcome variables were more satisfying for both groups at T3, and the changes in LIS-A and RSES reached a level of significance. GDS, LIS-A, RSES, GHQ, time, sleep quality, monthly income, number of chronic illnesses, social network within the family,

social network with friends, IADL, BI, negative life events, and number of children alive were key variables in predicting outcomes. **Conclusion :** The findings did not show that LSW has significant effects on the psychological wellbeing of community-dwelling seniors. **Keywords :** life story work, community-dwelling seniors, intervention study, psychological outcomes

PP26 S-060

RESEARCH OF THEME PARK PLANNING AND SPACE DESIGN BASED ON THE REQUIREMENT ANALYSIS OF THE NEW SILVER GENERATION

Da Yeon LEE (Space Based Story Telling, Exhibition Planning, Graduated Graduate School of Creative Industry, Andong National University, Korea)

Introduction : Rapid aging dictates many cultural and financial changes. The cultural perspectives of the Silver Generation have changed in recent times as the generation looks to improve their quality of life by enjoying leisure and cultural activities. The New Silver Generation now demand the needs to enjoy leisurely activities but these are limited due to lack of both culture and leisure centers which can accommodate their needs. **Method :** The value of this research is significant in targeting the New Silver Generation from the wide range of the elderly population and basis of the requirement analysis is derived from surveys, in-depth interviews, and case studies to accommodate the needs of the subject to plan and design the proposed theme park. **Results :** The New Silver Generation's needs portrayed in their proud actions which are rooted on the notions that "health is the most important thing in life," Therefore, from such needs and desires, the concept of the new silver theme park has been derived as "preparing for a healthy life and future." It shall be named the "Health Aging Park." **Conclusion :** The main focus of Health Aging Park is health. In relation to the concentration of health; light exercise, leisure activities, means and medical care are the theme park's four prime objectives. It is anticipated that the programs designed for fun exercise at Health Aging Park will slow the effects of aging and help extend the health of the entering members of the New Silver Generation. **Keywords :** Healthcare, New Silver Generation, Theme park

PP26 S-061

FACTORS WHICH AFFECT THE HEALTH RELATED QUALITY OF LIFE OF OLDER ADULTS IN KOREA

Eunhee CHOI (Department of Nursing, Yeungnam College of Science and Technology, Korea)

Introduction : Older adults are generally characterized in Korean society as weak and physically in a degenerative state. At least 69% of the entire older adult populations surveyed are afflicted by one or more illnesses. Moreover, their psychiatric needs are greater than their physical needs, but neither are expressions of health related quality of life. In order to have a healthier older adult population, attention must be given to their health related quality of life that strongly related with successful aging. The EQ-5D instrument is an appropriate method to access the health related quality of life of older adults⁴ and will be instrumental in future research in finding solution to this growing problem. **Method :** Data used in this study was obtained from the Korean National Health and Nutrition Examination Survey (KNHANES IV-1). The SPSS 12.0 software program was used in the analysis of the numerical data, percentages, Pearson correlation, and multiple logistic regression. **Results :** The factors that are associated with health related quality of life are: home ownership, perception of health, discomfort during the previous two weeks, limitations in

activity, lying sick in bed during the previous month, depression lasting over a two week period, and contemplating suicide. The factors that affect health related quality of life are: limitations in activity, perceived health, contemplating suicide, discomfort during the previous two weeks, and home ownership. Conclusion : The findings suggested that the older adult had main factors affecting on quality of life. Nursing interventions tailored on the elder's characteristics that affect on the quality of life. Keywords : EQ-5D, Older adults, Korea

PP26 S-062

THE EFFECTS OF EXERCISE PRESCRIPTION SERVICES CUSTOMISED FOR THE AGED INDIVIDUALS ON THEIR FUNCTIONAL FITNESS

Hee Eun NAM, Mi Ran LEE (Department of Social Welfare, Kosin University, Korea)

Introduction : This study is to examine the effects of exercise prescription services customised for the aged individuals on their functional fitness by implementing mixed exercise prescription programs that mainly deal with physical activities as preventive treatment such as Yoga, Dancing, and Sports massage. Method : 60 elderly women over the age of 60 living in Y-gu in B-metropolitan city were used as subjects of this study and twenty persons per program were allocated to Yoga, Dancing, and Sports massage to observe the difference in the functional strength of the subjects with different exercise prescription applied. Results : As results of the study, it was observed that all of the three exercises of Yoga, Dancing, and Sports massage show improved muscular strengths in the upper limbs, flexibility of pelvic limb, and agility after the exercise, compared with them before the exercise and the extents of the effects generated by each of them differed. Conclusion : Significance of this study was the basis for a more effective program data were obtained through the comparison on the effects of social service programs 'personalized exercise prescription elderly services'. Keywords : The aged, Exercise Prescription Service, Functional fitness.

PP26 S-063

THE LONGITUDINAL FACTORS RELATED TO THE DEPRESSION OF ELDERLY: COMPARISON OF YOUNGER-OLD AND OLDER-OLD

Hye-Kyung KIM, Jun Mo SUNG (Division of Social Welfare, Korea Nazarene University, Korea)

Introduction : It is well known that the depression is main psychological problem of the elderly, however, very few approach was conducted using longitudinal data-set in Korea. The purpose of this study is to investigate the longitudinal factors related to the change of depression of elderly focusing on the comparison between the younger-old and older-old. Method : We analyzed elderly data from the wave 1 to wave 4 of Korean Welfare Panel Study(KWPS). KWPS is representative nationwide panel data. Final analysis subjects are 2,766, 2,552, 2,351, and 1,765 in each year. Dependent variable is CES-D(Center for Epidemiological studies for Depression Scale), and independent variables are family, health, housing, social, and economic factors. Sex, age, educational level, living area, and religion are controlled. Fixed effects model of GLD(Generalized Least Squares) was employed to examine the longitudinal correlations between dependent and independent variables both age group. Results: Main results are as follows. Satisfaction with family relation, health, housing environment, and leisure had negative influence on the depression both younger and older-old. On the other hand, basic livelihood recipient showed higher depression score only in younger-old. Conclusion : Our findings suggests that the determinant of

depression of elderly are such as family, health, housing environment and leisure satisfaction regardless of age. However, the importance of economic status is more important in younger-old. The policy directions for reduce depression level in ole age was discussed. Keywords : depression, panel data, younger-old, older-old.

PP26 S-064

A STUDY ON THE ANALYSIS OF OLDER ADULTS' EXERCISE PARTICIPATION IN TAIWAN

I-Yao FANG¹, Shao-Hsi CHANG², Eva Hui-Ping CHENG³, Ming-Chun HSUEH¹ (1. Department of Physical Education, National Taiwan Normal University, Taiwan; 2. Graduate Institute of Sport, Leisure & Hospitality Management, National Taiwan Normal University, Taiwan; 3. Department of Leisure and Sport Management, National Taipei University, Taiwan)

Introduction : In 2011, older adults aged 65 years and over in Taiwan represented 10.89% of the total population. Taiwan will soon become an aged society in 2017, and a super-aged society in 2025 as the aging population will be more than 20% at the time. The aging phenomenon is comprehensively in its scope and future impacts on societies. In order to assist people to stay healthy, the main official strategy is to promote national-wide physical activity programs (sports activities). Therefore, the purpose of this study was to analyze the sports participation of older adults aged 65 years and over, and come up with suggestions based on the study results. Method : Content analysis was adopted as the research method and the government official publications between 2009 and 2012 on national survey on sports were analyzed. Results : 1)Most Taiwanese older adults started to exercise regularly after reaching 60 years old. 2)The percentage of regular exercise was as high as 56.25% (at least 3 times per week, at least 30 minutes per time), and 39% for exercise daily. 3)The main physical activities of older adults were low intensity activities such as walking, brisk walking, and exercise. 4)The intensity of the elderly exercise is mostly perspiring but not breathing heavily, representing 44.2%. 5). The main exercise venues are surrounding parks, green places and schools nearby. Conclusion : Conclusion: the government should develop professional exercise programs for older people, to provide instructors in accessible venues and therefore to strengthen their sports-related skills and knowledge. Keywords : older adults, elderly physical activities, exercise participation

PP26 S-065

INFLUENCE OF INCOME AND SELF RATED SOCIOECONOMIC POSITION ON LIFESTYLE, PHYSICAL AND PSYCHOLOGICAL FUNCTION IN CHINESE OLDER ADULTS AGED 65 YEARS AND OVER

Jean WOO¹, Jason LEUNG², Ruth CHAN¹, P.H. CHAU³ (1. Medicine & Therapeutics, The Chinese University of Hong Kong, Hong Kong; 2. Jockey Club Centre for Osteoporosis Care and Control, The Chinese University of Hong Kong, Hong Kong; 3. Faculty of Social Sciences, The Chinese University of Hong Kong, Hong Kong)

Introduction : In order to examine the whether socioeconomic factors contribute to health disparities in older populations in a society with universally accessible low cost health care and social welfare system, we examined the influence of absolute income, disposable income and self-rated socioeconomic position on lifestyle and various health outcomes in a cohort of community-living people aged 65 years and over. Method : 1324 participants (605 men, 719 women) aged 65 years and over living in the community were recruited as part of a health survey, which included information regarding demographics, medical history, smoking, alcohol intake, physical activity level, dietary intake,

activities of daily living, depressive symptoms, health-related quality of life, and physical performance measures. Self-rated socioeconomic status was assessed by asking participants to place a mark on a picture of an upright ladder. Details regarding monthly expenditure, monthly income and whether participants viewed that they had enough money, were also obtained. Results : More associations were observed between the two self rated SES status and health outcomes compared with the objective income indicators. In general higher SES status is associated with better physical and psychological function. A disposable income \geq \$500 was associated with better physical component of health related quality of life in women. Conclusion : In the older population, even with universally accessible health care and social welfare, associations between SES and health outcomes are still observed. Self-rated SES scales may be useful measures for health outcomes relevant to the elderly. Keywords : socioeconomic status

PP26 S-066
THE KOREAN LONGEVITY WALKING METHOD -
JANGSAENG BOBUP 長生步法

Jin Kyung AN (*Brain Education Institute, University of Brain Education, Korea*)

Introduction : This research deals with the longevity technique Jangsaeng bobup (眞生步法), which help the true longevity accomplished in modern Korean Sundo (尊道), Korean traditional Taoism. The Jangsaeng bobup in modern Korean Sundo is a walking method that focuses on the yongcheon (眞氣) acupuncture point of foot and applies acupressure on the front of the foot when walking. The breath, the stream of qi (氣) energy, and acupuncture points are important in Jangsaeng bobup. Method : This research compares the three western walking techniques of Masai walking, Power walking, and Nordic walking that have high general awareness and popularity with walking in modern Korean Sundo longevity techniques. Results : The most difference of Jangsaeng bobup from the three western walking techniques is on consuming and accumulating of the energy. The purpose of the three western walking is to promote calories, build up muscles, reduce fats, and improve cardiovascular fitness. They maximize the effectiveness of energy consumption, release the toxic waste matters, and enhance the mobility and function of the body. While western techniques mainly focus on the physical improvement and health maintenance, Jangsaeng bobup is more related to the accumulation of qi. In other words, it is a method to use and supplement qi that is kept consuming in daily life. And its concentration training on the body when Jangsaeng bobup can makes the walker meditating status. Conclusion : Jangsaeng bobup is the longevity technique to attain the mental and spiritual health and complete the human in ourselves on the basis of physical health. Keywords : walking, Jangsaeng bobup (眞生步法), qi (氣) energy

PP26 S-067
IMPROVEMENT OF FUNCTION AND SELF ESTEEM AFTER
1 YEAR PROGRAM OF LOCAL GOVERNMENT'S HEALTH
CENTER FOR THE OLD DISABLED PEOPLE

Joon-Sung KIM¹, Seong-Hoon LIM², Boyoung HONG¹
(1. Department of Rehabilitation Medicine, St. Vincent's Hospital The Catholic University of Korea, Korea; 2. Rehabilitation Medicine, St. Vincent's Hospital The Catholic University of Korea, Korea)

Introduction : Increasing number of old people in Korea is one of the leading problems in nowadays. There are very few places that they can spend their time, especially for the disabled people and very elderly people. Method : One of the local governments, Hawseong-si operated the health center for the elderly who have mild disability and disease.

The members of this center were comprised of one nurse, one occupational therapist and two assistants. The older people who enrolled the center were received 1 year program daily. The program was consisted of physical therapy, occupational therapy, cognitive training, stretching and strengthening exercise and some recreational activities. Results : Total numbers are 36 (M: 7, F 29). Mean age is 76.5 \pm 4.2. Most of them have disease such as hypertension, diabetes, dementia, stroke and arthritis. After the 1 year program, most of indexes improved, MMSE-K (22.0 \pm 4.0 to 23.4 \pm 3.6), FIM (107 \pm 13.3 to 110 \pm 11.3), Grasp power (25.1 \pm 6.8 to 30.4 \pm 10.3) and depression scale (20.3 \pm 3.1 to 17.5 \pm 3.9) respectively. Conclusion : The comprehensive program for the very elderly and disabled old people in Hwaseung-si is useful for the improvement of function and depression. Keywords : health center, elderly, function

PP26 S-068
REDUCING HUNGER AMONG MEXICAN-ORIGIN SENIORS
IN TEXAS BORDER COMMUNITIES

Joseph SHARKEY¹, Wesley DEAN¹, Melissa GOMEZ¹, Maria CASTILLO², Natalie RANGEL², Eba MUNGUIA² (1. Program for Research in Nutrition and Health Disparities, Texas Healthy Aging Research Network School of Rural Public Health, USA; 2. Program for Research in Nutrition and Health Disparities, School of Rural Public Health, USA)

Introduction : Nutrition-related health conditions disproportionately affect disadvantaged populations that face increased vulnerability to food insecurity and poor nutritional health, such as hard-to-reach older adults residing in colonias along the U.S.-Mexico border. Mexican-origin older adults face physical, economic, and sociocultural contextual challenges to the accessibility, affordability, adequacy, and appropriateness of food resources on multiple levels: individual and community. Method : In February 2012, seniors were recruited for 14 focus groups (FG) in four geographic areas to understand food acquisition and preparation knowledge and skills, and learning styles. All FG guides were written in an iterative process with team promotoras and community partners. All FGs were conducted by a highly trained promotora in Spanish and audio-recorded. a six-stage process was used for audio data transcription and translation in to English. All FG data were organized into segments, read through with themes identified and assigned, and sorting and sifting to identify similar phrases, patterns, themes, and common sequences. Results : Seniors described their experiences and beliefs in discussing the following topics: how they get food to eat at home; experiences when they do not have enough money for food; experiences when they do not have enough food to eat; major concerns; decision-making when confronting competing demands for resources; childhood experiences; planning for meal preparation; source of nutrition information; community resources; and community needs. Conclusion : Seniors will be key in identifying issues regarding food acquisition and food preparation knowledge and skills needed to reduce food insecurity. This will be key for increasing the knowledge and skills of Mexican-origin seniors. Keywords : hunger , immigrants, food insecurity

PP26 S-069
THE FACTORS INFLUENCING HEALTHY AGING IN
KOREANS

Eun Joo SEO¹, Eun-Young JEON², Kwuy-Bun KIM³ (1. Prof. Dep. of Nursing, Daegu Health College, Korea; 2. Prof. Dep. of Nursing, Daegu University, Korea; 3. Prof. College of Nursing Science, Kyung Hee University, Korea)

Introduction : This study was to examine the factors related to healthy

aging in Koreans. Method : The period of collecting the material was from August 1th to 20th of 2012, a preliminary search prior to the main investigation was carried out for the selection of analysis tools. Afterwards, the main investigation was carried out from September 5th to 25th of 2012 , by surveying 275 in person from 45 years old age. Data were analyzed with SPSS Window 20.0 program. To meet the purpose of the research, descriptive statistics, and multiple regression were performed. Results : 1. Demographic characteristics of subjects and healthy aging the results of the comparison of the differences, age, education status, living status and economic status were found significant differences. 2. The results of correlation between healthy aging were as follows. perceived health status, self-esteem, depression(), ego-integrity(), achievements, leisure activities, loneliness() was found in correlation to each other. 3. The predictors of healthy aging in Koreans were leisure activities, perceived health status, ego integrity, achievements and self-esteem. The biggest factor was leisure activities(B=0.273). These factors enabled to explain 52.6% of the total variance in persons. Conclusion : Based on these findings , the above major influencing factors leisure activities in Koreans, should be considered to develop a new nursing program for the healthy aging. Keywords : Factors, Healthy Aging, Korean

PP26 S-070

EDENTULISM IN THE BRAZILIAN ELDERLY AND ASSOCIATED FACTORS

Luisa Helena Do Nascimento TORRES¹, Juliana Balbinot HILGERT², Fernando Neves HUGO², Maria Da Luz Rosario De SOUSA¹ (1. Community Dentistry Department, Piracicaba Dental School, University of Campinas - UNICAMP, Brazil; 2. Community Dentistry Department, Federal University of Rio Grande do Sul, Brazil)

Introduction : Edentulism is a major public health concern, especially in developing countries because it affects quality of life and well-being of the elderly. Also, it is one of the leading causes of years lost due to disability. The aim of this study was to verify the association between edentulism and sociodemographic, general health and dental service use data. Method : This report is based on partial data retrieved from the second follow up of a cohort study carried out in Brazil, The Carlos Barbosa Cohort Study (CBCS), using preliminary data from 295 older subjects. The outcome was being edentulous or not. The independent variables were gender (male/female), age (<73/≥ 73 years-old), local of residence (urban/rural), income (0-2 /≥3 minimum wage), number of medications in use (0-1/2-13), depression (present/absent), dental care attendance (never/when having a problem, sometimes or regularly), type of dental service (particular or convenio/public). Associations between the outcome and sociodemographic data, general health and dental service use were assessed using Poisson regression. Results : The mean age was 73.16 and the mean schooling was 3.84. The variables associated with edentulism were gender (female, RP=1.80, CI95% 1.35-2.40), age (≥ 73 years-old, RP=1.34, IC 95% 1.10-1.63), dental care attendance (never go to the dentist, RP=1.66, CI95% 1.38-2.00), dental service type (public, RP=0.64, 0.49-0.84). Conclusion : The results suggest that sociodemographic and dental service use are associated with edentulism. Keywords : Tooth loss, Geriatric Dentistry, Health Services Accessibility

PP26 S-071

COMORBIDITY AND HEALTH HABITS AMONG DEMENTIA, MILD COGNITIVE IMPAIRMENT, AND COGNITIVELY NORMAL ELDERLY INDIVIDUALS IN SEOUL

Mi Ra SUNG¹, Myonghwa PARK², Dong Young LEE³ (1. General.

PhD. professor, Seoul Metropolitan Center For Dementia. Kyung-in women`s college, Korea; 2. Professor; College of Nursing, Chungnam National University, Korea; 3. Director, Professor; Department of Neuropsychiatry, Seoul Metropolitan Center for Dementia, Seoul National University Hospital, Korea)

Introduction : The aim of this study is to clarify the actual condition of the elderly of dementia, mild cognitive impairment, and cognitively normal who registered in Seoul Dementia Management Project. Method : In the present study, total 11,163(Dementia 5,312, MCI 2,814, cognitively normal, 3,037) elderly were analyzed including demographic characteristics, comorbidity, and healthy lifestyle habits. The data were collected in the data of Seoul Dementia Management Project. The diagnostic process for dementia, mild cognitive impairment, and cognitively normal involves assessment of MMSE as a screening and CERAD or SNSB as a diagnostic measure. Results : Demographic characteristics were revealed as followings at dementia; 78 years of the mean age at the time of definite diagnosis, and female(69.3%), and 4.55 years of educational period. There were several comorbidities including hypertension(61.7%), DM(31.8%),hypercholesterolemia(10.2%), heart disease(11.1%), obesity(4.2%), and strokes(21.4%). MCI were several comorbidities including women (62.0%) hypertension (56.5%), DM (26.8%), hypercholesterolemia (14.0%),heart disease(10.4%), and stroke(9.2%). Alcoholic history was found in 31.3% of the elders, and smoking in 24.4%. Cognitively normal demographic characteristics were more women(67.0%) compared to men(33.0%) and 6.7 yr was the average length of education. There were several comorbidities including hypertension (55.8%), diabetes mellitus (20.2%), hypercholesterolemia (15.8%), heart disease (9.3%), strok (5.0%). Alcoholic history was found in 29.8% of the elders, and smoking in 23.5%. Regular exercise was done more than 57.9% of the elders. Conclusion : Healthy lifestyle such as smoking, Exercise and alcoholic consumption could represent an important and potent protective factor for cognitive decline in elderly persons Authors expect that the present data will be used for establishment of dementia associated projects and policies. Keywords : elderly, Physical comorbidity, health-Habits

PP26 S-072

THE FACTORS THAT AFFECT MEANING OF LIFE THE ADULT AND THE ELDERLY

Mi Yeon JEONG¹, Eun Joo SEO², Kwuy-Bun KIM³ (1. Master's candidate, College of Nursing Science, Kyung Hee University, Korea; 2. Prof. Dep. of Nursing, Daegu Health College, Korea; 3. Prof. College of Nursing Science, Kyung Hee University, Korea)

Introduction : This study was to examine the factors related to meaning of life in the adult and the elderly. Method : The period of collecting the material was from August 1 of to 20th of 2012, a preliminary search prior to the main investigation was carried out for the selection of analysis tools. Afterwards, the main investigation was carried out from September 10th to 30th of 2012, by surveying by surveying 210 in adults from 45 to 64 years old and 198 in elders above the age of 65 in the areas of Seoul, Incheon. Data were analyzed with SPSS Window 20.0 program. To meet the purpose of the research, descriptive statistics, and multiple regression were performed. Results : 1. The degree of meaning of life in adults were significantly higher than in elders (F= 4.253 , p=.040). 2. The degree of meaning of life(t=3.611, p <.000), successful aging(t=2.563, p <.011), self-transcendence value(t=4.967, p <.000) showed significantly difference between in adults and elders. 3.The predictors of meaning of life in adults and elders were successful aging(=0.353),

hope($r=0.289$), self-transcendence value($r=0.189$), and allowance($r=0.117$) in adults and hope($r=0.351$), life satisfaction($r=0.272$), successful aging($r=0.274$) in elders. The biggest factor was successful aging in adults and hope in elders. These factors enabled to explain 51.9% of the total variance in adults and 59.4 % in elders. Conclusion : Based on these findings , the above major influencing factors, (successful aging in adults and hope in elders, especially) should be considered to develop a new nursing program for the meaning of life. Keywords : meaning of life, adult, elderly

PP26 S-073

RELATIONSHIP BETWEEN EPA/AA RATIO IN THE BLOOD AND LIFE SPAN AT A NURSING HOME

Miho MATSUDA¹, Hiroki MATSUDA², Minoru TAKEMOTO³, Yukio MATSUDA⁴ (1. *Special Nursing Home for the Elderly, Gerontopia Niigata (social welfare corporation), Japan*; 2. *Department of Gastroenterological Internal Medicine, Yokosuka Kyosai Hospital, Japan*; 3. *Department of Clinical Cell Biology and Medicine, Chiba University Graduate School of Medicine, Japan*; 4. *Sunayama Clinic, Miyoshikai, Japan*)

Introduction : EPA, unsaturated fatty acids mostly found in fish, is likely to have an anti-atherosclerotic effect. Method : Fasting EPA/AA ratios were measured early in the morning of 91 people who were currently residing at the nursing home without history of taking EPA drugs. The correlation between nursing care level, the degree of activities of daily life (ADL) in the elderly, and the degree of independence of the elderly with dementia, Hasegawa Dementia Scale-Revised (HDS-R) and life span were investigated. Statistical analyses were done using SPSS 15.0J. Results : The average age was 88 years old, the HDS-R average was 4.3 and the average of EPA/AA ratio was 0.5 (minimum value 0.1, maximum value 0.82). There was a positive correlation between nursing care level, the degree of ADL, and the degree of independence of the elderly with dementia ($r=0.279$, 0.3 , 0.26 , $p<0.05$). Within about a year after measuring their EPA/AA ratio, 10 people died. EPA/AA ratio was tended lower in people who died compared to people who survived. (people who survived 0.5 ± 0.1 vs. people who died 0.43 ± 0.16 , $p<0.056$). Conclusion : It was found that the EPA/AA ratio for elders on exactly the same diet varied between a minimum of 0.1 and a maximum of 0.82 suggesting that there might be individual differences in absorption of fatty acids from foods. In this study, it was suggested that the possible existence of a correlation between low EPA/AA ratio and lower life span. Keywords: EPA/AA

PP26 S-074

DEMENTIA, A CHALLENGE FOR THE PUBLIC HEALTH SYSTEM, BRASOV, ROMANIA

Minerva GURGU¹, Andreea ZAMFIRESCU², Ana Maria STROIE³, Doina MILHEM⁴, Aurel ROMILA⁵ (1. *Geriatrics, MD, PhD attendant, Emergency Hospital, Brasov University of Medicine and Pharmacy, Bucharest, Romania*; 2. *Geriatrics, MD, PhD attendant, Clinic of Geriatrics, "Sf. Luca" Hospital, University of Medicine and Pharmacy 'Carol Davila', Romania*; 3. *Geriatrics, MD, PhD attendant, Department of Geriatrics, Hospitalier Bretagne, University of Medicine and Pharmacy 'Carol Davila', France*; 4. *General Practitioner, Private Practice, Romania*; 5. *Psychiatry, MD, PhD, University of Medicine and Pharmacy 'Carol Davila', Romania*)

Introduction : Frequently, in primary care, the diagnosis of dementia is delayed; we need a strategy to encourage the early diagnosis. The goal of this project was to evaluate the cognitive function in a group of

community subjects. Method : During Oct 2011 - Oct 2012, Romanian Alzheimer Society, held a campaign for the evaluation of cognitive function and physical health. There were used 2 screening scales: MMSE, CT (Clock Test) and enquires that evaluated the life style, risk factors, chronic diseases and the frequency of medical visits. Patients with dementia were excluded from the study. The patients scores were compared with the normative values, differentiated on age, education level, risk factors and comorbidities. Results : A group of 356 subjects were evaluated; the average age was 69.5 years; 74% were females; 70% had a medium level of education; 26% had a high level of education and 4% had a low level of education. A high level of SMI was scored, 88.48%; 81.74% of the patients had a normal MMSE score; 16.01% had minor memory impairment; 2.24% had medium memory impairment. The CT scores ranged similarly to the MMSE scores. 93% of the subjects visit their GP on a regular basis, which is in direct correlation with the prevalence of chronic diseases. Conclusion : SMI has a high prevalence. For patients with risk factors and chronic diseases, it is required a regular monitoring of the cognitive function, using MMSE and CT. MMSE is easy to use and should be included in the national evaluation program. Keywords : MMSE, early diagnosis

PP26 S-075

EFFECT OF IMB (INFORMATION-MOTIVATION-BEHAVIORAL) MODEL BASED SELF-MANAGEMENT EDUCATION PROGRAM FOR OLDER ADULTS WITH DIABETES: A PILOT STUDY

Misoon SONG¹, Suyoung CHOI², Se-An KIM¹, Kyoungsan SEO¹, Soo Jin LEE¹, Eun Ho KIM¹ (1. *College of Nursing, Seoul National University, Korea*; 2. *Research Institute of Nursing Science, College of Nursing, Seoul National University, Korea*)

Introduction : Self-management is an important concept in terms of change life style and habit in order to prevent complications for older adults with diabetes. It has been known that providing knowledge to client is not enough in improving self-management behavior. IMB (Information-Motivation-Behavioral) model is a theory of behavior change that propose three important factors for behavior change; Information, motivation and behavioral skills. This is a pilot study that tested the effect of IMB model based self-management program for older adults with diabetes. Method : Ten older adults who were diagnosed with type 2 diabetes were recruited at a senior center in Seoul Korea. The intervention program is consisted with 12 weekly sessions with each session lasted 1 and 1/2 hours. The topics of the program were concord to guideline of the American Association of Diabetes Educators. Measurements were made at pretest (T0), 13th week (PT1), and 3 months later (PT2); weight, body fat, waist circumference, HgbA1c, Lipids, depression, diabetes knowledge, motivation, self-efficacy of self-management behavior, and self-management behavior. Results : There was no difference in HgbA1c between T0 and PT1, but it was significantly improved between PT1 and PT2. The level of motivation was improved between T0 and PT1, but no change was seen between PT1 and PT2. The self-management behavior was significantly improved between T0 and PT1, but no difference was shown between PT1 and PT2. Other dependent variables were shown no differences between times. Conclusion : The IMB model based self- management education program showed some potential benefit for older people with diabetes. Keywords : diabetes, IMB model, self-management

PP26 S-076

THE DEVELOPMENT OF A HEALTH FITNESS PROGRAM BASED ON ORIENTAL MEDICINE FOR KOREAN SENIORS

Moon Mi JUNG¹, Seung Jae PARK² (1. Graduate School, Yonsei University, Korea; 2. Oriental Medical Doctor, WOOJOO Korean Medical Clinic, Korea)

Introduction : The purpose of this research is to implement a health fitness program that focuses on the energy(gi) passages within the body which are connected to acupressure and acupuncture points to positively influence the body's internal rhythm. Within the government and private organizations the majority of health fitness programs that have been developed for seniors focus on the function of the body's musculoskeletal system. Because of the overwhelming presence of western medicine based approaches there are a lack of traditional Korean medicine based programs, which is why this research is necessary. **Method :** This research was based on the 'dong-eui-bo-gam' methods of Dr. Heojun and the 'sa-sang medical methods' of Dr. Jaema Lee. **Results :** As a result, it was found through Heo's method that people live in accordance with their energy levels, and that the thriving of one's energy is deeply connected to one's mental state and health. Furthermore, if one cultivates one's energy by tempering a sound mind that a longer lifespan will result. This suggested that the cultivation and care of one's energy flow is important. In the case of Lee's method, it was found that sickness and old age are caused by the depletion of spiritual essence which is caused by the loss of control over one's body. **Conclusion :** Therefore it was necessary to develop a health fitness program which will return control to one's body through the revitalization of one's spirit. **Keywords :** Korean Seniors , Health Fitness Program , Oriental Medicine

PP26 S-077

COMPUTERIZED INTERACTIVE MULTIMEDIA EDUCATION

Myonghwa PARK (College of Nursing, Chungnam National University, Korea)

Introduction : Interactive multimedia education using computer technology is increasing in the area of health education. The purpose of this study was to examine the effects of interactive multimedia education on community dwelling older adults' knowledge and efficacy for safe medication in Korea. **Method :** A nonequivalent control group pre and post-test design was used in this study. The interactive multimedia education was designed to suit the disease and medication characteristics of older adults. Education consisted of seven modules which contained the contents of medication name, usage, side effects, interactions, and storage requirements. Computerized interactive learning activities consisted of animation processes and games. A total of 60 older adults from local senior centers were recruited and assigned to the experimental and control group. Twenty six participants used the interactive multimedia education on laptop computers. **Results :** Subjects receiving interactive multimedia education had significantly higher self-efficacy ($t = 3.69, p = .001$) and knowledge ($t = 3.74, p < .001$) cores than the control group at post intervention. The participants believed the animations and games were useful. They agreed the program was easy and fun to use. They responded that much of the information was new for them and they would recommend the program to their friends. **Conclusion :** The study results suggest that the interactive multimedia education is an effective teaching method that empowers older adults with low information literacy to facilitate individual learning using computer technology. * This work was supported by the Korea Research Foundation (KRF) grant funded by the Korea government(MEST) (No. 2009-0067767) **Keywords :** computerized education, medication

PP26 S-078

COMPARISONS OF BODY COMPOSITION, BLOOD CONCENTRATIONS OF BONE METABOLIC MARKERS AND CRP RESPONSES TO THE DIFFERENT EXERCISE TRAINING

Nayoung AHN, Changbum KANG, Seoung-ho JANG, Youngsik JU, Sooryun JUNG, Jayoung BYUN, Kijin KIM (Department of Physical Education, Keimyung University, Korea)

Introduction : The body's mass of bone very closely reflects the balance of bone formation and absorption. So bone loss may be as an imbalance of bone formation and absorption in a state of increased bone change. The purpose of this study is that comparing body composition between the type of exercise in postmenopausal elderly women and insulin resistance index, bone metabolic marker, and the CRP concentration change. **Method :** Subjects were 33 Korea elderly women. Their age were average above 75 years old. Exercise intervention were yoga, the strength training with Theraband and the elderly dance for 12 weeks, and we analyzed body composition before and after exercise, and insulin resistance-related indicator, serum osteocalcin, total alkaline phosphatase, and serum inflammation-related markers like a CRP. **Results :** Elderly women, especially after menopause, theraband exercise for 12 weeks is proved that alkaline phosphatase levels significantly ($p < .05$) reduced, so affected the decrease in serum concentrations of CRP, and Theraband exercise and elderly dance exercise for 12 weeks appeared to affect on improvement in BMC of the postmenopausal elderly women. **Conclusion :** This study showed that Theraband exercise and seniors dance group have increase bone density markers but yoga group is no difference changes. Also Theraband exercise and the elderly dance group are a significant reduction of the serum total alkaline, is verified, the reduction of CRP verify the tendency. The Theraband exercise and the elderly dance exercise for Korea elderly women after menopause are expected to be a positive improvement in body composition and bone metabolic markers. **Keywords :** elderly women, exercise, bone metabolic

PP26 S-079

MENTAL HEALTH STATUS AND HOPE OF ELDERLY

Narisa WONGPANARAK¹, Bungon KUMPHON² (1. Faculty of Nursing, Mahasarakham University, Thailand; 2. Faculty of Science, Mahasarakham University, Thailand)

Introduction : The purposes of this research are to determine the level of mental health status and hope and its association with socio-demographic factors among the elderly in Maha sarakham Municipality. **Method :** 432 sample of elders were selected. The instruments of this study consist of 1) Socio-demographic information, 2) Thai General Health Questionnaires (GHQ-12) and 3) The Herth Hope Index (HHI). The internal consistency of The GHQ-12 and HHI was examined using Cronbach's alpha coefficient which gave values of 0.82 and 0.77, respectively. The data were analyzed by descriptive statistic, Chi-Square test of association and Cramer's χ^2 and Phi coefficient. **Results :** The results revealed that 283 (65.5%) of elderly had no mental health problems and 149 (34.5%) had mental health problems. Most of the elderly had moderate and high level of hope 310 (71.8%) and 118 (27.3%), respectively. The association between mental health status and hope was investigated by test of association. There was a significant between mental health status and hope ($\chi^2 = 4.196, p\text{-value} = 0.123$), and the low correlation with Cramer's coefficient $V = 0.099$. Seven factors associated with the mental health status were age, education, income, source of income, social welfare, club member, and present illness. Meanwhile, marital status,

education, income, and social welfare were four factors related to hope. Conclusion : The findings suggested that mental health promoting activities should be implemented in elderly people in order to promote the mental health status and hope underpinning important factors among elderly people. Keywords : Mental Health Status, Hope, Elderly

PP26 S-080

GENDERED ANTI-AGING WORK AMONG MIDDLE-AGED PEOPLE IN THE U.S.

Neal KING, Toni CALASANTI (*Sociology, Virginia Tech, USA*)

Introduction : Age relations subject even the most privileged men to ageism as they move through middle age, but those men respond in ways rooted in the hegemony of manhood. This paper draws on data from pilot interviews of nine middle-aged men and ten middle-aged women in the U.S. to show that, though both women and men concern themselves with the anti-aging preservation of bodies, they do so in gendered ways such that men distance themselves from consumer roles and link themselves Method : We analyze in-depth interviews conducted with 19 men and women in the U.S., aged 43-61. Grounded analyses of these semi-structured interviews sought to understand how people come to view changes in their bodies. Results : Male and female respondents answered questions about products used, regimens observed, bodily concerns, and work done, in different ways. Though men are as concerned with appearance as women are, they focus verbally on performance at work and at athletic play, emphasizing the “fight”, “work” and being “natural” in ways that women do not. Women concern themselves with attractiveness; and, while they often engage in hard work in this regard, they do not describe it in those terms. Conclusion : Men distance themselves from “passive” consumerism often associated with femininity and focus instead on hegemonic ideals of work, as if to claim a more successful aging than women claim, and thus to vie for some continued gender privilege. Keywords : aging, gender, work

PP26 S-081

EFFECTS OF THE SELF-EFFICACY AND SOCIAL SUPPORT ENHANCEMENT PROGRAM ON FOOT CARE BEHAVIOR AMONG THAI ELDERLY WITH DIABETES MELLITUS

Pissamai PHANPHUECH¹, Pornchai JULLAMATE², Raweevan PAOKANHA³ (*1. Nursing Department, Ao Udom Hospital, Thailand; 2. Gerontological Nursing Department, Faculty of Nursing, Burapha University, Thailand; 3. Adult Nursing Department, Faculty of Nursing, Ubonratchathane University, Thailand*)

Introduction : Foot problem in older adults with diabetes mellitus (DM) is vital. To prevent this problem, nursing intervention to enhance foot care behavior is crucial and necessary. This two-group pretest posttest quasi-experimental research aimed to examine the effect of self-efficacy and social support enhancement program on foot care behavior among Thai elderly with DM. Method : Sixty diabetes elderly were randomly selected and assigned into experimental and control group equally. The control group received usual care from health care staffs while the experimental group received the 8-week self-efficacy and social support enhancement program from the researcher together with their primary caregivers in group. During the program, telephone follow up also was performed to stimulate the diabetes elderly in taking care of their feet. Data were collected using The Demographic Data Form and The Foot Care Behavior Questionnaire (reliability .79). Descriptive statistics, dependent and independent t-test were computed for data analysis. Results : Findings revealed that after receiving the program, the experimental group had

significantly higher score of foot care behavior than prior to starting the program ($t=13.97$ $p < .001$). In addition, once finished the intervention, the experimental group had significantly higher score of foot care behavior than the control group had ($t=10.50$ $p < .001$). Conclusion : This self-efficacy and social support enhancement program obviously increases foot care behavior of the diabetic elderly. Therefore, nurses should apply this efficient program for taking good care of DM patients so to promote foot care behavior. Nursing research by applying this program in other chronic population was also recommended. Keywords : Elderly, Diabetes Mellitus, Self-Efficacy, Social support, Foot care behavior

PP26 S-082

DIFFERENCES IN THE DEGREE OF HEALTH PROMOTION BEHAVIOR PRACTICES OF KORAN ELDERLY RESIDING IN A RETIREMENT COMMUNITY BY DEMOGRAPHIC CHARACTERISTICS

Seon Sook KIM¹, Jun-Ah SONG² (*1. Doctoral Student, College of Nursing, Korea University, Korea; 2. Associate Professor, College of Nursing, Korea University, Korea*)

Introduction : As aging population grows rapidly in Korean society, there have been increased interests about health promotion programs targeted for elderly to increase their active life expectancy and quality of life. Knowledge of differences in the degree of health promotion behavior practices (HPBP) of elderly by demographic variables has important implications for the study and care of related people. Method : This study used a convenient sample of 170 older adults (Mean age = 72.59 ± 7.11) recruited from a retirement community located in Seoul, Korea. Using a face-to-face interview, participants were assessed demographic characteristics and HPBP using the Health Promotion Lifestyle Profile (HPLP) consisting of 6 subscales including nutrition, stress management (SM), interpersonal relationships (IR), exercise, health responsibility (HR), and self-actualization (SA). The data were analyzed using descriptive statistics, t-tests, and ANOVAs. Results : Mean score of participants' HPLP was 3.05 (SD=.54), with the highest score on the subscale of exercise (Mean=3.26, SD=.71); and the lowest score on the stress management (Mean=2.74±.51). The overall score of HPLP differs significantly by economic status ($F=5.44$, $p = .001$). Subscale scores of the HPLP were significantly different by religion (for IR), education level (for SA), economic status (for nutrition, exercise, HR, and SA), and family members living together/ occupation/ number of diagnosed illness (for nutrition). Conclusion : Results of this study provide a basis for the development of nursing strategies to increase a retirement community residents' level of HPBP. However, further studies using large random samples from various sites are needed to confirm the findings from this study. Keywords : health promotion behavior, retirement community, HPLP

PP26 S-083

CONCEPTS RELATED TO THE AGING EXPERIENCE IN OLDER AFRICAN IMMIGRANT WOMEN

Sharon G. MCRAE, Barbara COCHRANE (*School of Nursing, University of Washington, USA*)

Introduction : Older African immigrants are among the fastest growing immigrant group in the United States. Few studies have been conducted with older African immigrant women from varying ethnic origins. As these women become long-term U.S. residents, they experience a decline in health and an increase risk for chronic diseases. Older African immigrant women's perspectives and experience are particularly important because of their central role in addressing,

healthy aging, as well as possible concepts and health practices from their home country that differ markedly from those in the U.S. The goals of this integrative literature review are to: (1) identify concepts related to the experience of aging relevant to older African immigrants' lives; (2) identify the contexts within which older African immigrants have been studied; (3) identify research gaps in our knowledge. Method : A systematic, integrative review of the literature was undertaken. U.S. and international research and theoretical publications indexed in PubMed, PsycINFO and CINAHL databases from 1990 to 2012 were identified. Results : Although U. S. and international research reveals functional status, social and cultural connectedness, and cognitive functioning as concepts of aging in older non-African immigrant populations, absent from empirical studies is what is known among African immigrants, particularly older women, about chronic disease and aging. This literature review revealed a paucity of research regarding older African immigrant women in the U.S. or even older African immigrants overall. Conclusion : Additional qualitative research is needed to understand relevant concepts and experiences of chronic disease and aging among older African immigrant women. Keywords : Aging, African, Women, Immigrant

PP26 S-084

A COMPARATIVE STUDY OF THE FACTORS INFLUENCING SUCCESSFUL AGING BETWEEN ADULTS AND ELDERLY

Shin Jeong KIM¹, Yun Jung LEE², Eun-Young JEON³, Kwuy-Bun KIM⁴ (1. Master's candidate, College of Nursing Science, Kyung Hee University, Korea; 2. Prof., Department of Nursing, Shin Gyeong University, Korea; 3. Prof., Dept. of Nursing, Daegu University, Korea; 4. Prof., College of Nursing Science, Kyung Hee University, Korea)

Introduction : This study was to compare and to examine the factors related to successful aging between adults and elders. Method : The period of collecting the material was from August 1 to 20th of 2012, a preliminary search prior to the main investigation was carried out for the selection of analysis tools. Afterwards, the main investigation was carried out from September 1 to 20th of 2012, by surveying 204 in adults from 45 to 64 years old and 199 in elders above the age of 65 . Data were analyzed with SPSS Window 20.0 program. To meet the purpose of the research, descriptive statistics, and multiple regression were performed. Results : 1. The degree of successful aging in adults and elders were significantly higher than in aging ($F=2.640$, $p=.010$). 2. The degree of purposeful life ($t=6.094^{***}$), Attitude of aging ($t=2.974^{**}$), well-being ($t=4.452^{***}$), ego-achievements ($t=2.308^*$), and self-esteem ($t=3.808^{***}$) showed significantly difference between in adults and elders. 3. The predictors of successful aging elders were purposeful life, well-being, self-esteem in adults and purposeful life, self-esteem, Attitude of aging, perceived health status in elders. The biggest factor was purposeful life in adults and elders. These factors enabled to explain 56.1% of the total variance in adults and 51.4 % in elders. Conclusion : Based on these findings , the above major influencing factors, (purposeful life in adults and elders, especially) should be considered to develop a new nursing program for the successful aging. Keywords : Successful Aging, Adults , Elders

PP26 S-085

CONTENT ANALYSIS ON RESEARCH EXERCISE AND OLDER ADULTS IN TAIWAN

Ching- Show LIN¹, Shou-Wen CHENG², Shou-Yen CHENG³, Jian-Xun LU⁴ (1. Graduate School of Gerontechnology and Service Management, Nan Kai University of Technology, Taiwan; 2. Graduate

School of Gerontic Technology and Service Management, Nan Kai University of Technology, Taiwan; 3. Graduate Institute of Electrical Engineering & Computer Science, Nan Kai University of Technology, Taiwan; 4. Department of business Administration, National Chung Hsing University, Taiwan)

Introduction : The 70% older adults have at least one or more chronic diseases [1]. For instance, cardiovascular, high blood pressure, stroke, Parkinson's disease, and diabetes, etc. The chronic diseases and mental diseases have positive correlation significant relationship [2, 3]. Exercise can reduce physical illnesses or mental diseases (depression). In Taiwan, 2009 National Health Interview Survey (65 years old or older), this reported having had exercise during the past two weeks only 53.1% [4]. Many studies indicated that regular exercises had a significant influence on depression symptoms. This study aimed to analyze the content and trend of past research of evidence regarding the effectiveness of exercise in elder adults. Method : The method employed in this study was content analysis. Our data consisted of 52 journal articles taken from PerioPath Index to Taiwan Periodical Literature System; the key words were elderly and exercise. The articles were analyzed on the aspects of research types, topics, variables, and scales. Results : The three raters in this study attained an inter-rater reliability of 0.923 on average, while the intra-rater reliability had an average of 0.887; > 0.8 . For content analysis these are sufficiently high values [5]. Conclusion : It was found that researchers' backgrounds could be categorized into six main groups, the most importances are including public health nursing, 17 papers, and physical, 15 papers. Journals currently studying Taiwan's elderly exercise publish mostly comprehensive review papers (35), with few original research papers (17). Most of the results showed that exercise effective to improve or maintain the ability of physical activity. Keywords : content analysis, exercise, elderly

PP26 S-086

THE FACTORS THAT AFFECT BURDEN OF FAMILY CARE GIVER OF THE ELDERLY

So Yeong KANG¹, Yun Jung LEE², Kwuy-Bun KIM³ (1. Master's candidate, College of Nursing Science, Kyung Hee University, Korea; 2. Prof., Department of Nursing, Shin Gyeong University, Korea; 3. Prof., College of Nursing Science, Kyung Hee University, Korea)

Introduction : This study was to examine the factors related to burden of family care giver of the elderly in Koreans. Method : The period of collecting the material was from August 10th to 25th of 2012, a preliminary search prior to the main investigation was carried out for the selection of analysis tools. Afterwards, the main investigation was carried out from September 12th to 28th of 2012, by surveying 215 family care giver for the elderly above the age of 65, residing in the areas of Seoul and Pusan city. Data were analyzed with SPSS Window 20.0 program. To meet the purpose of the research, descriptive statistics, and multiple regression were performed. Results : 1. The average Burden of family rate of the elderly was 2.75, which was lower than expected. The rates for related factors, social support(3.23), family support(3.18), stress(3.09), burnout(2.48) depression(2.32) were found to be respectively. 2. According to the analysis on the relationship between Burden of family and its factors, stress, depression and burnout showed positive correlations. However, social support, family support showed negative correlations. 3. Stress($r=.401$) showed to be the most important of the Burden of family factors for the elderly. Burnout($r=.360$), educational status($r=.191$), relation of family($r=.117$) orderly. These factors enabled to explain 55.1% of the total variance in adults and 58.9 % in

Burden of family. Conclusion : Based on the results of the research, a new nursing program should be developed for Burden of family care giver of the elderly and enhance its efficiency, applying it in the real world. Keywords : factors, Burden of family care giver, elderly

PP26 S-087

INFLUENCING FACTORS ON DEPRESSION OF OLDER ADULTS IN COMMUNITY

Soonrim SUH¹, Jiae SON² (1. College of Nursing, Kyungpook National University, Korea; 2. Nursing, Kyungpook rehabilitation hospital, Korea)

Introduction : The previous study reported that depression was influenced on sociodemographic factors. However, there were a few studies including stress and mistreat of older adults as influencing factors on depression and older residents in rural community. This study was to identify influencing factors on depression older adults who live in rural community. Method : A cross-sectional and correlational design was used. A total of 228 older adults were surveyed using a written questionnaire at 4 myeon areas in a province. The data were analyzed using descriptive statistics, t-test, ANOVA, Pearson correlation, and multiple regression. Results : There was few disability of activity of daily living of participants. The score of stress was below the medium level and subjective health status was the middle level. The score of depression was moderate level. The score of mistreat on older adults was low level. Variables such as stress, neglect, subjective health status, physical mistreat, age, and economic state accounted for 65.1%. Stress among them was the most predictive factor and then neglect was the second factor. Conclusion : The effect of stress, neglect, and subjective health status is significant to decrease depression of older adults. Consequently, nursing intervention for depression prevention need to include reducing stress and promoting health status with community support system. Keywords : Aged, Depression, stress, mistreat, health status

PP26 S-088

ASSOCIATION BETWEEN BODY WEIGHT AND PSYCHOLOGICAL WELL-BEING OF OLDER ADULTS IN SOUTH KOREA

Sujin CHAE (School of Social Science, Seoul Women's University, Korea)

Introduction : Body weight is one of the most important factors that explain the health status and mortality. While the physical health or mortality correlations with BMI are fairly well established, the association between BMI and psychological well-being has not been dealt with. This study was conducted to investigate whether underweight, normal-weight, over-weight, and obese older adults differ in aspect of their depression and life satisfaction. Method : This study used data from the KLoSA in 2008 (n=9026). The study sample was 5,044 older adults who were over the age of 60 in South Korea. The research assessed the prevalence of 4 body weight groups, examined associations between body weight and demographic characters, depression, life satisfaction. Results : The study revealed that the life satisfaction of underweight group was lowest and the depression of them was highest among 4 groups (p<.000). And both life satisfaction and the depression were negatively affected by underweight, even though controlling other variables (sex, age, education, comorbid). Implication of the result is discussed healthy weight maintenance are important for old adults to improve their quality of life. Conclusion : This study found that Korean older people have detectable differences, according to BMI status. It is suggested that the underweight status is one of the most negative factors that

influence the psychological well-being of Korean older people. These results have important implications that the older people with underweight could be vulnerable to threaten their psychological well-being, and it should be necessary to establish multidisciplinary networks and to develop interventions for improving their psychological well-being. Keywords : elderly, BMI, psychological well-being

PP26 S-089

DEVELOPMENT AND PSYCHOMETRIC EVALUATION OF GERIATRIC SELF-EFFICACY SCALE FOR SELF-MANAGEMENT OF TYPE 2 DIABETES MELLITUS (GSES-DM)

Suyoung CHOI¹, Misoon SONG², Se-An KIM², Kyoungsan SEO², Soo Jin LEE², Eun Ho KIM² (1. Research Institute of Nursing Science, College of Nursing, Seoul National University, Korea; 2. College of Nursing, Seoul National University, Korea)

Introduction : One of the central goals of diabetes education is to enhance self-management skills and confidence to achieve the appropriate self-management behaviors for improvement over health status of older adults with diabetes. Most of the instruments currently used to assess diabetes self-efficacy lack adequate testing for applicability with older adults. The purpose of this study was to develop and validate a geriatric self-efficacy scale for self-management of type 2 diabetes mellitus (GSES-DM). Method : A preliminary GSES-DM of 22 was derived from literature reviews and focus group interviews with type 2 diabetes older adults. Seventeen items were finally confirmed through item analysis and factor analysis. Psychometric testing was performed with a convenience sample of 150 older adults with type 2 diabetes. The data were analyzed using factor analysis, Cronbach's alpha, and Pearson correlation coefficients. Results : From the factor analysis, 17 significant items in six subscales were derived. The subscales were named problem solving for hypoglycemia and self-monitoring blood glucose, problem solving for hyperglycemia, coping with psychological distress and medication taking, reducing risks of diabetes complications, appropriate exercise, and healthy eating. The GSES-DM also established a concurrent validity with Self-efficacy for Diabetes and known-groups validity. The internal consistency, Cronbach's alpha, was .84, and reliability of the subscales ranged from .55 to .80. Conclusion : This study suggests that the GSES-DM is easy, reliable and valid instrument to measure self-efficacy for self-management of older adults with type 2 diabetes. Keywords : Type 2 Diabetes Mellitus, Self-management, Self-efficacy

PP26 S-090

COMPARISON OF CHARACTERISTICS OF RISK BEHAVIORS AND INJURIES BETWEEN ELDERLY AND YOUNGER POPULATION

Yang Ju TAK (Department of Paramedic Science, Korea National University of Transportation, Korea)

Introduction : The purpose of this study was to compare the incidence and characteristics of risk behaviors and injuries between elderly and younger population. Method : This research was conducted as a secondary analysis of data collected from annual nationwide large scale survey, Community Health Survey (CHS). The original data was collected from a CHS in 2010 from an adult population (over 19 years old) through one-on-one interviews from a structured questionnaire using CAPI system. There were a total of 229,229 subjects in the study, and this population was split into the elderly group (n=54,254) who were above 65 years old ; and the younger group (n=174,975) who were below 65 years old. Risk behaviors such as drunken driving,

lack of seat belt use and lack of helmet use and incidence and cause of injuries were compared amongst the two groups. Results : The elderly group showed significantly higher rates of driver seat belt use (85.16% v 78.81%), passenger seat belt use (77.45% v 71.39%), motorcycle helmet use (60.16% v 51.87%), drunken motorcycle driving (1.54% v 0.75%), injury incidence (5.6% v 4.76%), and unintentional injury (99.14% v 98.5%) at a statistically significant rate when compared to the younger group. On the other hand, the younger group showed significantly higher rates of riding drunken driver's car (8.94% v 2.14%) and bicycle helmet use (4.82% v 2.37%) at a statistically significant rate when compared to the elderly group. There was no statistically significant difference in the rates of drunken driving and intentional self-injury. Conclusion : The elderly people showed different characteristics of risk behaviors and injury incidence than younger population. Keywords : Community health survey, risk behavior, injury

PP26 S-091

COMPARISON OF HEALTH BEHAVIORS IN ELDERLY POPULATION WITH AND WITHOUT CHRONIC CARDIOVASCULAR RISK FACTORS

Yang Ju TAK¹, Jun PARK², Hyun Sook KIM³ (1. Department of Paramedic Science, Korea National University of Transportation, Korea; 2. Medical Research Information Center, College of Medicine, Chungbuk National University, Korea; 3. Department of Social Welfare, Korea National University of Transportation, Korea)

Introduction : The purpose of this study was to compare the health behaviors of the geriatric population that are currently living with cardiovascular disease to those who do not have disease. Method : This research was conducted as a secondary analysis of data collected from national large scale study. The original data was collected from a Community Health Survey (CHS) in 2010 from an adult population (over 19 years old). The information was collected by trained interviewers through one-on-one interviews from a structured questionnaire. There were a total of 229,229 original subjects in the study, out of which 54,254 were above 65 years old. This population was split into the disease group (n=20,135) based on reported history of hypertension and/or diabetes mellitus; and the control group (n=23,676) if there was no reported history of disease. Health behaviors such as smoking, drinking, physical activity level, and stress level were compared amongst the two groups. Results : The control group showed higher rates of smoking (16.58% v 10.95%), moderate intensity physical activity (20.84% v 16.27%), and walking (43.69% v 40.73%) at a statistically significant rate when compared to the disease group. On the other hand, the disease group showed higher rates of obesity (25.74% v 13.42%) and stress (22.03% v 19.45%) at a statistically significant rate when compared to the control. There was no statistically significant difference in the rates of drinking. Conclusion : The information from this study could be used to tailor the national public health program and optimize resources available in promoting healthy behaviors. Keywords : Community health survey, health behavior, Diabetes, Hypertension

PP26 S-092

THE EFFECTIVENESS OF CARDIOPULMONARY REHABILITATION ON ELDERLY PATIENTS AFTER CARDIAC SURGERY

Yi-Chen LEE (Nursing, Chi Mei Medical Center, Taiwan)

Introduction : Activity intolerance is a major physiological problem on elderly patients after cardiac surgery. The purpose of this study was to explore the effectiveness of cardiopulmonary rehabilitation to improve

early ambulation after cardiac surgery using a Taiwanese elderly sample. Method : Use the checklist to collect 44 cardiac surgery elderly patient's basic information and observe their activities. A qualitative interview was conducted to explore the reasons of elderly patient for delaying ambulatory before, then set up the cardiopulmonary rehabilitation measures. Results : The mean age of 44 sample was 66.2 years, Data showed that patients in the intervene the cardiopulmonary rehabilitation measures of multidisciplinary team: 'Hosting the education of cardiopulmonary rehabilitation'; 'Development the care plans of cardiac rehabilitation team'; 'Develop the care guidelines of cardiopulmonary rehabilitation'; 'Develop the health education pamphlets and shooting the videos of cardiopulmonary rehabilitation'; 'Increase set of the assisted ambulation tools'. The incidence of got out of bed on Elderly Patients after Cardiac Surgery from 22.7% to 88.4% after cardiopulmonary rehabilitation of average length of hospital stay were 13.4 days to 10.6 days, and when they activities did not feel laborious, beats per minute than the rest did not increase more than 20 times. Conclusion : Through team work to perform care plan can improve elderly patient's activity intolerance and shorten the length of hospital stay. The article to intervene cardiopulmonary rehabilitation measures, on elderly patients after cardiac surgery can early ambulation and enhance the quality of care. Keywords : Cardiopulmonary Rehabilitation on Elderly Patients, Cardiac Surgery

PP26 S-093

THE EFFECT OF HEALTH BEHAVIOR PRACTICE PROGRAM OF GRANDPARENTS IN RURAL KOREA AREA

Yoo Hyang CHO (Department of Nursing, Chodang University, Korea)

Introduction : The purpose of this study was to examine effect of the health behaviors practice program of grandparents. Method : The interview survey and health behavior practice program were performed from July 2012 and January 2013 with a structured questionnaire to 60 grandparents of grandparent - grandchildren families who were served intervention services lived in Muan-Gun of Chunnam Province. The intervention services were provided by electronic voucher a day per week. The health behavior practice program was served 16 items. The questionnaire composed of general characteristics of grandparents, health status, MMSE, ADL, IADL, depression scale, and 16 items of health life style and 19 items of independence life behavior. The research method used SPSS program with F-test, Chi-square test and t-test. Results : This result was only 1st survey. 2nd survey will conduct at January 2013. Among the elderly 60.0% were female, and 85.0% had education below elementary school. There were more drug management and oral care and money management among 16 health behavior practice items. And there were less reading newspaper, writing diary, having a good time with hobby and drinking water 1,500cc per day among 16 health behavior practice items. The grandparents considered their IADL, depression, MMSE and health promotion behaviors worse. This intervention services for grandparents will change the health behaviors and health condition of grandparents. Conclusion : We suggest recommended change for health behavior of grandparents in rural area. Intervention services for GP-GC family should included health behavior practice program contents. Keywords : Grandparent, program effect, health behavior practice

PP26 S-094

THE EFFECTS OF INTERNET USE ON HEALTH INFORMATION SEEKING BEHAVIOR OF THE ELDERLY WITH CHRONIC DISEASES IN THE U.S.

Yongsam OH, Jeong Woo LEE (Case Western Reserve University, USA)

Introduction : With an aging U.S. population, the incidence and prevalence of chronic disease is expected to rise dramatically (NCHS, 2010), and the necessity of increasing health information seeking behavior has become an important issue in the field of aging (Ladha et al., 2009). **Method :** According to the data from the Health Tracking study (2010) by the Pew Internet and American Life Project, in which the research subjects were the elderly with chronic diseases (n = 198) using the internet, types of chronic diseases among the elderly (≥ 60 years) are put into five categories: diabetes, high blood pressure, respiratory disease, heart disease, and cancer. Based on previous research (Zhao, 2006), this study classified internet usage into two categories: solitary activity (0 to 6) and social activity (0 to 5). The health information seeking behavior (0 to 14) is measured by fifteen items asking about the behavior of looking for information about certain health or medical issues on the internet. Using zip code, community types are categorized as rural, suburban, and urban (reference). **Results :** In the final hierarchical regression model, the centered solitary activity ($b = .787^{***}$) and rural community ($b = 1.893^{**}$) was significantly related to the health information seeking behavior. The interaction effect on the health information seeking behavior also was observed between the solitary activity and rural community (.77*). **Conclusion :** Findings demonstrate that internet uses of the elderly are highly related to their health information seeking behavior, and simultaneously this relationship can be moderated by the effect of community types. **Keywords :** Health Information Seeking Behavior , Internet Use , Elderly with Chronic Diseases

PP26 S-095

PREVALENCE OF DEPRESSION AND PHYSICAL ACTIVITY AMONG ADULTS IN THE U.S.

Mi Ryeong SONG¹, Young-Shin LEE², Jong-Duek BAEK³, Marci MILLER⁴ (1. Department of Nursing, The Research Institute for Basic Sciences, Hoseo University, Korea; 2. School of Nursing, San Diego State University, USA; 3. Graduate School of Public Health, San Diego State University, USA; 4. Department of Nursing, San Diego State University, USA)

Introduction : Depression is a worldwide health problem . The purpose of this study was to identify the prevalence of depression and examine physical activity amounts among adults with depression. **Method :** This study was a cross-sectional descriptive study with the National Health and Nutritional Examination Survey 2005-2006. The sample of this study was a total of 4058 men and women aged 20 years and older. Self-reported Patient Health Questionnaire [PHQ-9], for depression, accelerometer counts for physical activity amount, demographic information, and self-reported health status were analyzed by applying and weighting to represent population estimates. Bivariate analysis and multivariate logistic regression were applied to data. **Results :** Overall the prevalence of depression was 13.9% in mild and 5.6% in moderate to severe levels. Adults in the mild depression group spent significantly less time doing both light ($p < .01$) and moderate ($p < .001$) intensity physical activity than the non-depression groups. And also adults in the moderate to severe depression group spent significantly less time doing both light ($p < .001$) and moderate ($p < .01$) intensity physical activity than the non-depression groups. After controlling for socio-demographic factors, those at greater risk for depression reported poor health ($p < .001$), less moderate intensity physical activity ($p < .05$) and were middle-aged ($p < .01$) and female ($p < .01$). **Conclusion :** An exercise program is needed to prevent

depression among middle aged women with poor health and who do not engage in moderately intense physical activity. Public education regarding the efficacy of physical activity and encouragement of appropriate activity levels could contribute to the prevention and treatment of depression. **Keywords :** physical activity, depression

PP26 S-096

A COMPARISON OF FACTORS INFLUENCING HEALTH BEHAVIOR COMPLIANCE BY TYPE D PERSONALITY IN THE PATIENTS WITH CORONARY ARTERY DISEASE

Yun Ok CHOI¹, Jung Sun KIM² (1. Department of Nursing, Graduate School of Chonnam National University, Korea; 2. College of Nursing, Chonnam National University, Korea)

Introduction : This study is to compare the factors influencing health behavior compliance (HBC) by Type D personality in the patients with coronary artery disease (CAD). **Method :** The study was performed in 240 patients, older than 50 years old, who were diagnosed CAD. Data were collected by personal interviews utilizing the questionnaire from January 9th to march 6th 2012. The collected data was analyzed by descriptive statistics, Chi-square test, t-test, ANOVA, Duncan test, Pearson correlation, and Linear Regression. **Results :** Of 240 patients, 92 (38.3%) were classified as Type D personality. Type D patients showed higher stress, higher passive coping, and higher depression scores compared to that of Non-type D patients. Type D patients have a statistically significant positive correlation between stress and depression ($r = .35, p < .001$), depression and passive coping ($r = .35, p < .001$), and HBC and active coping ($r = .22, p = .031$). On the other hand, Non-type D patients have a statistically significant positive correlation between stress and depression ($r = .42, p < .001$), HBC and active coping ($r = .40, p < .001$), HBC and neutral coping ($r = .24, p = .003$), and HBC and passive coping ($r = .27, p = .001$). In the factors influencing HBC by Type D personality, diet, hospitalization, active coping, living arrangement, depression, and smoking account for 36.9% of the factors in Type D patients. Active coping, diet, stress, hospitalization, exercise, current life satisfaction, educational level, and living arrangement explained 35.8% of the factors in Non-type D patients. **Conclusion :** Type D patients showed low current life satisfaction, negative perception on self-rated health status, and stress and depression of high level. Furthermore, they utilized passive coping more frequently than that of Non-type D patients. **Keywords :** Coronary artery disease, Personality, Health behavior

PP26 S-097

DEVELOPMENT OF AN EXERCISE DVD WITH MUSIC FOR OLDER PEOPLE TO PROMOTE PHYSICAL ACTIVITIES FOR HEALTH

T.M.U. Sanjeewa TUNPATTU (Physiotherapy, National Hospital of Sri Lanka, Sri Lanka)

Introduction : Promoting and facilitating the regular practice of physical activity in older adults is especially important because this population group is very often the least physically active. Efforts to promote physical activity in older adults will generally place less emphasis on attaining high volumes of activity, or engaging in vigorous intensity activity. However, the health status and abilities of older adults vary widely, and some older adults are capable of, and regularly perform, high volumes of moderate- and vigorous-intensity activity. **Method :** Exercises suitable for elderly people and traditional music appropriate for exercises were selected and pre tested in the community settings. A group of elderly people were selected and trained to demonstrate the group exercises in the DVD. Two physiotherapy students were selected and trained to demonstrate

exercises in the DVD. Explanation of the exercises including benefits of the each exercise and safety information was prepared to be illustrated in the DVD. Results : Final edition of the DVD is prepared with 3 components 1. Explanation of the exercises including benefits of the each exercise and safety information. 2. Demonstration of exercises by instructors. 3. Demonstration of exercises elderly people. Conclusion : Suitable exercise focused endurance, strengthening, stretching and balance and coordination training gives lot of health benefits for elderly people. This DVD can be used for 1. To train the health education officers in exercises for elderly people 2. To guide the elderly people in exercise programs 3. To health promotion purposes by displaying waiting areas of different settings where elderly people gathered. Keywords : Exercises, physical activities, Older people

PP26 S-098

A LONG JOURNEY OR A JOURNEY ALONE? A PRELIMINARY STUDY ON EXPERIENCES OF FAMILY CARERS IN TAIWAN

Chia Ming YEN (*Adult and Continuing Education (PhD Candidate), National Chung Cheng University, Taiwan*)

Introduction : This pilot study looks at the changes of meaning-making from three family carers who care a family with dementia in Taiwan. Due to the increased number of dementia patients in the past decade and many of them are reported stay in their own houses particularly for those with mild cognitive impairment. Family carers, usually son, daughter-in-law, daughter or spouse, are therefore facing various challenges while looking after their be loved one. Despite these challenges, this pilot study investigates that family carers are able to find the positive aspects and feel self-growth under certain circumstances throughout the processes of caring. Method : An in-depth interview is conducted with three family carers. Their experiences, both positive and negative ones, of caring a family with dementia are collected and analysed. Results : The results show the changes from negative experiences to positive ones among the three family carers are possibly found but they are suggested to be occurred under certain circumstances. The results will also provide the type of information as significant sources and references when the main study is conducted later on. Conclusion : This pilot study concludes that gaining positive meaning among the family carers are crucial and this will help and provide a better quality of life and quality of caring for both care givers and care recipient. Keywords : dementia, family carer, meaning-making

PP26 S-099

SOCIO-ECONOMIC STATUS AND DEMENTIA AMONG THE OLD: THE AGES PROJECT

Chiyoe MURATA¹, Tokunori TAKEDA², Kayo SUZUKI³, Seungwon JEONG¹, Katsunori KONDO⁴ (*1. Dept. of Social Science, National Center for Geriatrics and Gerontology (NCGG), Japan; 2. Division of Occupational Therapy, Seijo University, Japan; 3. Center for Well-being and Society, Nihon Fukushi University, Japan; 4. Faculty of Social Welfare, Nihon Fukushi University, Japan*)

Introduction : Our society is aging and dementia is a major cause of disability among the old. Depression, illnesses or social isolation are risk factors for dementia. All these are prevalent among low income elderly. However, the association between income and dementia remains unclear. Our study purpose is to investigate such association using a 4-year follow-up data. Method : AGES project is a prospective cohort in Japan. Self-administered survey in 2003 in 6 municipalities was used in our study. Respondents 65 years or older (6, 813 men and 7,473 women) were followed for 4 years (2003 to 2007) for dementia

onset. Dementia onset was determined according to the criterion used in Japan's Public Long-Term Care Insurance System. Cox hazard proportional model stratified by sex was employed to calculate the hazard ratios for dementia onset. Those died or moved out from the study site during the follow-up period was considered censored. Results : Out of 14,286 subjects, 333 men (4.9%) and 468 women (6.3%) developed dementia during the follow-up. In Cox models, even after adjustment for age and illnesses, lower income and education were significantly associated with higher incidence of dementia among men but not among women. After adding depression (GDS-15), such association disappeared, indicating that depression was a stronger predictor for dementia irrespective of income with hazard ratios of 1.83 (p<.000) for mild and 2.57 (p<.000) for severe depression. Among women, such hazards were 2.00 (p< .000) and 2.91 (p<.000), respectively. Conclusion : Our results indicated the need to deal with old age depression when considering health disparity. Keywords : socio-economic status, depression

PP26 S-100

EFFECTIVENESS OF AROMATHERAPY MASSAGE PERFORMED BY FAMILY MEMBERS CARING FOR SEVERE DEMENTIA PATIENTS

Chiyoko SEKI, Kazuyuki SUGINO, Kazue SAWAMI, Kiyoshi NAWAI, Osamu URAYAMA (*Health Sciences, Tsukuba International University, Japan*)

Introduction : We investigated the effectiveness of aromatherapy massage (AM) on caregivers' mood and dementia patients' response, by surveying family members caring for dementia patients. Method : Twenty-seven subjects were chosen who had participated in an AM workshop, and 4 caregivers who subsequently used AM at home while caring for severe dementia patients. The profile of mood states (POMS) was used to evaluate the caregivers' mood, and each assessment was repeated 4 times: before and after the workshop, and 1 and 2 months later. Dementia patients' reactions and caregivers' feelings during AM were recorded. Further, the subjects completed a final questionnaire. Results : In the survey results immediately after the workshop, the average POMS scores decreased for all negative mood states, namely, tension, depression, anger, fatigue, and confusion compared to those before the workshop; only the positive mood state, vigor, exhibited the highest score in the "iceberg" profile. However, 2 months after performing AM at home, among the low scores for negative mood states that were generally observed in the caregivers, only 2 showed high scores for positive mood state. Records showed that caregivers expressed satisfaction and happiness at the positive responses of dementia patients. Further, many subjects specified that they "Want to find out more" about aromatherapy. Conclusion : Our study suggested that AM performed by family members caring for dementia patients may have a positive effect on both the caregivers and those for whom they care. Future studies are required to verify the effectiveness of AM on institutionalized patients and patients with different levels of dementia. Keywords : dementia, caregiver, aromatherapy massage

PP26 S-101

EFFECTIVENESS OF AROMATHERAPY MASSAGE PERFORMED BY CARERS FOR PEOPLE WITH DEMENTIA IN A DEMENTIA ELDERLY PERSON GROUP HOME

Chiyoko SEKI, Kazue SAWAMI, Kazuyuki SUGINO, Kiyoshi NAWAI, Osamu URAYAMA (*Health Sciences, Tsukuba International University, Japan*)

Introduction : This study aimed to investigate the effectiveness of

aromatherapy massage (AM) on the mood of dementia carers and the responses of people with dementia. Method : A practical program was designed to provide effective care for people with dementia. Six carers participated in an AM workshop and provided AM to eight people with dementia. The Profile of Mood States (POMS) was used to evaluate the carers' mood, and this process was repeated 4 times in 2 months. The responses of people with dementia and their carers' feelings were recorded during AM. Finally, the carers completed a questionnaire. Results : The results showed that the average POMS scores for all negative mood states, namely, tension, depression, anger, fatigue, and confusion, decreased after the workshop; a positive mood state, vigor, exhibited the highest score in the "iceberg" profile. The main behavior modification in people with dementia was the appearance of a certain level of psychological and/or physical comfort (8; 100%), improved verbal communication (4; 50%), and reduction in the behavioral and psychological symptoms of dementia (3; 100%). The results indicate that AM not only helps people with dementia but also their carers; both groups felt comfortable, healed, and positive but did not experience tiredness. Conclusion : We have found that AM is effective for people with dementia and that their positive reactions affect their carers' moods positively. Keywords : dementia, carer, aromatherapy massage

PP26 S-102

IMPORTANCE OF AND INFLUENCING FACTORS ON DEMENTIA CARE COMPETENCES OF GERIATRIC CAREGIVERS

Chun-Gill KIM (*Nursing, Korean Gerontological Nursing Society, Hallym University, Korea*)

Introduction : The complexity of dementia care requires multidisciplinary collaboration. Geriatric caregivers are charged with direct care for demented elders. The study investigated the importance of caregivers' dementia care competences and identified influencing factors on caregivers' dementia care competences for demented elders. Method : Data were collected through questionnaires from 201 geriatric caregivers in institutional dementia settings between 2011 and 2012, and analyzed by applying descriptive statistics, t-test, ANOVA, Duncan test, Pearson's correlation coefficient and stepwise multiple regression with SPSS/WIN 19.0. Results : The average score for importance of caregivers' dementia care competences was 3.63, showing ranges from the score of 1 to 5 and 'dementia patient care' factor such as knowledge, attitudes, and skills was the highest level. The mean score of dementia care dependency burden was 3.44 and job satisfaction, 3.71. Dementia care competences had a significant positive correlation with job satisfaction, caregivers' career and the numbers of dementia care education. Four significant variables influencing factors on caregivers' dementia care competences were job satisfaction, gender, working area and dementia care dependency burden. Conclusion : With the results of this study, importance of caregivers' dementia care competences can be improved by intervening the factors affecting this importance. Based on the findings, further dementia care practice and research for caregivers' caring the demented elders should be focused on job satisfaction, care dependency burden, caregiver's gender and working area. Keywords : Dementia care competences, Job satisfaction, Care dependency burden

PP26 S-104

CAREGIVER BURDEN IN AFRICAN AMERICANS: A CRITICAL REVIEW

Debbie Yong STEVENS, Kenneth HEPBURN (*Nell Hodgson Woodruff School of Nursing, Emory University, USA*)

Introduction : Caregiver burden has repeatedly been linked with poor health outcomes in those caring for older adults with Alzheimer's disease. Despite having greater financial hardship, keeping elders at home longer, and perceiving greater needs, African American (AA) caregivers are reportedly less burdened than whites. The purpose of this review was to examine how burden has been conceptualized and measured in AA caring for adults with Alzheimer's dementia. Method: CINAHL, PubMed, and Web of Science databases were comprehensively searched. Articles were limited to primary research reports involving human adults and published in English. The search strategy produced a total of 163 journal titles. Further review of the full text articles was conducted to identify studies that focused exclusively on caregiver burden in AA caring for adults with Alzheimer's dementia, resulting in a final selection of 17 quantitative and 11 qualitative studies. Results : Results from the quantitative studies show a difference in levels of caregiver burden by race. AA caregivers consistently reported lower levels of burden on a variety of measures, although such results were not seen in very recent studies. Qualitative reports, however, show a very different picture. Several qualitative studies suggest that AA are, indeed, burdened by caregiving responsibilities, but may express burden differently. Conclusion : The review provides a way to broaden the discourse about burden among AA caregivers, raises the possibility that there are cohort differences among AA caregivers, and poses questions about whether standard measures of burden or stress account sufficiently for the cultural context of AA caregiving. Keywords : Caregiver Burden African-American

PP26 S-105

MEDICATION ADHERENCE IN CHINESE OLDER ADULTS WITH CHRONIC DISEASES IN THE COMMUNITY

Doris Y.P. LEUNG¹, Angela Y.M. LEUNG², Iris CHI³ (*1. Nethersole School of Nursing, The Chinese University of Hong Kong, Hong Kong; 2. School of Nursing, University of Hong Kong, Hong Kong; 3. School of Social Work, University of Southern California, USA*)

Introduction : Medication management of chronic comorbid conditions requires treatment adherence. Poor treatment adherence was associated with worse health outcomes. Little is known about medication adherence in community-dwelling older adults in Hong Kong. Method: A secondary analysis of data from all the 10,331 community dwellers who applied for long-term care service in Hong Kong in 2006. Data on medication adherence, demographics, health and psychosocial factors were collected using self-reports. We included 3167 adults aged ≥60 who had private home, no prior/current home care services, and chronic disease in the analysis. Results : Their mean age was 79.4 years old (SD=7.4), 60.2% were female, 43.2% were married, 26.6% had no education and 90.8% reported always compliant to the prescribed medications. 13 variables were found to be associated with medication adherence ($p < .2$) in bivariate analyses and were included in the logistic regression model. Patients who were more ADL dependent (OR=1.68, $p < .01$), had stroke (OR=1.56, $p = .01$), and had received more informal care support (OR=1.24, $p = .01$) were more likely while those who were cognitively impaired (OR=0.82, $p = .01$), perceived poor health (OR=0.61, $p < .01$), had no drug check by doctors (OR=0.15, $p = .01$), and had negative mood (OR=0.91, $p < .01$) were less likely to report medication adherence. Conclusion : The prevalence of medication adherence reported in this study might be overestimated due to social desirability. Nevertheless, both healthcare professionals and caregivers can play an important role to further boost medication adherence in Chinese older adults: healthcare professionals check medication usage more frequently and caregivers provide more care support, especially to cognitively impaired patients. Keywords :

Medication adherence, community-dwelling, Chinese older adults

PP26 S-106

KOREAN AMERICAN CAREGIVERS' PERCEPTIONS OF DEMENTIA

Eunhi KONG (*School of Nursing, Gachon university, Korea*)

Introduction : Family caregivers' perceptions of dementia are very important because it has great impact on the caregivers' help-seeking, utilization of formal support, and caring. The purpose of this study was to describe the perceptions of Korean American family caregivers of old adults with dementia. Method : This study used a qualitative descriptive method and a purposive sampling method. A total 17 in-depth interviews were conducted. Symbolic interactionism and cultural models were used as theoretical frameworks. Qualitative content analysis was used to analyze the data. Results : Four themes were identified: is a brain disease, caused by lack of interaction, precipitated by lack of interaction, and delayed by family contact. While they described dementia as death of brain cells, and changes in brain structure and function, they believed that their care recipient's dementia was caused by a lack of interactions. In addition, they thought that the progress of dementia would be delayed by frequent family visits and communication, and would be precipitated by lack of interactions. Conclusion : Regarding beliefs about dementia, Korean American family caregivers combined the biomedical model with their cultural model. Future research should continue to examine the perceptions about dementia among other minority caregivers. Keywords : Korean-American, caregiver, dementia

PP26 S-107

KNOWLEDGE AND ATTITUDE ABOUT DEMENTIA OF THE WORKERS AT THE ELDERLY CARE FACILITIES

Eun Hye HWANG¹, Kyungsook PARK² (*1. Gerontological Nursing, The Graduate School of Chung-Ang University, Korea; 2. Chung-Ang University, Chung-Ang University Red Cross College of Nursing, Korea*)

Introduction : This is a descriptive research conducted for providing fundamental data which strengthen knowledge education and positive attitude for dementia by grasping knowledge and attitude about dementia of the workers at the elderly care facilities and examining their relations. Method : The data were collected from Feb. 5, 2013 to Feb. 22, 2013 and the subject was 190 workers at 5 elderly care facilities selected by convenience sampling. For the data analysis, PASW 20.0 statistical program was used. Results : 1)The subject's knowledge about dementia showed relatively low standard as average 7.75 ± 2.03 score of perfectly 16 score. The knowledge question of the highest score was "Regular life and periodical physical examination are effective for the prevention of dementia" and showed the percentage of correct answers of 91%. The knowledge question of the lowest score was "Dementia can be completely recovered by drugs" and showed the percentage of correct answers of 5%. 2)The subject's attitude about dementia showed generally positive attitude as average 4.04 ± 0.52 score of perfectly 5 score. The question of the lowest score was "I don't want to approach dementia patients if possible" and showed 3.71 ± 1.09 score. 3)The correlations between subject's knowledge and attitude about dementia was not significant. Conclusion : The results of this research showed that improvement of knowledge standard about dementia and strengthening of positive attitude for their negative attitude should be necessary for workers at the elderly care facilities. To achieve them, it's necessary to provide correct knowledge and information about dementia and develop various educational programs for cultivating positive attitude in the

future. Keywords : dementia, knowledge, attitude

PP26 S-108

EFFECT OF INFORMAL CAREGIVER'S CHARACTERISTICS ON THE USE OF FORMAL LONG-TERM CARE IN SOUTH KOREA

Eun-Young KIM, Jeng Ok KWON (*Dept. of Nursing, Dong-A University, Korea*)

Introduction : In July 2008, the system for caring for the elderly in South Korea was changed drastically with the launch of new long-term care insurance. We investigated whether the presence and characteristics of a family caregiver still affect formal service use (nursing home, daycare, visiting nurse, home help, home bath service, and loan of devices) under the new system. Method : A cross-sectional study was conducted. The main family caregivers of 332 applicants for long-term care insurance with a caregiver and 32 applicants without a caregiver, living in one city. Data were collected from November 2010 to June 2011 using self-report questionnaires. The applicant's gender, age, physical function, and cognitive function, existence of a family caregiver, family caregiver's gender, age, opportunity cost, and service use for each service covered by long-term care insurance. Data were analysed using t-test, chi-square test, and multiple logistic regression. Results : The effect of the existence of a family caregiver on the use of long-term care facility was significant. Nursing home was used more when the applicant had no family caregiver. The use of nursing home was related to higher functional dependency, less children number, and less when a spouse was caring. Conclusion : The use of formal services may be decided not only by the care level of the applicant but also by the needs of caregivers. To successfully implement the new system, consideration of the caregiver situation should be included in policy making. Keywords : informal care, long-term care insurance, formal care

PP26 S-109

OLDER PEOPLE, TELECARE AND THE DEHUMANIZATION OF LATER LIFE

Gary PRITCHARD, Katie BRITAIN (*Institute of Health and Society, Newcastle University, United Kingdom*)

Introduction : Telecare is an umbrella terms for various types of equipment used to remotely care for older and/or disabled people. Currently, in its simplest form, it consists of a fitted wall unit with a speaker connected to a call center. An alert can be triggered either by a person directly by pressing a button on a pendant, usually worn around the neck, or by a combination of sensors around the home. Telecare, as a method of is being pursued as a rational response to the escalating costs associated with an ageing population. Our study looks at how older people interact with these new technologies and compare it to more traditional, human-centered, care provision. Method : Our data is derived from focus groups (N=10), semi-structured interviews (n=20) and in-depth ethnographic fieldwork conducted with older telecare users and their carers. Visual prompts, videos and technological artifacts were used to facilitate discussions, which were audio-recorded, transcribed and anonymised. Transcripts were then coded and analysed vigorously. Results : We show that while telecare as a technique of caring for older people has some undoubted benefits, it can also have dehumanisation outcomes. We show how it can be detrimental to honest and meaningful human exchange, reduce social capital and decrease autonomy. Conclusion : As the worldwide population ages, telecare will become more and more ubiquitous and future research needs to address the capacity of older people to resist the dehumanizing potential of this type of monitoring equipment.

Keywords : Telecare, Dehumanization

PP26 S-110
INVESTIGATING MOBILITY, SELF-CARE, AND COMMUNICATION IN ELDERLY PATIENTS WITH NEUROLOGICAL CONDITIONS

Haejung LEE¹, Dongjin YI², Kango OH², Yiae KIM² (1. Dept. of Physical Therapy, Silla University, Korea; 2. Physical Therapy, Silla University, Korea)

Introduction : The services for elderly patients in rehabilitation centers are not quite clear whether they are suitable for the service users. Therefore, the aim of this study was to investigate functional status including mobility, self-care and communication in in-patients with neurological impairments in rehabilitation centers. Method : One hundred and fifty-nine patients (aged over 65) with CNS disorders recruited from five rehabilitation centers located in Busan and Kyongsangnamdo, Korea. Their functional status was assessed using a questionnaire, which contains three categories; mobility, self-care and communication. It was administered by a physical therapist, independent from treatment providers. All subjects responded to each item base on their health. Results : In mobility, 54% of subjects reported needing help or supervision when moving around places from a hospital or inside a hospital. In their self-care, 76% of subjects required 'need help or supervision' in showering or bathing. About 50% of subjects needed help or supervision during their dressing and toileting whereas most of subjects had no difficulties of their communication. Conclusion : In-patients aged over 65 years with CNS problems experience difficulties in moving around from a hospital, showering or bathing, dressing and toileting. Most of them also reported needing a help sometimes for understanding their communication. Those of difficulties should be addressed to rehabilitation services for elderly patients with CNS conditions. Therefore, assessing functional status of patients with CNS problems is important to provide appropriate rehabilitation services to patients. Keywords : function, mobility, self-care

PP26 S-111
COUNSELING THE BENEFICIARY IN LONG TERM CARE INSURANCE SYSTEM IN KOREA

Hung Sa LEE (Department of Nursing, Daegu Haany University, Korea)

Introduction : The numbers of older people dramatic increase in the after 2000. It has led to concurrent increase in the number of long term care facilities in which the older people being taken care. After 2008, introducing the long-term care insurance system, many type of the nursing facilities were established, especially the visiting nursing facilities were rapidly increased in the number. In the other hand it is difficult to find eligible nursing facilities for the elder. Method : This study accomplished to analyze factors influencing the counseling, and to find the way, frequency and time of counseling when the nurses or social workers counsel the older who wanted to have a long term care service. Questionnaires included socio-demographic characteristics, time, frequency, way and contents of counseling were used. Results : 1. Average age of participants was 77.02 years old. 11.09 % were living alone, 42.69% were living with spouse. 83.02% had visiting long term care services, 13.05% had services at nursing home. 2. The way of counseling were 3 types. Initial counseling for beneficiary was done through visiting home (58.35%), visiting facility (6.28%), by telephone (8.36%), the beneficiary lead (26.13%). The average counseling time was 17.8 minutes in first counseling, 37.2 minutes in second counseling, 21.2 minutes in third counseling. 3. The initial

counseling was came through around once a year (0.14/y) as soon as older authorized beneficiary, regular counseling was twice a year (0.43/y). Conclusion : Based this result, the government should establish active counseling system, should be provided according to elderly's exact health status. Keywords : elderly, counseling, long term care

PP26 S-112
RELATED FACTORS OF URINARY INCONTINENCE AMONG OLDER ADULTS IN LONG-TERM CARE FACILITIES

Gwi-Ryung SON HONG, Hyekyung KANG (Department of Nursing, Hanyang University, Korea)

Introduction : Urinary incontinence (UI) is a risk factor for nursing home admission, and is one of the critical predicting factors for both frailty and quality of life in nursing home residing older adults. The purpose of the study was to identify the associated factors of UI based on demographic and health related factors. Method : Descriptive study design was used through face-to-face interviews with older adults and staff nurses. Data was collected from 7 nursing homes more than 80 beds in Korea. A convenience sample of 314 older adults were included if they were over 65years of age, and had agreed to participate in the study. Data were analyzed using chi-square, t-test, and logistic regression. Results : Mean age of the participants was 80.3 (± 7.49), and the prevalence of UI was 57.8%. There were statistically differences in age, gender, type of facility, hypertension, arthritis, cataract, delirium, insomnia, number of chronic diseases, number of medication, depressive symptoms, cognitive impairment, ADL, nutritional status, and mental functioning between continence and incontinence group at univariate analysis. Number of chronic diseases (OR 2.08; CI=1.462-2.895, $p < .000$), depressive symptoms (OR 2.65; CI=1.077-6.520, $p < .05$), and ability to control urine (OR .16; CI=.045-.527, $p < .005$) were the significant predictors of UI. Conclusion : It is important for future studies to examine the impact of environmental and organizational factors on UI in long-term care facilities to develop a comprehensive intervention for this population. Keywords : Urinary Incontinence, older adults, long-term care facility

PP26 S-113
THE EFFECT ON SOCIAL WORKER'S PSYCHO-EDUCATIONAL INTERVENTION PROGRAM ON FAMILY CAREGIVERS' UNDERSTANDING END-OF-LIFE DECISION FOR KOREAN DEMENTED OLDERS IN LONG TERM CARE SERVICES

Jihyeon PARK¹, Sooyoun K. HAN², Taehyun KIM³, Hongjik LEE⁴ (1. Research & Education, CARE the Right, Korea; 2. Executive Director, CARE the Right, USA; 3. Social Welfare, Sungshin Women's University, Korea; 4. Social Welfare, Kangnam University, Korea)

Introduction : The purpose of this study was to examine the benefits of a psycho-educational intervention program (PEIP) on family caregiver(FC)'s understanding about end-of-life decision (EOLD) for demented, Korean elders in Long Term Care Service(LTCS). Method : This study used a quasi-experiments single case, AB designn to identify that PEIP would enhance FC to understand about EOLD in pre and post test. Using a two-hour long PEIP(Kim, Han, Lee & Kim, 2012) was designed to educate FC about dementia prognosis and symptoms, life sustaining treatment choices, and the EOLD procedure, all by using supportive counseling skills. The telephone interview included semi close-ended questions with regard to how well FC understood EOLD and knowledge of Dementia. Data was analyzed by SPSS 19, using paired T-test. Results : Results indicate that FC who

received PEIP showed statistically significant increased to their knowledge of Dementia, understanding on EOLD. FCs satisfied with the PEIP in terms of how it helped increase their knowledge of Dementia and their level of comfort in dealing with EOLD. Conclusion : If PEIP works in such a positive way to improve the quality of EOLD for demented elders, more people need to encourage policy makers and healthcare providers to be more cognizant of the system's current shortcomings in caring for and educating FCs is needed in order to effectively address them. Keywords : Educational Intervention Program, Demented Elders, Family Caregiver, Social Worker

PP26 S-114

THE EFFECT OF PSYCHO-EDUCATIONAL INTERVENTION PROGRAM ON COMPLETION OF END OF LIFE DECISION FOR KOREAN DEMENTED OLDERS IN LONG TERM CARE SERVICES

Jihyeon PARK¹, Sooyoun K. HAN², Hongjik LEE³, Taehyun KIM⁴
(1. Research & Education, CARE the Right, Korea; 2. Executive Director, CARE the Right, USA; 3. Social Welfare, Kangnam University, Korea; 4. Social Welfare, Sungshin University, Korea)

Introduction : The study examined the effect of a psycho-educational intervention program (PEIP) on completion of end-of-life decision (EOLD) for demented, Korean in Long Term Care Services. Method : This study used a classic pre and post-test control group design to identify that PEIP would enhance family caregiver(FC) to complete EOLD in comparison pre and post test. A two-hour long PEIP(Kim, Han, Lee & Kim, 2012) was designed to educate FC about dementia prognosis and symptoms, life sustaining treatment choices, and the EOLD procedure, all by using supportive counseling skills. The telephone interview included semi close-ended questions with regard to how many FCs had actually completed EOLD or consulted physicians, and why the FCs decided to complete EOLD. Data analyzed by SPSS 19, using paired T-test. Results : Results indicate that FC who received PEIP showed statistically significantly increase EOLD completion rate than before PEIP. They involved in EOLD to help elderly residents' pain relief, elder's dignity, medical condition. Conclusion : This study suggests if PEIP works in such a positive way to improve the quality of EOLD for demented elders, encouraging policy maker and healthcare providers to be more cognizant of the system's current shortcomings in caring for and educating minority elders and FCs is needed in order to effectively address them. Keywords : End-of-Life Decision, Korean Older, Family Caregiver

PP26 S-115

ILLNESS EXPERIENCES OF ELDERLY PEOPLE LIVING WITH PULMONARY TUBERCULOSIS

Jirapa SIRIWATANAMETHANON¹, Kanjana PHAWINRUM², Tanyaluk PRANPRASERT³ (1. Community Nursing Department, Faculty of Nursing Mahasarakham University, Thailand; 2. Out Patient Department, Yangtalad Hospital Yangtalad District, Thailand; 3. In Patient Department, Yangtalad Hospital Yangtalad District, Thailand)

Introduction : The qualitative research of this study was to explore the illness experience of elderly people living with Pulmonary Tuberculosis in Rural Community Thailand. Method : Participants includes 18 elderly people diagnosed with Pulmonary Tuberculosis. They were recruited from an TB clinic and by snowballing. Data were gathered through in-depth interviews, participant observations and field notes made during home visits. The interviews were tape-recorded and transcribed verbatim. Results : Findings revealed that the

illness experience of elderly people living with Pulmonary Tuberculosis consisted of 5 themes including 1) being diagnosed with Pulmonary Tuberculosis, 2) being stigmatized, 3) being suffered 4) being shamed, 5) being feared, and 6) learning about TB. This study provided better understanding about the perception of the illness experience of elderly people living with pulmonary tuberculosis. Conclusion : Findings of this study can be applied and integrated by health professionals for developing holistic care interventions that can effectively meet the needs of elderly living with the disease in their home. Keywords : Illness experiences, elderly people, pulmonary tuberculosis

PP26 S-116

REDUCING THE BURDEN OF CARE BY USING AROMATHERAPY MASSAGE IN A GERIATRIC HEALTH SERVICES FACILITY

Kazue SAWAMI, Chiyoko SEKI, Kazuyuki SUGINO, Kiyoshi NAWAI, Osamu URAYAMA (Medical health, Tsukuba International University, Japan)

Introduction : In Japan, the number of elderly people with dementia is increasing with the aging of the population. Furthermore, people taking care of elderly people with dementia often feel that such care is a heavy burden. Thus, a method for effectively caring for elderly people with dementia, without putting a large strain on caregivers, is in demand. In this study, we examined whether one method - aromatherapy massage - could reduce the burden on caregivers. Method : Participants were 25 people taking care of elderly people with dementia in a geriatric health services facility. First, participants were taught the aromatherapy massage method. They then filled out a questionnaire on their feelings of burden from caregiving as well as their thoughts about the aromatherapy massage. Results : Forty-eight percent of the caregivers reported they were fatigued in response to violence and violent language from people of the dementia. In addition, 40% suffered from a sleep disorder. The aromatherapy massage was practiced on the patients with the hope of relieving these feelings of unrest, sleeplessness, and uneasiness. Conclusion : Caregivers and relatives of elderly people with dementia wish for them to have peaceful lives. The results of this study suggest that aromatherapy massage can ease the negative feelings of elderly people with dementia, thus reducing care workers' feelings of burden. Keywords : aromatherapy massage, dementia, burden, ease

PP26 S-117

AGE AND SEX DISTRIBUTION OF THE RESIDENTS AT THE RESIDENTIAL CARE HOMES FOR THE ELDERLY IN A 300-THOUSAND POPULATED TOWN IN HONG KONG

Kwun Man LO¹, Joyce HO¹, Siu Yin CHAN¹, Elsie HUI², Philip LI²
(1. Community Outreach Services Team, Alice Ho Miu Ling Nethersole Hospital, Hong Kong; 2. Community Outreach Services Team, Prince of Wales Hospital, New Territories East Cluster, Hong Kong)

Introduction : The ageing problem is inevitable in the community-dwelling population in Hong Kong. It is observed that residents are aged older than before at the residential care homes for the elderly (RCHEs). However, little is known on the age and sex distribution of people living at RCHEs. Method : A cross-sectional survey was conducted at all the RCHEs in a 300-thousand populated town in Hong Kong. The age and sex distribution of the residents were reported by the supervisors of the RCHEs. The number of the residents and the sex distributions were plotted against the age. Finally, the cumulative age distribution of the residents was plotted for analysis. Results : We

achieved 100% response rate from the RCHEs. There were 3099 residents living at the RCHEs in a 300-thousand populated town in Hong Kong. There were more women (1874) than men (1125) living at the RCHEs or at a female to male ratio of 1.67 to 1. There were 2.7% residents aged less than 60 living at the aged homes. Approximately half of the residents (51%) and a quarter of the residents (26%) were aged at 85 and 90 or above respectively. Conclusion : The survey supported our observation that the ageing problem is inevitably true at RCHEs. Community service strategies should be devised and targeted to support the oldest old population at the aged home. The higher proportion of women at the aged homes may prompt us to address for the special needs of the women in the health care services, manpower arrangement and facilities planning. Keywords : residential care , age, sex

PP26 S-118

CAREGIVING TASKS AND BURDEN AMONG FAMILY MEMBERS OF CENTENARIANS AND OCTOGENARIANS

Kyuhoo LEE¹, Peter MARTIN¹, Maurice Marcus MACDONALD², Leonard W. POON³ (1. *Human Development and Family Studies, Iowa State University, USA*; 2. *Family Studies & Human Services, Kansas State University, USA*; 3. *Gerontology, University of Georgia, USA*)

Introduction : Many centenarians depend on others for care, but their children are typically of advanced age themselves. The purpose of this study was to assess caregiving tasks and burden among family members of centenarians and octogenarians. Method : Self-ratings and proxy informant ratings were obtained from three hundred and six participants of Georgia Centenarian Study. Octogenarians' data were also used for comparison. All participants were asked questions about different types of care and caregiver burden. Demographic characteristics and mental health of the centenarians were assessed and descriptive statistics and multiple regression analysis were computed to assess predictors of caregivers' feeling of burden. Results : The results indicate that octogenarians (26.5%) received more personal care from unpaid family members than octogenarians (12.5%). The difference of financial support from a family member was not significant between two age groups. The caregiving family members' overall feeling of burden was associated with participants' residence ($\beta = -.17, p = .015$), indicating that centenarians living in a care facilities had the lowest and those living at home the highest scores of burden. The level of loneliness of the participants observed by the proxies was also associated with caregivers' feelings of burden ($\beta = .27, p = .001$). Conclusion : We conclude that caregiving support for centenarians is relatively low, particularly from family members whose relative resides in a care facility. Loneliness of oldest-old adult, on the other hand, is an important predictor of caregiver burden. Keywords : centenarian, octogenarian, feeling of burden

PP26 S-119

CAREGIVING NEEDS FOR CHINESE SENIORS LIVING WITH HEART DISEASE AND STROKE

Lichun Willa LIU¹, Helen LEUNG², Ratsamy PATHAMMAVONG³, Alice MUI⁴, Betty DUONG⁴, Leqin LU³ (1. *Prentice Institute for Global Population & Economy, University of Lethbridge, Canada*; 2. *Administration, Carefirst Seniors and Community Service Association, Canada*; 3. *Dept. of Diversity, Heart and Stroke Foundation of Ontario, Canada, Canada*; 4. *Program Development, Carefirst Seniors and Community Services Association, Canada*)

Introduction : Funded by the Heart and Stroke Foundation, Canada (2012), this paper examines the service gaps, needs, and barriers faced

by Chinese Ontarians living with heart disease or stroke and their family caregivers, as well as the strategies they utilized in self-care and self-management. Method : Mixed research methods were used in data collection, which included focus groups (n=9), individual interviews (n=8), and an open-ended email survey (n=10). Sixty-two informants participated in the study, including 26 survivors of cardiovascular diseases, 19 family caregivers, and 17 health care providers from the Greater Toronto Areas and five other regions in Ontario, Canada. Results : Data analysis highlighted findings in the following areas: 1. Insufficient Chinese-speaking family doctors and specialists lead to long waiting time and cause delay in treatment. 2. Due to language barriers, many survivors sought health information and medical advice from "non-professionals" sources in Chinese. 3. Many recent immigrants used traditional Chinese herbal medicine alongside prescribed Western medicine, which may affect the efficacy of the prescribed medicine and mislead the doctors in diagnosis. 4. Self-management and self-care practices include physical exercises on a daily basis, eating healthy food and maintaining a healthy lifestyle, actively seeking health information from various sources, and developing a positive/optimistic outlook. Conclusion : Improved integration and coordination of care services are needed and more ethnically and linguistically appropriate programs were recommended. Keywords : caregiving, service gaps

PP26 S-120

THE HOME HEALTH CARE WORKERS' STRESS AND ITS EFFECT ON THEIR JOB SATISFACTION

Meeryoung KIM, Jeong Won SHIM (*Department of Community Development and Welfare, Daegu University, Korea*)

Introduction : The study is based on the stress theory to find out whether the stress of home health workers' job affect their job satisfaction. If the job stressors of home health care workers were reduced, they may work efficiently. Also, it will affect the receivers' welfare. Therefore, the aim of this study is to find out whether the job stressors such as preventing job autonomy, salary level and role overload are affecting the job satisfaction of home health care workers and to increase their job satisfaction and receivers' welfare. Method : The target population of this study is home care workers who took care of older adults in the long-term care centers in Kyung-nam Province. The sample size of this study is 205 and the data was collected in 2010. To test the differences of job stressors by demographical variables, t-tests were used. To test the effect on the job satisfaction of the home care workers' job stress, hierarchical regressions were used. Results : There are statistically significant positive effects of home health care workers' education, experience and health on job satisfaction. Also, the task related variables such as salary, the work time, the distance and reeducation affected the job satisfaction in a statistically significant level. When the salary was increased and the role overload was reduced, the job satisfaction increased in a statistically significant level. Thus, to increase job satisfaction, reducing role overload and reasonable salary are necessary. Conclusion : To increase job satisfaction of homehealth care workeres, reducing role overload and reasonable salary are necessary. Keywords: home health care workers, job stress, job satisfaction

PP26 S-121

EFFECTIVENESS OF MULTI-COMPONENT INTERVENTION ON NURSING HOME RESIDENTS: EFFECTS ON FUNCTION, DEPRESSION AND QUALITY OF LIFE

Seung-Youn HONG (*Division of Silver Industry, Kangnam University, Korea*)

Introduction : Since the Long-term care policy was applied in 2008, the number of nursing home residents has been increased. However, there is little experimental evidence of interventions in that setting. Therefore, we examined the effects of 8 week multi-component program on functional capacity, depression and quality of life in nursing home residents who had been identified as having low physical activity levels. **Method :** Design: Pretest-post test with outcome measures taken before and after 8 weeks of intervention. **Setting:** Three Nursing homes in Y city, Republic of Korea **Participants:** 35 residents (from the three nursing home) (Mean age: 80.97+8.93; Range: 61-95 years, 78% female) completed 8 week intervention program **Intervention:** All residents participated in once a week of 45 minutes multi-component intervention: 10-min warm-up activities, 10-min memory game, and 20-minute recreation activities. **Measure:** GDS-K for depression, 4 questions of 36-SFT for vitality, 3 SFT tests (chair stand, shoulder flex and arm curl) were measured before and after 8 week of intervention. **Results :** Result: There were no significant differences in perceived health status, any of functional capacities (chair stand, arm curl and shoulder flex), and depression. Eight weeks of multi-component intervention, however, produced significant improvement in vitality of quality of life ($t=-2.6$, $p=.019$). Also, there were no side effects, such as increases in falls or cardiovascular complications, due to the intervention. **Conclusion :** Eight-week multi-component intervention by ambulatory nursing home residents produced significant improvements in vitality in quality of life. No other significant changes were noted in function, perceived health and depression in groups. **Keywords :** Nursing home, intervention, vitality, depression

PP26 S-122

EXAMINING CAREGIVER DISTRESS OF INFORMAL CAREGIVERS OF THE OLDEST OLD RECEIVING COMMUNITY HOME CARE SERVICES IN ONTARIO, CANADA

Shannon FREEMAN, John P. HIRDES (*School of Public Health and Health Systems, University of Waterloo, Canada*)

Introduction : Enabling caregivers to continue caregiving duties can reduce demands on health care systems and ensure older adults are able to remain at home. This study examined factors driving caregiver distress for informal caregivers of the oldest old (aged 80 or greater) receiving community based home care services and identified factors amenable to intervention. **Method :** This study examined community-based home care clients assessed with the interRAI Home Care assessment (interRAI HC) as part of normal clinical practice between 2003 and 2010 (N=829,402). The main study outcome was the presence of one or both indicators of caregiver distress: helper(s) unable to continue caring activities; primary informal helper expresses feelings of distress, anger, or depression. **Results :** Caregiver distress was evident among about 16.5% of community homecare clients (N=137,115). Caregivers provided on average 17.9 hours of care per week. 30% of spousal caregivers exhibited distressed compared to 14% of children, 11% of other relatives, and 7% of neighbour caregivers respectively. 1 in 4 caregivers who lived with the care recipient expressed distress compared to less than 1 in 10 for those who did not. Multivariate regression analyses examined client level predictors (including functional, cognitive, psychosocial, and demographic characteristics), as well as caregiver and agency characteristics, to identify factors affecting prevalence of caregiver distress. **Conclusion :** Informal caregivers are vital to ensuring quality of life and care older adults. Results emphasize to the need for a care planning protocol that may be used on a targeted basis for clients experiencing or at elevated risk of caregiver distress. **Keywords :**

caregiver burden, interRAI, assessment

PP26 S-123

AN INTERVENTION ON IMPROVEMENT OF INCONTINENCE FOR NURSING HOME RESIDENTS

Sing Shueh HUNG¹, Tsuann KUO² (*1. Eldercare, Central Taiwan University of Science and Technology, Taiwan. 2. Medical Sociology and Social Work, Chung Shan Medical University, Taiwan*)

Introduction : Incontinence is one of the major issues for older adults to lose their independent ability and dignity at home or at a nursing home setting. An effective strategy to improve incontinence based on quality and respect requires a creative and evidence-based methodology as well as cooperation between staff and residents. The purpose of this research was to evaluate an intervention created to remind residents about toileting and promote friendly-service attitudes to assist residents in making toilet runs. **Method :** Staff and a few residents served as volunteers were divided into teams to remind all residents to go to the toilet by following a structured and instructed manual developed by the author. The intervention ran for six months and the incontinence rate and the quality of toileting were compared before and after the intervention. **Results :** The frequency of toileting improved from 61.3% to 85% among the residents in the nursing home. In addition, the ability to control and finish toileting without accidents improved from 61.5% to 64.5%, an improvement of 3%. **Conclusion :** The study showed that the intervention was effective by improving incontinence and toileting quality. Therefore, an intervention which guides staff to pay attention to incontinence and to create a way so the residents can improve their toileting ability, avoid embarrassing incontinence moments and gain self-esteem and dignity. The instruction of this intervention can be disseminated among nursing homes in the future. **Keywords :** Incontinence, Nursing Home, Long-term Care

PP26 S-124

THE EFFECT OF PSYCHO-EDUCATIONAL INTERVENTION PROGRAM ON FAMILY CAREGIVERS' UNDERSTANDING ABOUT END OF LIFE DECISION FOR KOREAN-AMERICAN, DEMENTED OLDERS

Sooyoun K. HAN¹, John KIM², Jason J. HAN³, Hongjik LEE⁴ (*1. Executive Director, CARE the Right, USA; 2. Internal Medicine and Geriatrics, Bergen Regional Medical Center, USA; 3. Exercise Physiology Laboratory, VAD & Cardiac Transplant Program, Center for Advanced Cardiac Care, Columbia University Medical Center, USA. 4. Social Welfare, Kangnam University, Korea*)

Introduction : The purpose of this study was to examine the benefits of a psycho-educational intervention program (PEIP) on family caregiver(FC)'s understanding about end-of-life Decision (EOLD) for demented, Korean-American, nursing home residents. **Method :** This study used a classic pre and post-test control group design to identify that PEIP would enhance FC to understand about EOLD in comparison to the control group, receiving only the standard information routinely provided in Korean. A two-hour long PEIP was designed to educate FCs about dementia prognosis and symptoms, life sustaining treatment choices, and the EOLD procedure, all by using supportive counseling skills. The telephone interview included semi close-ended questions with regard to how well FC understood EOLD or knowledge of Dementia. Data was analyzed by SPSS 19, using the One-Way Analysis of Covariance(ANCOVA). **Results :** Results indicate that FCs who received PEIP statistically significant scored higher FCs' understanding of EOLD than the control group between pre and post test. They increased in understanding about the definition

of patient's self determination, the Right of Good Death, and respecting of elderly patient's value in EOLD. They significantly increased their knowledge of dementia to compare with the control group after three month of PEIP. Conclusion : If PEIP works in such a positive way to improve the quality of EOLD for minority elders, encouraging policy makers and healthcare providers to be more cognizant of the system's current shortcomings in caring for and educating minority elders and FCs is needed in order to effectively address them. Keywords : Psycho-Educational Intervention Program, End-of-Life Decision, Family Caregiver

PP26 S-125

HOME CARE, INSTITUTIONAL CARE AND SPOUSAL CARE IN EUROPE

Thijs VAN DEN BROEK (*Sociology, Erasmus University Rotterdam, Netherlands*)

Introduction : Many studies have shown that spouses are the main providers of informal care for dependent older adults. Yet, the association between public long-term care and spousal care has thus far received little attention from scholars. In this study we assess to what extent country differences in the propensity of spousal care are attributable to long-term care arrangements. We distinguish two forms of public long-term care as these are expected to be distinctively associated with spousal care. Institutional care diminishes necessity and opportunities for spousal care, while home care typically comes together with expectations towards capable spouses. We thus expect spousal care to be positively associated with receiving home care, but negatively associated with the availability of institutional care. Method: Multilevel logistic regression analyses of SHARE data on older adults with functional limitations who are married to a person with no functional limitations. Micro data are enriched with country level indicators from the MULTILINKS database. Results : As expected, the availability of public institutional care is negatively associated with spousal care, while receiving public home care is positively associated with spousal care. Conclusion : Our results suggest that public home care and spousal care are complimentary, while widely available institutional care tends to substitute spousal care. In advanced welfare states the long-term care balance is shifting away from institutional care and toward home care. This may reinforce the role of spouses as care providers. Keywords : spousal care, substitution, crowding out

PP26 S-126

THE EFFECT OF ABMINAL MASSAGE AND FAMILY PARTICIPATION ON CONSTIPATION IN BEDRIDDEN ELDERLY PATIENTS

Kim TOSSAPUK¹, Pornchai JULLAMATE², Naiyana PIPHATVANITCHA² (*1. Gerontological Nursing Department, Nangrong Hospital, Thailand; 2. Gerontological Nursing Department, Faculty of Nursing, Burapha University, Thailand*)

Introduction : Constipation in bedridden population becomes a crucial and serious problem in this current "grey" society in Thailand. Non-pharmacologic intervention challenges nurses who responsible for this important issue. Method : This two- group pretest and posttest quasi-experimental research aimed to study the effect of abdominal massage and family participation on constipation in bedridden elderly patients. Forty-four bedridden elderly diagnosed with constipation were randomly selected and assigned into experimental group and control group equally. The control group received usual nursing care whereas the experimental group received individual abdominal massage together with family participation five days a week for four weeks

consecutively. Data were gathered using 1) The Demographic Data Interview Form 2) The Bowel Pattern Assessment Form 3) The Defecation Form, and 4) The Family Participation Record Form. Frequency, percentage, mean, standard deviation, dependent and independent t-test were computed for data analysis. Results : Findings revealed that when finished this nursing massage together with family participation intervention, the bedridden elderly in the experimental group had statistically significant lower constipation's mean score than the control group had ($t = 6.510, p < .001$). Additionally, once finishing the nursing intervention, the constipation's mean score of the elderly in the experimental group significantly decreased at the level of significance of .01 ($t = -3.843, p < .001$). Conclusion : This nursing abdominal massage together with family participation is practical and effective in reducing the constipation of bedridden elderly. Therefore, this should be applied in improving quality of care for hospitalized bedridden elderly who had constipation. Keywords : Elderly, Bedridden, Constipation, Abdominal Massage, Family Participation

PP26 S-127

CAREGIVER SUPPORT: THE EFFECTIVENESS OF "POWERFUL TOOLS FOR CAREGIVERS" ON ROLE STRESS AND WELL-BEING OF THAI ELDERCARE PROVIDERS

Pornchai JULLAMATE¹, Ed ROSENBERG², Zaida AZEREDO³, Rarcharneeporn SUBGRANON¹, Wanida NOIMONTREE¹ (*1. Gerontological Nursing, Faculty of Nursing, Burapha University, Thailand; 2. Department of Sociology, Appalachian State University, USA; 3. Public Health, Institute of Piaget, Portugal*)

Introduction : As in most nations, Thai eldercare is mainly family-based. Caregiver burden, especially among family members caring for chronically-ill elderly, can be overwhelming, resulting in role stress and lower well-being. Nursing intervention can play a crucial role in assisting and empowering family caregivers. This study explored the effectiveness of the "Powerful Tools for Caregivers" (PT4C) program on role stress and well-being of caregivers of community-dwelling chronically-ill elderly. Method : A two-group pretest-posttest quasi-experimental design was used. One hundred family caregivers of chronically-ill elderly were divided into experimental and control groups. The control group received the usual supportive care, while the experimental group also received PT4C training, consisting of four weekly meetings. Data analysis included pretest and posttest means, standard deviation, and independent t-tests for role stress and well-being for both groups. Results : 1. Posttest role stress levels for the experimental (PT4C) group were significantly lower than for the control group. 2. Posttest well-being levels for the experimental (PT4C) group were significantly higher than for the control group. Conclusion : PT4C lowers role stress and raises well-being in informal caregivers of chronically-ill elderly. This enhances caregiver efficacy and thus the quality of life of care recipients. Nurses and other health care professionals should consider including PT4C as part of the support, education and training they provide for family-based eldercare. Keywords : Powerful Tools, Elderly, Chronic Illness, Community

PP26 S-128

PRIVATE LONG TERM CARE INSURANCE PURCHASES BY ADULT CHILDREN: DO THEIR CARE EXPERIENCES FOR AGING PARENTS MATTER?

Wonah YOON (*Retirement Research, Samsung Retirement Research Center, Korea*)

Introduction : The purpose of this study is to investigate how

consumer insurance decisions are influenced by personal experiences concerning LTC risks. Limited consumer information and knowledge in long-term care (LTC) situations, such as erroneous risk perception, is believed to be one major reason for the low demand for LTC insurance. Learning from experiences allows individuals to develop more optimal strategies to guard against uncertain risk (Einhorn 1982). If people have an opportunity to closely observe LTC situations, they more realistically perceive their own future risks and the costs associated with LTC options. Method : We estimate a conditional fixed effect logit model of having LTC insurance, using data from seven waves of the HRS (Health and Retirement Study) data from 1998 to 2010. We focus on respondents whose ages are 50 to 64. The final observations used in analyses are 41,257. Results : The results show that those who helped their parents with activities of daily living (ADLs) are more likely to have LTC insurances. Quantitatively, the personal care experience for fragile parents increases the odds that the adult children buy a LTC insurance by 21.7%. But those who parents simply needed LTC are less likely to hold private LTC insurance. Conclusion : Our findings have important policy implications for preparations for long-term care needs in later years: providing environments where individuals are exposed to information and experience related to long term care in earlier life stages. Keywords : Long-term Care Insurance, Limited Rationality, Caregiving Experiences

PP26 S-129

ASSOCIATIONS OF SELF-TRANSCENDENCE AND DEPRESSIVE SYMPTOMS IN TAIWANESE ELDERS

Ya-Chuan HSU¹, Cheryl WRIGHT² (1. Nursing, Chang Jung Christian University, Taiwan; 2. Nursing, Oregon Health and Science University, USA)

Introduction : Self-transcendence, a capability to expand self-boundaries, has been considered a psychosocial resource of personal maturity to promote individuals' spiritual and mental health. The literature has consistently indicated an inverse relationship between self-transcendence and depressive symptoms in both community-dwelling and institutionalized elders in western countries, but there is limited research in Asian cultures, thus warranting study replication to evaluate the relationship between self-transcendence and depressive symptoms in an Asian culture. In addition, the recent trend of gender differentiation is being recognized as an important issue in health. Therefore, to differentiate factors influencing depressive symptoms from a gender perspective is worthwhile. The purpose of study was to examine the association of self-transcendence, depressive symptoms and gender among Taiwanese elders living in long-term care facilities. Method : This cross-sectional study recruited a convenience sample of 176 cognitively intact elders with mean age of 78.59 years from 13 long-term care facilities in Eastern Taiwan. Reed's Self-Transcendence Scale was used to measure the levels of self-transcendence. Depressive symptoms were measured by the Geriatric Depression Scale. Results : A partial correlation coefficient indicated strong inverse relationship between self-transcendence and depressive symptoms. An ANCOVA controlled for functional impairment and length of institutionalization and indicated men and women showed no significant difference in levels of self-transcendence. Conclusion : Findings suggest the importance of providing nursing interventions to promote self-transcendence, regardless gender, which may alleviate depression in institutionalized elders. This is particularly salient for those elders who require greater assistance with daily activities due to increased frailty and physical disabilities. Keywords : depressive symptoms, self-transcendence

PP26 S-130

A CRITICAL REVIEW OF THE LITERATURE RELATING TO INTERVENTIONS FOR FAMILY CAREGIVERS OF THE ELDERLY WITH DEMENTIA

Yoon Hee CHO (Department of Nursing, Eulji University, Korea)

Introduction : In recent years, researchers have performed an increasing number of clinical trials for family caregivers of the elderly with dementia. To analyze the contents and approach of interventions for family caregivers, previously published studies were reviewed. Method : CINAHL, MEDLINE, KISS and RISS, free search engines for accessing the database, were used to search articles on related topics. A total 51 international articles and 20 Korean articles were retrieved from the four search engines using the following terms: dementia and caregiver; dementia and family; Alzheimer and caregiver; and Alzheimer and family. At the same time, three conditions, namely, clinical trial (type of article), nursing journal (journal groups), and English (language), were attached as limit conditions when the articles were retrieved on CINAHL and MEDLINE. In addition, two conditions, namely, clinical trial (type of article) and Korean (language) were added on KISS and RISS. Finally, 18 articles fit the above search criteria and, accordingly, were analyzed. Results : International articles introduced a number of approaches, such as group sessions, home visits, computer links, watching videotapes, phone calls, etc. On the other hand, the approaches used in Korea were not diverse. The Korean studies tended to the following: 1) Intervention contents were not diverse; 2) Group session were most often used; and 3) Monitoring period after main intervention was not provided. Conclusion : Many researchers in Korea need comprehensive works to help caregivers taking care of the elderly with dementia. In order to further promote the effectiveness of the intervention, intervention needs to be provided intensively and diversely. Keywords : family caregiver, dementia, intervention

PP26 S-131

EVALUATION OF A HOME-BASED, COMPREHENSIVE INTERVENTION PROGRAM FOR DEMENTIA PATIENTS' FAMILY CAREGIVERS

Yoon Hee CHO (College of Nursing, Eulji University, Korea)

Introduction : This study was a randomized controlled trial to evaluate the effectiveness of a home-based and comprehensive intervention program for family caregivers who take care of the elderly with dementia at home. Method : The intervention program was developed by conceptual framework and validity test. The program used in this study contains six components: 1) emotional support, 2) knowledge improvement, 3) skills training, 4) self-care ability, 5) communication, and 6) use of resources. The program includes various contents simultaneously. The study period for program was six weeks including home visits, group meetings, and supportive phone-calls. A total of 63 caregivers were randomly assigned to the intervention group (n=31) or the control group (n=32). Data collection was conducted from February to June, 2010. To measure the effectiveness of the intervention program, caregivers' knowledge, self-efficacy, burden, personal growth, preventive health behaviors, and family coping strategies were checked. Descriptive statistics, χ^2 test, independent t-test, Pearson correlations, MANCOVA, and multiple regression analysis with SPSS/Win 15.0 were used to analyze the data. Results : The home-based, comprehensive intervention program for family caregivers was found to improve caregivers' knowledge, self-efficacy, family burden, and family coping strategies. However, it did not appear to have a favorable effect on personal growth and preventive health behaviors. Conclusion : The home-based and comprehensive

intervention program applied in this study was effective in improving caregivers' knowledge, self-efficacy, burden, and coping strategies. Therefore, an intensive and comprehensive intervention including diversified contents based on individual approaches should be utilized in order to maximize the effectiveness. Keywords : Program evaluation, Family caregiver, Dementia

PP26 S-132

FACTORS ASSOCIATED WITH PHYSICAL RESTRAINT AMONG OLDER ADULTS WITH DEMENTIA IN LONG-TERM CARE HOSPITAL AND NURSING HOME

Young Mi LIM¹, Hae Jung LEE² (1. Department of Nursing, Yonsei University Wonju College of Medicine, Korea. 2. College of Nursing, Pusan National University, Korea)

Introduction : Although there are many studies on physical restraint in geriatric care setting, little attention has been paid to identifying the prevalence and factors of use of physical restraint in terms of demented elders' characteristics such as impaired cognitive status, risk of falls, and wandering in the long-term care hospital and nursing homes. The purpose of the study was to determine factors affecting use of physical restraint among older adults with dementia in long-term care hospital and nursing home in Korea. Method : We evaluated 3121 older adults with dementia from the Nationwide Survey on Dementia Care of Korea in 2011. Mini-Mental State Exam (MMSE), Morse Fall Scale (MFS), and Revised Algeas Wandering Scale (RAWS) were used. We employed logistic regression to identify predictors influencing on the use of physical restraint in the long-term care hospital and nursing homes. Results : For the long-term care hospital, MMSE(Odds Ratio=.879, p=.000) was a predictor of the use of physical restraint. For nursing home, MMSE (OR=.893, p=.000) and wandering (OR=.500, p=.000) were predictors of the use of physical restraint among older adults with dementia. Conclusion : Results show that impaired cognitive status and wandering significantly influenced the use of physical restraint among older adults with dementia in nursing home. Researchers and clinicians should continue to focus efforts on developing a variety of approaches that reduce the use of physical restraint among older adults with dementia in the long-term care hospital and nursing homes. Keywords : physical restraint, dementia

PP26 S-133

THE EFFECTS OF MULTI-SENSORY STIMULATION INTERVENTION PROGRAM USING FAMILIARITY KOREAN TRADITION ON PERSONS WITH DEMENTIA IN LONG TERM CARE FACILITY IN KOREA

Young-Sun PARK (Department of Nursing, Kyungbok University, Korea)

Introduction : Korea is becoming an aging society, there is a rapid increasing number of people with dementia. There has been practicing various treatment for the elderly people with dementia in facilities and institutions, but its effectiveness has not been verified yet. The purpose of the study was to examine the effects of Multi-Sensory Stimulation intervention program (MSS) using familiarity Korean tradition on Persons with Dementia (PWDs). Method : A nonequivalent control group with pre and post tests was used. 46 PWDs were included of they: 1)were over 65yr old, 2)were diagnosed with dementia, 3)had no visual or speech impairments, 4)were able to communicate, 5)had spent more than one month in a long term care facility. The outcome variables included cognitive function (MMSE-KC), emotion (SGDS-K), physical function (Barthel Activity of Daily Living Index), psychobehavior function (NPI-K). Repeated ANOVA was used for

data analysis. MSS was conducted twice a week for 10 weeks. Results: After the program, the cognitive functions (MMSE-KC) (F=3.69, p=.029), emotional functions (SGDS-K) (F=7.03, p=.001), physical functions (Barthel ADL Index) (F=9.53, p<.001), and psychobehavioral functions (NPI-K) (F=7.58, p=.009) of the experimental group was significantly better than those of the control group. Conclusion : A MSS using familiarity based on Korean tradition was effective in improving cognition functions, emotion functions, findings, physical functions, psychobehavioral functions of PWDs. Therefore, this program should be considered as a positive program for cognitive, emotional, physical and psychobehavioral improve for persons with dementia. Keywords : Dementia, Familiarity, Multisensory

PP26 S-134

THE EFFECTS OF COGNITIVE AND PHYSICAL FUNCTION OF INTERVENTION PROGRAM USING FAMILIARITY KOREAN TRADITION ON PERSONS WITH DEMENTIA (PWDS) IN LONG TERM CARE FACILITY IN KOREA

Young-Sun PARK¹, Jin-Yeong CHOE² (1. Department of Nursing, Kyungbok University, Korea; 2. Department of Neuropsychiatry, Seoul National University Bundang Hospital, Korea)

Introduction : The purpose of the study was to examine the effects on cognitive and physical function of intervention program using familiarity Korean tradition on Persons with Dementia(PWDs). Method : A nonequivalent control group with pre and post tests was used. 46 PWDs were included of they: 1) were over 65yr old, 2) were diagnosed with dementia, 3) had no visual or speech impairments, 4) were able to communicate, 5) had spent more than one month in a nursing home. The outcome variables included cognition (SCIRS), activities of daily living (Barthel Activity of Daily Living Index), Balance in SPPB (Side-by-Side, Semi-Tandem, Tandem, Sum), and UPST (Unipedal Stance Test). Repeated ANOVA was used for data analysis. It was conducted twice a week for 10 weeks. Results : There were no significant differences in demographics or the main variables at pretest. After the program, the cognitive function (SCIRS)(F=1.49 p=.229), activities of daily living(Barthel ADL Index)(F=8.33, p=.006), and Balance in SPPB {(Side-by-Side)(F=5.69 p=.021), (Semi-Tandem)(F=6.04 p=.018), (Tandem))(F=1.68 p=.203), (Sum)(F=4.14 p=.048)} of the experimental group was significantly better than those of the control group. UPST did not show significant differences(F=.31 p=.578). Conclusion : Intervention program using familiarity based on Korean tradition was effective in improving physical functions of PWDs, and marginally effective in improving cognition function. Therefore, this program should be considered as a positive program for cognitive, and physical improve for persons with dementia. Keywords : Dementia, Familiarity, Intervention

PP26 S-135

ANTIPSYCHOTIC MEDICATIONS USE IN OUR NURSING HOMES PATIENTS: QUALITY IMPROVEMENT PROJECT

Tezo KAREDAN, Daniel TISMAL, Halina Gajlewicz KUSZ (Medical Education, McLaren Flint Health Care/Michigan State University, USA)

Introduction : Behavioral problems in older nursing home patients with dementia are common and antipsychotics are widely used as first-line treatment agents. Method : In our residency training program, residents are assigned for longitudinal care of a panel of nursing home (LTC) patients. Current practices in the LTC facilities are that geriatric psychiatry service is managing patients with dementia and behavioral problems. The pharmacy based intervention and multidisciplinary

team regular clinical review are the main control systems for antipsychotics use. We as physicians usually approve their recommendations. Our quality improvement (QI) workshop suggested the need for some modification of our current practice. The overall goal is to increase our awareness about potential misuse of antipsychotics by improving physicians' documentation. Our aim was that within 3 months of implementation, 75% of our LTC patients on antipsychotic medications will have documented in physicians' note indication for their use and a plan to monitor therapy. Results : We obtained our Institutional Research Board and LTC administrators' approval. We presented the project to residents and faculty on our QI Forum. Starting November 1st 2011, we provided information regarding antipsychotics management for all residents. Three months later review of physicians' documentation indicated that we had 65% of patients on antipsychotics for various diagnoses and only 30% of these patients had a definite plan of dose adjustment and/or discontinuation of therapy. Conclusion : Increasing physicians' responsibility for appropriate antipsychotic medications management is a standard which might significantly improve quality of patient's care. Advancing system-based practice may require several cycles of quality improvement process. Keywords : Dementia with Behavioral Problems and Antipsychotic Medications

PP26 S-136

THE RECOVERY OF ELDERLY WOMAN'S SEXUALITY

In A. PARK¹, Eun Kyung KIM² (1. *Social Welfare, The Graduate school Seoul Christian University, Korea*; 2. *Social Welfare, The Graduate school Sungkyunkwan University, Korea*)

Introduction : For the past decades the sex act of elderly women had been repressed, ignored, and regarded even as bad things in Korea. Now we need to have an open discussion about the sex act of the elderly women in order to help the elderly women have their own sexual identity and lead a healthy sex life. Method : What kind of meaning do the elderly women attribute to the recovery of their sexuality? Qualitative data collected from 19 elderly women participants over 65 years old had been analyzed using qualitative research methods. Results : The recovery of elderly women's sexuality can be interpreted as the effort of finding out their femininity. They were trying to love themselves with confidence in the capacity of their femininity and love for themselves. Moreover, they were trying to learn standing alone for the remaining life time with liberty by getting freedom from their husband's restraint. They tried to take care of their feminine appearance in order not to lose the beauty of women. Conclusion : Finding sex in the old age is the issue on female identity and freedom and old women have desire to show female beauty to all the people even at the old age and the to live in a stately manner and freely as a woman, unconstrained by anybody, which was found. Thus, the effort to assure the senescent women living with psychological and mental freedom with identity of women and the right of living freely with the identity of women is needed. Keywords : Elderly women's sex life, sexuality, Elderly women's life

PP26 S-137

RELATED FACTORS WITH SEXUAL BEHAVIOR OF THAI FEMALE ELDERLY RECEIVING HEALTH CARE SERVICE AT MENOPAUSE CLINIC

Monrudee POPIJAN¹, Pornchai JULLAMATE², Waree KANGCHAI¹ (1. *Gerontological Nursing Department, Suan sunandha Rajabhat University, Thailand*; 2. *Gerontological Nursing Department, Faculty of Nursing, Burapha University, Thailand*)

Introduction : Sexual behavior of female elderly is very significance

and understudied in Thai culture. This correlational study aimed to research the relationship between knowledge of and attitude towards sexual behaviors, health status, relationship with spouse and sexual behavior of Thai female elderly. Method : Eighty two older adults with 60-69 years of age attending menopause clinic at one hospital in Bangkok, Thailand were randomly selected to participate in this study. Instruments used included The Demographic Questionnaire, The Knowledge about Sexual Behavior Questionnaire (reliability .80), The Health Status Questionnaire (reliability .80), The Attitudes towards Sexual Behavior Questionnaire (reliability .80), The Relationship with Spouse Questionnaire (reliability .86), and The Sexual Behavior Questionnaire (reliability .82). Data were computed as range, mean, standard deviation, and Pearson's Product Moment Correlation Coefficient was also calculated. Results : Findings revealed that attitudes towards sexual behavior and relationship with spouse of Thai female elderly positively related with sexual behavior at the moderate level with the significance level of .01 ($r = 0.56$, $r = 0.39$ respectively). Conclusion : Nursing intervention for promoting appropriate sexual behavior of Thai female elderly by applying attitude towards elderly sexual behavior and relationship with spouse was strongly recommended for further study. Keywords : female , elderly , sexual behavior

PP26 S-138

PREDICTORS OF DRIVING CESSATION IN RETIREMENT LIVING SENIORS: PRELIMINARY FINDINGS

Alexander Michael CRIZZLE¹, Anita M. MYERS², Courtney JANSSEN-GRIEVE², Sarah SOUSA², Susan BROWN³, Kaylen PFISTERER³ (1. *School of Rehabilitation Science, McMaster University, Canada*; 2. *School of Public Health and Health Systems, University of Waterloo, Canada*; 3. *Research Institute for Aging, Schlegel University of Waterloo Research Institute for Aging, Canada*)

Introduction : Older adults are often reliant on driving to remain engaged in community activities and to access services. However, age related deficits and/or medical conditions can impact on driving and ultimately, aging in place. While prior studies have examined driving status in community settings, little is known about the association between driving and relocation to retirement facilities. Thus, the purpose of this study was to examine the driving status of this population. Method : We surveyed 206 residents (141 women and 64 men) living in four retirement villages in southern Ontario (Mean age 85.1 ± 6.4). Results : Nearly 29% of the residents were currently driving, while 63% had stopped driving and 9% had never driven. Those who had never driven were predominately women (94%), widowed (83%), living alone and receiving more support services. Current drivers were more likely to be men, married and live in apartments ($p < .01$). When modeled into a regression analysis controlling for age, living arrangements and marriage status ($N=187$, -2Log Likelihood Ratio = 172.779; Nagelkerke $R^2 = .347$), gender (female) and needing supportive services were independent predictors ($p < .01$) of driving status (no longer versus still driving). Many residents had quit driving the year before (45%) or the same year (39%) they relocated, while 16% stopped driving shortly after they moved to the village. Conclusion : These findings suggest that there may be a temporal association between residential relocation and the transition to non-driving. Keywords : driving cessation, retirement homes, older adults

PP26 S-139

THE EFFECT OF SUPPORT BURDEN ON THE USE OF ELDER CARE SERVICE

Chang Gi KIM (*Social Welfare, Korea National University of*

Transportation, Korea)

Introduction : The burden of family members in caring for older people ranges from physical, to economic, emotional and social. The purpose of the study was to examine the effect of caregiver burden of family members on the use of elder care service, including residential and home care services. Method : The study was conducted using a quantitative method. For this study, there were 164 respondents who were family members of older people using the National Long-Term Care Insurance in Chungcheongbuk-do. To measure support burden, Caregiver Burden Inventory, developed by Novak & Guest and Stommel et al. was used. Data were analyzed using frequency analysis and description statistics analysis, as well as logistic regression analysis. Results : The findings of the study show that more than 50 per cent of respondents (n=83) used residential care service, and 49.4 per cent (n=81) used home care service. Home care service was likely to be used when social and economic burden was high, while residential care service was favored when emotional burden, including negative family relationships, was high. The majority of elder care facilities used by the respondents were government-funded or public organizations (72.2 per cent). The level of support burden was relatively high average 3.779) in general, and economic burden was the highest (average 3.88) among sub-variables. Conclusion : This study indicates that the types of support burden can affect the use of elder care service. The support burden of family members should be considered to develop the National Long-Term Care Insurance in the future. Keywords : support burden, elder care, Korea

PP26 S-140

A STUDY ON MAIN CAUSE ON LIFE-SATISFACTION OF THE ELDERLY IN RURAL VILLAGE

Chang Gi KIM (*Department of Social Welfare, Korea National University of Transportation, Korea*)

Introduction : Elderly life-satisfaction is subjective satisfaction feeling caused by agreement between expectation on life and meet in real. It is a complex feeling that is affected by personal physical characteristic, psychological characteristic and environmental factors and it will affect various factors such as physical, economical, social factors and etc Financial independence rate in rural village is also low. Its Elderly Care Services is inadequate compare to urban area and its elderly's health condition is also appeared low as they live in a disadvantageous geographic environment that is far from welfare health care center or health care related organization. Method : 250 elderly, aged more than 65 in rural village in Chungcheongbuk-do are the subject. First, descriptive statistic is conducted to survey the level of everyday life ability, everyday life ability, economical stress, social support, avocation and life-satisfaction. Second, Multiple Regression Analysis is conducted to survey the effect of everyday life ability, economical stress, social support, avocation and life-satisfaction. Results : As a result of Multiple Regression Analysis, in effective characteristics on elderly in rural village, economical stress is the highest as a negative effect and self-esteem and avocation are the second and third highest as a positive effect. Conclusion : First, it is analyzed that economical stress is the most affective than other variables on life-satisfaction of elderly in rural village. Second, it is assumed that traditional education method is acted for elderly in rural village Third, continuing activity should also keep being practiced through compensation for motivating, participating and avocation to activate avocation properly. Keywords : Elderly in Rural Village, Life-Satisfaction

PP26 S-141

THE INFLUENCE OF OLDER PEOPLE'S SATISFACTION

FACTORS OF HOUSING ENVIRONMENT ON THEIR QUALITY OF LIFE: FOCUSING ON THE MEDIATING EFFECT OF SELF-ESTEEM AND DEPRESSION

Hyunjeong NAM (*Graduate school of Social welfare, Yonsei University, Korea*)

Introduction : This study was performed to test the influence of older people's satisfaction factors (safety and convenience) of housing environment on their quality of life and the mediating effect of self-esteem and depression. Method : In this study, from 386 older people over the age of 60 in senior welfare center and senior club of Cheongju region, the data were collected by questionnaire during October, 2012. Results : First, safety had not any significant influence on older people's quality of life, while convenience had a significant positive influence on their quality of life. Second, safety had not any significant influence on older people's self-esteem and depression, while convenience had a significant positive influence on older people's self-esteem and it had a significant negative influence on their depression Third, older people's self-esteem had a significant positive influence on their quality of life, while older people's depression had a significant negative influence on their quality of life. Fourth, between safety and older people's quality of life, the indirect effects of older people's self-esteem and depression as mediating variables were not found. However, between convenience and older people's quality of life, the indirect effects of older people's self-esteem and depression as mediating variable were found. Conclusion : Through the above results of this study, it was found that convenience among older people's satisfaction factors of housing environment was important. Also, this study shows that various measures for convenience of housing environment need to be prepared to increase older people's quality of life and self-esteem and to lessen their depression. Keywords : satisfaction factor of housing environment, quality of life, self-esteem and depression

PP26 S-142

CHARICTERISTIC OF JAPAN COMMUNITY CENTERS AS A LOCAL COMMUNAL BASE FACILITY IN ULTRA AGEING SOCIETY

Jae Hyun PARK¹, Yeun Sook LEE², Eun Ji YEOM¹, Yun Jee JUNG¹(*1. Housing & Interior Design, Graduate School of Yonsei Univ., Korea; 2. Housing & Interior Design, Professor, Graduate School of Yonsei Univ., Korea*)

Introduction : Population ageing will cause many problem in city environment plan. As the aged population grow, people highly require spaces for the local society. Community Center of Japan in the ultra Aged Society with long history of communal facilities can be a reference to spatial improvement of the other following nations. The purpose is to delineate characteristics of both space planning and management for the community centers in Japan. Method : This research is a field study and the researchers have visited Keiyaki community center in Musashino city, Japan on February 4th, 2012 and Shounandai community center in Fujisawa city, Japan on February 5th, 2012. The research has conducted spatial observation and depth-interviews with residents who are managing the facilities. Results : The result of this research shows that the Keiyaki facility is small sized, resident-participated and open plan with autonomic management. On the other hand, the Shonandai facility is big sized, multi-functional complex and closed characteristics among different functional facilities with top-down plan and commissioned management. Conclusion : These two cases give direction of the community's base facilities for a place where the local development is related with absolute idle manpower in super-ageing society. These

cases can be used for discussion to explore better plan and management direction when a community center is expected to be built. It is especially useful when a society is facing rapid ageing. Keywords : Community Facility, Field study, Ageing in Place

PP26 S-143

A STUDY ON SPACE DESIGN EVALUATION OF JAPANESE COMMUNITY FACILITY BASED ON USER BENEFIT THEORY

Eun Ji YEOM¹, Yeun Sook LEE², Chang Houn AHN¹, Ting QI¹ (1. *Housing & Interior Design, Graduate School of Yonsei Univ., Korea*; 2. *Housing & Interior Design, Professor, Graduate School of Yonsei Univ., Korea*)

Introduction : Because architecture is built for user, the congruence between the architecture and user is very important. Fortunately, as democratic society has been developed emphasizing residents' benefits and this trend is more important for the community center to be actively used due to ageing society. Therefore, this study aims to evaluate the space design of the leading community center based on UBC theory. Method : This is a case study by local visit and the target is Keiyaki facility in Musasino city. For data collection we observed and recorded the target space and data analysis was made by the four characteristics of UBC for each space. In addition reliability of each evaluator was drawn by analyzing the photos by three persons at the time contents analysis. Results : As natural lightening and ventilation were well prepared overall behavioral-facilitation and physiological maintenance were fairly provided. Regarding perceptual-maintenance, broad windows induce much light, wind and exposure to landscape bringing much visual and perceptive effect. Besides, visual observability can be made among spaces very easily, and moving lines meet naturally enhancing the social-facilitation. All these characters derive from the big southern windows and open structures. Conclusion: This shows how community life can be led well when community facility is built in communication with the outside local environment and with a system communicating indoor spaces. This implies that in case of community facility that increasing number of local seniors may use due to aging society, users' benefits available from the facility should be considered in planning the facility. Keywords : Community Facility, User Benefit Criteria Theory, Space Plan for the Elderly

PP26 S-144

A STUDY ON EVALUATION OF EXAMPLES OF MULTIFUNCTION ELDERLY HOUSINGS AT HIJIRIGAOKA IN JAPAN

Ga Young YOUN, Yeun Sook LEE, Chang Houn AHN, Hyun Jin LIM (Housing and Interior Design, Yonsei University, Korea)

Introduction : Aging society has become global phenomena and new models worthy enough to share, have been developed through trials and errors especially in advanced countries where aging has started early. This study aims to evaluate by the users' benefit theory the multi-functional elderly housings that have been recently developed in Japan which has entered the super aging society already. Method : Study target is the examples of Hijirigaoka elderly home with rents in Tama city Tokyo Prefecture that has complex functions of independent life and individual health care. Method of study was to have local survey by visiting the facility to have interviews with the facility staff and recordings about the elderly home through actual observations. Collected data were analyzed by the theory of users' benefits. Results : The results of this study were analyzed primarily by the UBC (Users' Benefit Category) theory according to the types of spaces, such as

the multi-purpose cafeteria for the community, the group houses of several unit houses of the individual users. the elderly homes with care services, the day care center and short stay room. Conclusion : This means the study results of these examples not only helps to understand the architectural examples by papers and graphs but also shows what kinds of benefits are provided to the users of these environments and will be effective to expand the scope of understanding such spaces. Keywords : Multi-function Elderly Housings , Users' Benefit Category

PP26 S-145

A STUDY ON EVALUATION OF ELDERLY RESIDENCE BASED ON FALL PREVENTION DESIGN GUIDELINE

Hyun Jin LIM, Yeunsook LEE, Chang Houn AHN, Gayoung YOUN (Housing & Interior Design, Yonsei University, Korea)

Introduction : Falls are accidents that fatally damage the quality of life for the elderly and are typical accidents due to aging that stress the neighbors. While most houses are not prepared for the aged life, significant portions of population live in conventional houses. This study intends to evaluate the current houses where the elderly people reside from the viewpoint of fall prevention guidelines. Method : Three apartments were selected as the target examples of elderly houses among the apartments that are the typical residential form of Korea and in order to study the changes by times, the apartments were chosen each from those built in 1990s, 2000s and 2010s respectively and their size ranges from small to medium scale. Study method adopted local site visit and interviews and in order to check the characteristics of fall prevention guidelines composed of items were used. Results : Recently built apartments are more likely to be safe to prevent falls than the old apartments owing to the culture of construction market that utilizes the universal design. However, because of the tendency to increase the number of rooms instead of considering the number of the residents, the apartments had inefficient characters from the viewpoint of management and space utilities for the residence of a single elderly person or an aged couple, and the safety considerations to prevent falls were required to be improved. Conclusion : It is necessary to consider the designs for fall prevention as the primary fundamental factor in Korean housing market. Keywords : Fall prevention, Elderly Residence, Fall Prevention Design Guideline

PP26 S-146

A RESEARCH OF KOREAN APARTMENT EVALUATIONS IN SOCIAL HEALTH PERSPECTIVES

Jaehyun PARK¹, Yeunsook LEE¹, Jaewoo CHANG¹, Changhoun AHN¹, Lei ZHANG² and Siin DANG² (1. *Housing and Interior Design, Yonsei University, Korea*; 2. *Yonsei University, China*)

Introduction : The rapid industrialization in Korea in the 20th century, during which over nine million apartment units had been built over 50 years, contributed to enhancement of overall quality of life. However, the social health of housing became a great concern as social spaces for the community have been overlooked in the process of apartment building, especially in the rapidly aging current society. The purpose of this study is to find out how the Korean apartments are planned for supporting social health. Method : For the study three apartment complexes that had been recently completed were chosen and the design plan was analyzed with a focus on the spatial characteristics for social exchange between residents. And actual residents' interaction that takes place in one apartment complex, was analyzed through real behavioral observation. Four divisions were applied by the social facilitation in the User Benefit Criteria of Murtha & Lee for an analysis. Results : The result of this research shows the apartment complexes have improvements in diverse aspects. However, in the

apartment plan emphasis is placed on keeping the privacy and minimizing social contact, thus making residents' communication much limited. Conclusion : In case spaces for social contact in apartments are not considered continually, the existing apartments will lack adaptation capacity that is inevitable in the super-aging society. It will become a burden that will deepen the social problem. Keywords : Apartment, Social Health, Behavioral Observation

PP26 S-147

A CASE STUDY ON SERVICED ELDERLY HOUSING COMPLEX IN SYMBIOTIC RELATIONSHIP WITH COMMUNITY OF REGENERATED AREA

Jihye HWANG, Yeunsook LEE, Yeaji LIM (*Department of Interior Architecture & Built Environment, Yonsei University, Korea*)

Introduction : The purpose of this study is to analyze the characteristics of elderly housing development projects in Japan with multi services where it was implemented with cooperation of community for regeneration of urban apartment complex. Method : As a means of research "Takanedai Chutoinoie" facilities recently built in Hunabashi City Chiba Prefecture in Japan were chosen as target of analysis and by visiting the local site all the aspects were recorded through interviews with survey sheets and observation methods. All the data gathered were analyzed regarding the characteristics of the spaces based on the four dimensions of UBC(User Benefit Criteria) Theory. Results : The results of study revealed that the facilities of this community are small sized facilities with multiple functions that support and provide services suitable for diverse types of elderly people. Elderly facilities in the complex reflected the changing trends of the times and space was well designed through accumulated know-how and further, with the participation of the residents in the community. Conclusion : Therefore, this study can show a good example for Korean society where animosity for elderly facilities is still prevalent that the elderly facilities can function well to preserve the value of the community not by operating them separately from the community but by operating them in close relationship with the community. And it is also expected that to understand such development case will improve the design capabilities for facilities that are friendly to both communities and users. Keywords : Elderly, Community Regeneration, User Benefit Criteria

PP26 S-148

THE EFFECTIVENESS OF CONSISTENT PULSE MONITORING WRIST-WORN WATCH ON OUTPATIENT VISIT INCIDENCE AND EMOTIONAL SATISFACTION FOR ELDERLY PEOPLE LIVING ALONE

Juoh KANG¹, Tag HEO² (*1. Medical Department, Chonnam National University Hwasun Geriatric Hospital, Korea; 2. Cerebral Resuscitation, Toxicology, Emergency Medical Service System, Chonnam National University Hospital, Emergency Medicine, Korea*)

Introduction : The growth of the elderly people and increase in life expectancy have led to produce several social problems to Korean population. Growing medical expenditure and increase in elderly people living alone is a serious problem in the countries with growing population. Method : Measuring a real time data from wrist worn watch and survey from elderly and their family we evaluate the difference of 119 ambulance transports use and the clinical significances of the Emergency Medical Service System(EMSS) by analysis of medical consults, the effectiveness of wrist worn watch on outpatient visit incidence and emotional satisfaction in Elderly people living alone. Local elderly people three hundred in 1st trial, four hundred fifty in 2nd trial with chronic illness wear pulse monitoring

watch and the data has been transmitted to Emergency Medical Information Center(EMIC). Results : Studies have shown a high emotional satisfaction rate(by Likert scale), an ordinary ease of use, and a good compliance with the use of remote monitoring systems. We can show that the mean difference in number of outpatient visits per month between pre and post trial was significant (P = 0.01). Conclusion : Tele-monitoring system using updated equipment gives a quite successful emotional satisfaction to elderly living alone with chronic disease and gives us a chance to study reducing medical costs by outpatient visit incidence decrease. Keywords : tele-monitoring system, elderly living alone, outpatient visit incidence

PP26 S-149

A STUDY ON BATHROOM DESIGN FOR ELDERLY AND COHABITING FAMILIES HOUSEHOLD FOR AGING IN PLACE

Hye Shin KIM, Soo Been PARK (*Dept. of Housing and Interior Design, Pusan National University, Korea*)

Introduction : Bathroom is the indispensable space related to the quality of normal life, as well as the space with high probability of safety accidents. Hence, this space requires not only the functional requirement responding to aging, but also safety and comfort as well. Method : Study tools were composed by general characteristics (household characteristics and residence characteristics) and preference on bathroom composition(use, composition of bathroom and preference on color plans). For survey on the bathroom user method, bathroom facilities and bathroom color preference, 3D computer modeling on bathroom was used. Results : The result on the analysis of bathroom use and user method of facilities therein shows that main usage of bathroom is discharging, washing, shower&bath by elderly resident and cohabiting families, in identical purpose of use. This study analyzed recognition on bathroom by elderly resident as well as cohabiting families, inconveniences in bathroom use and overall satisfaction level on bathroom. As for preference on bathroom design, this study analyzed bathroom composition, bathroom ancillary space preferred to be established additionally, bathroom facilities, bathroom closets. Conclusion : By comparative analysis of the use, satisfaction level and design preference on the bathroom by the elderly resident as well as cohabiting families, this study provides the base for bathroom design for Aging in place, by minimizing the inconvenience factors and providing safe and pleasant space to elderly resident and cohabiting families in their use of bathroom. Keywords : Bathroom Design, Aging in place, Satisfaction, Elderly, cohabiting families

PP26 S-150

THE EFFECTS OF ACCULTURATION, HEALTH, SOCIOECONOMIC STATUS, AND PERCEIVED RESPECT ON OLDER ADULT DEPRESSION: ANALYSIS OF KOREAN AMERICAN OLDER ADULTS IN CHICAGO

Kyungsoo SIM (*School of Social Work, Loyola University Chicago, USA*)

Introduction : This study explored the extent to which acculturation level, health condition, SES, and geographical environment contributes to depressive symptomology among 121 older Korean-American immigrants in the Chicago area. Method : A multi-method approach was imported to analyze self-collected quantitative survey data from two groups of 57 participants in Chicago and 64 in the suburbs, qualitative interview data from 4 focus groups, 2 in-depth interviews and GIS (Geographic Information Systems). In the survey, Suinn-Lew Asian Stress-Identity Acculturation Scale, Geriatric Depression Scale-30, Functional Assessment of Chronic Illness Therapy-Fatigue, Health

Perception Questionnaire-36, 13-item questions for respect, and ZIP codes were utilized. Results : This study produced results by stepwise and hierarchical regression, ATLAS. ti, and GIS analysis. When their perceptions about health ($r(191)=-.417, p<.001$) and SES ($r(191)=-.335, p<.001$) were high, the participants experienced less depressive symptoms. SES and perceived health condition proved to be associated with each other ($r(191)=.264, p<.001$). The suburban participants had a stronger relationship between SES and perceived health condition than the Chicago participants. Qualitative analysis revealed that acculturation could influence depressive symptoms and that depressive symptoms could also be associated with hope and communication. Conclusion : The GIS analysis finding confirmed the findings from the quantitative analysis and suggested ways in which to develop and utilize community-based resources from mental healthcare management policy. These findings suggested that services given by service providers need to focus on communication and respect of the older Korean-American immigrants' self-determination, for they depend on it greatly when faced with the sufferings of adjusting to new residences. Keywords : Depression, Older population, Geographical background

PP26 S-151

THE ROLE OF PHYSICAL ENVIRONMENTS IN CULTURE CHANGE IN LONG-TERM CARE FACILITIES FOR THE ELDERLY

Min-Ah LEE (*Department of Housing and Interior Design, Kunsan National University, Korea*)

Introduction : This study investigates the role of physical environments in culture change in long-term care facilities for the elderly through the analysis of journal articles from 1990 to 2012. Method : The article search was performed on Google scholar using the keywords "culture change," "nursing," and "environment." The researcher included articles dealing with all three topics, and a total of forty-nine articles were collected for the analysis. Results : The articles were grouped into studies about the physical environment as an element of culture change and empirical case studies on implemented culture change. The study investigated the influence of the physical environment. The results of the study are as follows: First, home-like environments include the household or neighborhood model, and elderly residents are likely to place value on individual-directed care that allows autonomy, independence, privacy, and a life of dignity. Second, the case study showed the adaptation process going into appropriating the culture change model through the trial and error of design renovations. Assisted living facilities, which increased in number while the nursing home culture change was politicized, positively influenced the self-identity, privacy, and dignity of residents. Small sized environments encouraged the residents' interaction and program participation. Conclusion : Researchers need to provide various choices to the residents about where they will go in the facility, what they can use, and when and how they can interact with others. It will ultimately have a positive influence on the increase in elderly autonomy and independence. Keywords : Culture Change, Long-Term Care Facilities for the Elderly, Physical Environments

PP26 S-152

RESIDENTS' USE OF SITTING AREAS IN ASSISTANT LIVING FACILITIES

Min-Ah LEE (*Department of Housing and Interior Design, Kunsan National University, Korea*)

Introduction : This study investigates the use of sitting areas by residents in assisted living facilities, and analyzes the differences in

their characteristics. Method : Eight facilities of Brazos Valley, Texas, were invited to participate in the study. 66 residents and 36 staff members were asked about the two most frequently used sitting areas by residents, and the frequency and duration of their use. Results : The most frequently used sitting areas, in descending order, were the dining area, lounge, activity area, and outdoor area. The most frequently mentioned sitting area was the lounge as per the staff, but the activity area, outdoor area, and hallway, as per the residents. These areas were used, in descending order, for conversation, games, and rest. Staff reported that the residents use the lounge for socialization and watching TV, and the dining area for exercising and eating. Residents living in a single-floor building or having higher level of mobility assistance were more likely to use the lounge. The outdoor area was used more by the younger residents, and the library, by residents having lower level of mobility assistance. Conclusion : Diverse survey methods need to be developed for a more in-depth collection and analysis of data from functionally frail older residents and staff caring for them. A follow-up study should be conducted to identify the differences in their perceptions of these sitting areas. Keywords : Assisted living facilities, Sitting areas, Residents' use

PP26 S-153

A STUDY ON REMODELING CHARACTERISTICS OF THE ELDERLY HOUSING FROM THE VIEWPOINT OF USER BENEFIT THEORY

Meiluo JIN, Yeunsook LEE, Changhoun AHN, Boae KIM (*Housing & Interior, Yonsei University, Korea*)

Introduction : The issue of low fertility and aging society has become global issue. However, the housings built past do not support enough the physical deterioration of the aged people due to aging and in-house accidents such as falls make the aged people dependent, The purpose of this study is to find out what kinds of environmental benefits have been added in remodeled houses has been renovated. Method : This paper analyzed eight examples of remodeled houses in Japan where super aging society has come already, by the theory of Murtha & Lee's UBC (User Benefit Criteria). It is composed of four factors, behavior facilitation, physiological maintenance, perceptual maintenance and social facilitation. The relationship between such characteristics of remodeling and the users' benefits was verified by the inter-rater reliability checking process of the evaluators. Results : The results of such housing renovations analysis revealed that these renovations basically support the physiological maintenance. And behavior facilitation was the next support. These two factors imply physiological maintenance and perceptual maintenance are the direct cause for renovation, while social facilitation and perceptual maintenance have comparatively less influence upon the renovations. Conclusion : This study result indicates that when elderly housings are renovated, holistic environmental affordance supports are not pursued but their essential parts are improved. However, because in order to improve quality of life, all the four factors are important, it should be bear in mind that understanding of housing for the elderly people must be made fundamentally in the beginning of planning elderly housings. Keywords : Elderly Housing , Remodeling , User Benefit Theory

PP26 S-154

AN EXPLORATORY STUDY ON THE DEVELOPMENT OF HOUSING ALTERNATIVES FOR KOREAN SENIORS

Oh Jung KWON, Haehwa HA, Jinyoung KIM, Yong Min LEE, Hye-Shil YEOM (*Dept. of Housing Environment, Konkuk Univ., Korea*)

Introduction : Elderly population in Korea has been dramatically increased. Over the past 40 years, since 1970, elderly population

increased by 342%. The aging population now reached over 12% of total population in 2010 and this rate is expected to jump up to 14% in 2018 and 20.5% in 2026. Also, housing needs of the elderly are becoming more diverse than the past according to household types, economic status, health status, education level, family relations, or housing experiences through their lifetime etc.. Seniors expected to live in a housing option appropriate to their housing preferences. But, in reality, there is a lack of housing alternatives to fit into their needs. Method : This study attempts to provide the information on the development of housing alternatives for Korean seniors. On-line survey with open-ended questions is conducted to 50 housing researchers and facility staffs. The findings will be analyzed and the implications for developing various housing alternatives will be discussed. Results : Professionals' opinions in the field of housing were surveyed. Questions related to housing situations of Korean seniors, supply and demand of senior housing and physical/social/organizational aspects of senior welfare housing, nursing homes, and other types of elderly facilities, existing housing policies and programs, difficulties of providing various housing options for Korean elderly were asked. Conclusion : Various housing alternatives should be developed for making Korean seniors live the place where they want to live. Keywords : housing alternatives for Korean seniors, housing situation of Korean seniors, difficulties of providing housing for Korean elderly

PP26 S-155

THE EFFECTS OF SOCIOECONOMIC STATUS ON ENVIRONMENTAL EXPOSURE AND HEALTH OUTCOMES OF OLDER PEOPLE IN KOREA

Seyune LEE¹, Hongsoo KIM¹, Young-II JUNG¹, Yong-Bae KIM², Sung-Roul KIM³, Kiyong LEE¹, Yoon-hyeong CHOI⁴, Yun-Chul HONG⁴ (1. Graduate School of Public Health, Seoul National University, Korea; 2. College of Medicine, Soonchunhyang University, Korea; 3. Department of Environmental Health Science, Soonchunhyang University, Korea; 4. College of Medicine, Seoul National University, Korea)

Introduction : It is widely known that socio-economic status(SES) affects health outcomes, but the pathways of how social inequality in health occurs are still unclear. Studies have reported the impact of environmental exposure on health outcomes, yet not many empirical studies have examined the contributions of such factors to health inequality among the elderly. The purpose of this study is to investigate the effects of SES on environmental exposures and health outcomes of older people in Korea. Method : The sample of this study included a total of 600 elderly people residing in urban(Seoul), suburban(Cheonan), and rural(Asan) areas. Data on SES, environmental exposure from residential environment, exposure-related behaviors, and health impact measured by self-rated health and depressive symptoms(SGDS-K) were collected. The relationships of SES to environmental exposure and health outcomes were analyzed using descriptive statistics and multivariate regressions. Results : Study participants' SES was significantly associated with environmental exposure: older people with a greater monthly allowance ventilated longer; and those with a higher education level did not allow indoor smoking, and washed hands more frequently. Education level was consistently associated with the both health outcome measures. While adjusting for SES, indoor smoking was associated with lower self-rated health, and ventilation time was associated with higher depressive symptoms. Conclusion : The findings show inequality in environmental exposure and health outcomes by SES, and imply environmental exposure could be a critical mediator in explaining health inequality by SES in the Korean

elderly. Further studies are necessary to better understand the causal relationships among SES, environmental exposure, and health outcomes. Keywords : Social Disparity, Environmental Health, Health Inequality

PP26 S-156

AGEING FARMER'S SUCCESSOR AND THE IMMIGRATION OF FEMALE ASIAN SPOUSES IN RURAL JAPAN

Shoji OKUYAMA (Contemporary Law, Tokyo Keizai University, Japan)

Introduction : Over the past two decades in rural Japan there has been a dramatic increase in the number of marriages between middle-aged Japanese males and Asian female immigrants. The objective of this study was to document this trend in a rural district of Yamagata Prefecture and to investigate potential problems within this newly emerging marriage pattern. Method : I focused on the Mogami District in Yamagata, which consists of 1 small city, 4 towns, and 3 villages (See Figure 1). My research consist of 2 points of view as Follows: (1) I analyzed trends in census data concerning unmarried men and women. (2) I conducted case study interviews with thirty bi cultural couples in this rural district. Results : In Japan many rural farming households are considerably more wealthy than their salaried urban counterparts, and many households often find the rural lifestyle quite attractive. Therefore when economic conditions are favorable most young women opt to remain in their rural communities; however, when there is an economic downturn the numbers of rural females who decide to relocate to urban areas increases significantly. Consequently in many rural communities, male successors, who must continue the farming household, have considerable difficulty finding suitable brides, particularly during an economic slump. Conclusion : The Japanese census confirms that in recent years the population of rural unmarried middle-aged males is increasing much more rapidly than the unmarried female population. Keywords : Immigration, Asian Spouses, Rural Japan

PP26 S-157

EFFECT OF BUILT-ENVIRONMENT ON THE BEHAVIORS OF RESIDENTS WITH DEMENTIA: COMPARISON OF A SMALL-SCALE UNIT AND A TRADITIONAL CARE UNIT

Sookyoung LEE¹, Habib CHAUDHURY², Soojin LEE³ (1. Gerontology Research Centre, Simon Fraser University, Canada; 2. Department of Gerontology, Simon Fraser University, Canada; 3. Environmental Design, Yonsei University, Korea)

Introduction : This study comparatively observed the influence of a small-scale dementia care unit and a traditional dementia care unit on the behavior of the residents. Method : A purpose-built small-scale dementia care unit and a traditional dementia care unit were selected through several phases in Vancouver, Canada. Physical environment assessments were performed using two standardized environmental assessment tools: i) Professional Environmental Assessment Protocol (PEAP) and ii) Therapeutic Environment Screening Survey for Nursing Homes (TESS-NH) and an analysis of floor plan of the primary social space. For the assessment of behaviors of the residents, three specific assessment tools were used between February and March 2012: i) Multidimensional Observation Scale for Elderly Subjects (MOSES), ii) Minimum Data Set-Version 2.0 (MDS), and iii) Dementia Care Mapping (DCM). Results : The study found that the residents living in a small-scale environment were more engaged in activities and more likely to respond in understanding their fellow residents. Meanwhile, the residents living in a traditional long-term

care environment exhibited fewer signs of interaction/engagement with anyone or anything around them. Conclusion : The overall results of the study provide evidence that a small-scale residential care facility can serve as therapeutic environment for residents with dementia and a traditional care facility tends to influence withdrawn behaviors in the residents. The findings suggest that it may be helpful for a traditional long-term care facility to organize small groups within the larger whole and create more personalized and homelike atmospheres. Keywords : dementia, environmental design, small-scale

PP26 S-158

PERCEIVED NEIGHBORHOOD ENVIRONMENT ON HEALTH AND DEPRESSION AMONG KOREAN IMMIGRANT OLDER ADULTS IN THE U.S.

Soonhee ROH¹, Yuri JANG², David A CHIRIBOGA³, Sunhee CHO⁴, Kunsook Song BERNSTEIN⁵ (1. *Social Work, University of South Dakota, USA*; 2. *School of Social Work, University of Texas at Austin, USA*; 3. *Department of Child and Family Studies, University of South Florida, USA*; 4. *Department of Nursing, Mokpo National University, Korea*; 5. *School of Nursing, Hunter College, City University of New York, USA*)

Introduction : Neighborhood environment profoundly affects the physical and psychological well-being of older adults, because the latter tend to have decreased mobility, and hence have an increased reliance on resources in the immediate neighborhood. This study examined how older adults' subjective perceptions of the neighborhood environment (e.g., perceived ethnic density, safety, social cohesion, and satisfaction) are associated with perceived health and depressive symptoms among older Korean immigrants. Method : A questionnaire survey was conducted with 420 community-dwelling Korean immigrant older adults residing in the New York City metropolitan area. Hierarchical regression models for health perceptions and depressive symptoms were estimated. For both sets of models, the same predictive variable blocks were entered in the following sequence: (1) background variables (demographic information and acculturation), (2) health-related variables (chronic conditions and functional disability), (3) perceived neighborhood environment (ethnic density, safety, social cohesion, and satisfaction). Results : Perceptions of the neighborhood environment were strongly associated with both depression and perceived health, even after controlling for the individual level, sociodemographic variables. Older Korean immigrants who had lower satisfaction with their overall neighborhood environment were more likely to report depressive symptoms and poor health. A negative perception of neighborhood safety was strongly associated with depressive symptoms. Conclusion: Among Korean immigrant elders, perceptions of the neighborhood environment influence self-reported health and depression. Findings have important implications in assessing programs for health promotions and provide critical information that may help in the development of intervention programs to improve the quality of life among older Korean immigrants. Keywords : Perceived neighborhood environment, physical health, mental health

PP26 S-159

RISK PERCEPTIONS AND HEALTH BEHAVIORS CONCERNING INDOOR AIR QUALITY AMONG OLDER ADULTS IN KOREA

Sowoon KIM¹, Hongsoo KIM¹, Young-Il JUNG¹, Seyune LEE¹, Yong-Bae KIM², Sung-Roul KIM³, Kiyoung LEE¹, Yoon-Hyeong CHOI⁴, Yun-Chul HONG⁴ (1. *School of Public Health, Seoul National University, Korea*; 2. *College of Medicine, Soonchunhyang University, Korea*; 3. *Department of Environmental Health Science,*

Soonchunhyang University, Korea; 4. *College of Medicine, Seoul National University, Korea*)

Introduction : Risk perception is a key determinant of health behaviors, but the relationship between risk perceptions and environment-related health behaviors among older adults has rarely been explored. As older adults are likely to spend much time indoors, health behaviors concerning indoor air quality is a critical component for their health. The purpose of this study is to investigate the association between health-related risk perceptions and health behaviors concerning indoor air quality among older adults in Korea. Method : The sample includes a total of 559 elderly people in urban(Seoul), suburban(Cheonan), and rural(Asan) areas. Health-related risk perceptions were measured by three questions; risk perceptions of individual body, individual life, and people's lives. Health behaviors concerning indoor air quality-indoor smoking, second-hand smoking, fuel use, ventilation time, and pesticide use were surveyed. Multivariate regression analyses were conducted. Results : Health-related risk perceptions differ by self-reported health, number of chronic diseases, and location of residence: Health-related risk perceptions were higher among older adults with worse self-reported health status, a higher number of chronic diseases, and residing in suburb. After adjusting for socio-demographic covariates, older people with the high level of health-risk perceptions were as 1.82 times as likely to prohibit indoor smoking (95% CI: 1.03-3.22), compared to those with low level of risk perceptions. Conclusion : Health status and residence location implying socio-economic position could be critical components in explaining health-risk perceptions in the Korean elderly. Positive health behaviors concerning indoor air quality could be promoted by the increase of perception of health risks. Keywords : Risk Perceptions, Health Behaviors, Indoor Air Quality

PP26 S-160

CASE EVALUATION OF NURSING HOME BASED ON DEMENTIA HOME DESIGN GUIDELINES

Yeaji LIM, Yeunsook LEE, Jihye HWANG, Jihye LEE (*Housing & Interior Design, Yonsei University, Korea*)

Introduction : The rapid aging speed of Korea has steadfastly increased the number of the elderly facility, especially nursing home and dementia home. However, as the elaborate design guidelines have been unavailable, lots of homes lack quality enough to secure dignity and care efficiency. The purpose of this study is to evaluate a current rebuilt nursing home based on recently developed dementia home design guidelines. Method : The dementia home design guidelines developed through the check of care professionals in precedent research, was composed of 118 items. Three of the middle-sized nursing homes were selected, located in the capital area of Korea. Site visit, observation and interview were conducted, all the features of the spatial environment were thoroughly recorded as data for analysis. Results : Nursing home cases were evaluated as spaces which require more concern seriously about the elderly residents and care-givers from a viewpoint of design guidelines. Especially, important aspects which reflect humanity were overlooked such as comfortable and intimate environment like home, while emphasizing the convenience and efficiency of management. Conclusion : The good nursing home is the guaranteed space for welfare of the elderly with dementia and professional care. However, as current nursing home cases have left room for improvement, the role of welfare space design professionals are required to make the better nursing home in the future. Keywords : Nursing home, Dementia Home Design Guideline, Case Evaluation

PP26 S-161

SPATIAL CHARACTERISTICS OF A SPECIALLY DESIGNED NURSING HOME 'KAJENOMURA'

Yeunsook LEE, Jihye HWANG, Changhoun AHN, Seojung KIM
(Department of Interior Architecture & Built Environment, Yonsei University, Korea)

Introduction : The purpose of this study is to analyze the design characteristics of an innovative model in special elderly nursing home in Japan that has brought a qualitative innovation for elderly nursing facilities. **Method :** As a means of study, special elderly home "Kajenomura" at Yamata City Chiba Prefecture in Japan was chosen as target of analysis. By visiting the local site, all aspects of spaces were recorded through survey sheets and observing techniques and information about operational aspects of facilities and characteristics of space was collected through interviews with nursing home managers and documents. All data were analyzed regarding characteristics of spaces based on four dimensions of UBC(User Benefit Criteria) Theory. **Results :** As a result of this study this nursing home was accommodating 80 elderly people with memory impaired (mostly with dementia) by expanding the old buildings with new buildings. By utilizing the experiences of operating and managing the old buildings, more efficient space plans for new group homes in new buildings were projected. Spaces of the nursing home were planned with four categories of "Public," "Semi-public," "Semi-private" and "Private" by applying Privacy Theory. According to this category, detailed spatial systems were described in UBC Theory. **Conclusion :** This study shows that even existing nursing home with disrespect can be converted to a new nursing home with preference by applying new approach method, thus showing How architects and designers can work more professionally based on spatial knowledge. **Keywords :** Elderly, Nursing Home, User Benefit Criteria

PP26 S-162 THE PERCEPTION OF THE HEALING ENVIRONMENT AMONG THE NURSES WORKING IN LONG-TERM CARE FACILITIES AND GENERAL HOSPITAL IN KOREA

Young-Ran TAK, So-Young JUNG, Hae Young WOO (Department of Nursing, Hanyang University, Korea)

Introduction : The concept of a Healing environment suggests that physical environment of a healthcare setting is close related to health of those who use it. So recently, many architecture designs of Long-term Care healthcare facilities have changed for healing environment. The start of those changes must be the perception of nurse about healing environment, one of main staff of healthcare facilities. This study aims to compare the perception of the healing environment among the nurses working in long-term care settings and General Hospital in Korea. **Method :** A convenience sample was recruited from Long-term Care Facilities and General Hospital. The data is based on a survey questionnaire including close-ended questions such as the nurses' perception of the healing environment. A total of 465 Korean nurses participated in the survey. 158 nurses are working in long-term care settings and 306 nurses are working in General Hospital. Their experiences are sounded by self-report, and the answers have been processed using SPSS. **Results :** As a result, the mean of total items is 4.15 (SD=±0.52, range 0-5) and 4.30(SD=±0.52, range 0-5), which means that the nurses working in General Hospital have relatively higher awareness of the healing environment than the nurses working Long-term Care Facilities in Korea. **Conclusion :** Out of consideration to the elder's vulnerability of environment, the nurses working Long-term Care Facilities need more education about healing environment. Therefore, it is highly desirable to take into consideration the nurses' perception of the healing environment in healthcare architecture

design. **Keywords :** healing environment, nurses' perception, long-term care facility

PP26 S-163 AN APPLICATION AND EVALUATION OF ALZHEIMER'S GARDEN AUDIT TOOL TO ASSESS OUTDOOR SPACE OF THE LONG-TERM CARE FACILITY IN KOREA

Young-Ran TAK¹, Ji-Yeon AN², So Young JUNG¹ (1. Department of Nursing, Hanyang University, Korea; 2. Department of Nursing, Hanbuk University, Korea)

Introduction : Korea is the highest speed of population aging. Thus since 2008, the National Long term Care Insurance, a number of long term care facilities have established during short time in Korea. Especially, the environmental assessment tool is important for managing healing environment in a long term care facility for the elderly. Alzheimer's Garden Audit Tool(AGAT) is used to assess whether a garden incorporates those elements and qualities as healing outdoor space. In this paper, we discuss the benefits, limitations, and future directions of the assessment tool for long-term care facilities. **Method :** The AGAT audit was done through content analysis by 5 experts from diverse discipline as post occupancy evaluation of a long term care facility located in suburban area. The expert group was asked to describe their comments for modification and improvement in application of AGAT. **Results :** The results of this study show that it is necessary to refine the instrument's items to better meet the needs of the subdomains and elements for Korean culture-friendly tool. Especially, greenhouse elements (various plants, birds etc.), multisensory experiences, users-oriented space, programmed activities in garden, and hazards on pathway has somewhat limitation as measurement to assess outdoor of long-term care facilities in Korea. **Conclusion :** Consequently, AGAT could be applicable to evaluate the outdoor space of long term care facility in Korea with culturally sensitive revision. **Keywords :** healing environment, long-term care facility, outdoor space

PP26 S-164 RESIDENTS' EVALUATION ABOUT A COMMUNITY CENTER DESIGN OF THE ELDERLY CONCENTRATION AREA

Yunjee JUNG, Yeunsook LEE, Dongjoo LEE (Yonsei University, Housing and Interior Design, Korea)

Introduction : Due to aging society, urban space planning needs changes. Accordingly, the welfare facilities for the elderly exclusively have been developed and the pros and cons about them and intergenerational community facilities have been discussed. The purpose is to figure out the local residents' response to and improvement of the architectural design of later case, planned for the deprived area where the elderly are concentrated. **Method :** The target area is the community facility constructed in deteriorated residential area of Nosong-dong, Jeonju-si, South Korea and the analysis target is the design awarded in a contest. This study analyzed the characteristics of space planning which are inherent in this design by using content analysis method and carried out workshops with the local community representatives to figure out their response to facilities planning. **Results :** Through this study, we identified the residents' response to relations among diverse spaces, relative sizes, location, and so on. We organized the residents' opinions about the reason why the design needed changes through their response. Particularly, we figured out the preference for the elderly on how to share and divide the spaces with other local residents and identified the reason. **Conclusion :** Success of a building and resident satisfaction depend on the suitability between a

building and its needs. This study shows the experts' top down designs result in better directions with the residents' bottom up approaches. This result means how the residents' needs, especially in aged society, can be well reflected in local community. Keywords : Community Facility, Residents' Evaluation, Elderly Concentration Area, Workshop

PP26 S-165

A COMPARATIVE STUDY OF THE LIVING CONDITIONS OF URBAN ELDERLY

Yanhui ZHENG (*Institute of Gerontology, Renmin University of China, China*)

Introduction : This paper takes the living styles of the urban elderly as the key point, investigates their needs and satisfactions status under different living arrangements, and studies the families' modern characteristic of our country. Method : This paper employs a method of depth interview, labors resource flows between two generations and the satisfactions of the elderly under different living arrangements. It also interprets the modern characteristic that reflected by different living arrangements, such as intergenerational concept, status and so on. Results : Family distance has been greatly extended, and the member of same family may be scattered in different places. Living style of the old people will directly affect the quality of their life. Conclusion : Living nearby is the choice after some level of rational and emotional consideration of the old people. Keywords : Living arrangement³Urban elderly³Living conditions

PP26 S-166

HOW THE ELDERLY COMMUNICATE AND KEEPS INFORMED IN SOUTHERN BRAZIL?

Leticia GERLACK¹, Angelo BOS¹, Margo KARNIKOWSKI² (*1. Instituto de Geriatria e Gerontologia, Pontificia Universidade Catolica do Rio Grande do Sul, Brazil; 2. Pos-graduacao em ciencias da saude, Universidade de Brasilia, Brazil*)

Introduction : This study aims to determine how the elderly in the state of Rio Grande do Sul, Brazil, get information and their communication resources, based on the urban life aspects that can improve the ageing-friendly cities. Method : We studied seniors, 60 years or older, both genders and residents in urban and rural households in the state of Rio Grande do Sul, southern Brazil. We made a random selection of households and conducted sixteen interviews by census sectors, respecting the percentage ratio for men and women. The questionnaire consisted of closed questions, grouped into thematic blocks, including Information and Communication. For the analyzes we used the Epi Info. Results : 7315 elderly people were interviewed between 2010 and 2011. Television was the media most used (95%) and 12% used to access it once a week. About 70% of seniors had phone or mobile. 90% not accessed the internet and 83% showed no willingness to take classes or courses in this area. About 85% wouldn't like to make crafts activities, music, gymnastics or similar. High proportion (80%) of the elderly did not wish to be literate or finish formation and 90% had no interest in making language courses. Conclusion : It is important to invest in television programs more appropriate for elderly public awakening critical consciousness for active aging. The restricted access to the internet and low interest in participating in educational courses may reflect a demand for educational projects more attractive to elderly. Keywords : Aging, communication, healthy city.

PP26 S-167

A STUDY ON BURNOUT RESILIENCE OF SENIOR WELFARE CENTER WORKERS

Hee Eun NAM¹, Nam Sook KIM² (*1. Department of Social Welfare,*

Kosin University, Korea; 2. Department of Social Welfare, Tongmyong University, Korea)

Introduction : Senior welfare center and the workers are growing more in many countries include Korea. However, very few studies have been conducted on senior welfare center worker's burnout in Korea. Target the elderly, it needs to pay more attention in the sense that there is a ripple effect on human services and agencies, rather than simply staying on the problem of personal burnout leads to difficulties arising from these business professionals. Identifying the correct status for the exhausted and exhausted the workers, as well as institutions, and subject to undesirable consequences such as this to understand the mechanism for the development of policies to solve them by the results of this study to utilize expectations. Method : 10 senior welfare centers centers, 160 workers are replied this survey.. Gathering data analyzed as career, age, gender, working part, position, schooling, religion. Descriptive statistics computed for each of the factors of burnout, using SPSS 18.0. Analysis of variance(ANOVA), Multiple Reression Analysis used means tests to determine where significant differences between pairs of respondent characteristics would be present. Results : 1. significant differences in worker burnout according to the variables of educational level, age, marita status, service length and and position. 2. effects of burnout resilience on burnout. Conclusion : The purpose of this study is to further understanding of senior welfare center worker's burnout in their daily job stress. After understanding the factor to their emotional burnout as burnout resilience, burnout risk, the focus on this study is how we can predict and prevent to worker's emotional problems. Keywords : senior welfare center, worker's burn out, burnout resilience

PP26 S-168

ACTIVE AGING AND SELF-SUPPORT FOR LATER LIFE ? FOCUS ON YOUNG OLD PEOPLE IN URBAN CHINA

Jieyu HUANG (*Institute of Gerontology, Renmin University of China, China*)

Introduction : Chinese people tended to devote a huge percentage of their mid-age life to the next generation, while seldom prepared economically or spiritually for their later life. However, socio-economic development, accompanied with increased population mobility and changes in family size or structure, makes it more impractical for Chinese family to carry out support to elderly members. Under this social background, self-support for later life should be promoted as an important part in elderly support system. In this thesis, the author focused on the young old people in urban China and explored the prospect of self-support for later life , using'active ageing' perspective. Method : Literature analysis; Second-hand material and data analysis. Results : Firstly, data showed that it is necessary for young old people in urban China (especially the parents of the only child) to practice self-support for later life. Secondly, it is proved that self-support for later life for young old people in urban China is individually and socially possibly. Thirdly, under a life-course perspective, mid-age Chinese people should start preparing for their own later life. Conclusion : Influenced by the traditional ' raising children for old age' idea and a negative elderly identity, family support for elderly people is most common in China.However, family support is being challenged by social status quo. 'Active ageing' theory redefined the concept of 'elderly people' and refigured their social rule, and it is inner related to the practice of self-support for later life. We should promote self-support among young old people, even mid-age people in urban China. Keywords : Urban China; Young Old People; Self-support for Later Life

PP26 S-169

COMPARISON OF THE ENJOYMENT FOR MASTERS SPORTS EVENTS PARTICIPANTS BY AGE GROUPS; FROM THE CASE OF “MASTERS KOSHIEEN”

Yutaka UEDA¹, Kento YOSHIDA¹, Daichi TANAKA¹, Rie NAKAI¹, Makoto CHOGAHARA², Megumi TANI¹, Kei HIKOJI³, Daichi SONODA¹, Yuki MATSUMURA¹ (1. Graduate School of Human Development, Kobe University, Japan; 2. Faculty of Graduate School of Human Development, Kobe University, Japan; 3. Faculty of Education, Wakayama University, Japan)

Introduction : The purpose of this study was to explore the enjoyment for participants of “Masters Koshien” and to examine how the benefits differ with age groups. **Method :** In the present survey, 1499 participants from Masters Koshien 2006 to 2009 were used. The self-administered questionnaire was distributed and the number of valid responses was 1230. The questionnaire consisted of “Masters Sports Enjoyment Scale” (MSES, 32 items), individual belonging and career of sports. **Results :** As a result of the cross tabulation between the four age groups (~29,30~39,40~49,50~) and 32 items about the enjoyment of Masters Sports, it was revealed that 1) All age groups showed a tendency to respond the enjoyment of “remember the past,” “exhilaration and tensions obtained by playing” and “welcome from volunteers.” 2) The age group of over 50 years old and under 29 years old marked higher scores than the other age groups in terms of “supporting and cheering teammates of other age groups.” 3) The age group of 40-49 years old showed the highest scores in terms of “technical improvement and physical development”. **Conclusion :** Regardless of age, the study subjects gained “pleasure,” “exhilaration” and “human relations” as the enjoyment of Masters Sports. These were beneficial aspects which all age groups universally have. Additionally, the subjects felt “recollection of their younger days” strongly with aging. It can be suggested that this is the characteristic benefit not only of the case of Masters Koshien but also of all Masters Sports. **Keywords :** Enjoyment, Masters Sports

PP26 S-170

A STUDY ON REVITALIZATION OF THE SENIOR CENTER AS A CULTURAL ACTIVITY CENTER FOR THE BABY-BOOM GENERATION IN KOREA

Na Rae BAE¹, Chung Sun PARK² (1. Dept. of Management of Long Term Care Facilities, Konyang Cyber Univ, Korea; 2. Dept. of Family Welfare, University of Daegu, Korea)

Introduction : The purpose of this study is to propose revitalization of the existing senior centers as a new place for social and cultural activity centers of the baby-boom generation. Unlike the previous senior generation, the baby-boom generation (born in 1955-1963) has strong desires to actively participate in various social activities as well as simply working for their livelihood. In order to meet their needs, it is proposed that the existing senior centers should be redesigned and transformed from elderly welfare perspectives. **Method :** The data were collected by using the structured questionnaire including socio-economic backgrounds, needs for cultural activities, needs for social activities, and needs for job-training programs. The total 250 baby-boomers were used for the final analysis. The collected data were analyzed by cross-tabulation and ANOVA techniques. **Results :** The major findings are as follows: most of the baby-boom generation strongly agreed that they were very different from the previous elderly generation in terms of education, social and economic environments. So, a new system for the senior centers which can integrate various needs is suggested to encourage the baby-boomers to participate more actively even after their retirements. **Conclusion :** Based on the

research results, a new paradigm for the senior centers is proposed in order to enhance the quality of the senior centers. The application and practice of our research results would be very important, because larger numbers of baby-boomers are gradually retiring from the workforce, and it is necessary to keep them incorporating to on-going society for further development of the society in general. **Keywords :** the Senior Center, the Baby-boom Generation,

PP26 S-171

FACTORS INFLUENCING LIFE SATISFACTION OF OLDER ADULTS: FOCUSED ON WHO'S GUIDELINES OF AGE-FRIENDLY CITIES

Soon-Dool CHUNG, Sung-Won KIM, Ye-Sol KIM, Song-Ju SEO, Hyo-Jin PARK, Eunjin LEE (Graduate School of Social Welfare, Ewha Womans University, Korea)

Introduction : The purpose of this study was to examine the effects of fulfillment of WHO's guidelines of age-friendly cities on life satisfaction of older adults. Data used for this study were from '2011 National survey for older adults' by Korea Institute for Health and Social Affairs. Questions appropriate to show the degree of age friendliness on WHO's guidelines were selected to obtain study purposes. **Method :** A total of 2,312 older adults resided in seven special metropolitan cities among 10,674 senior respondents were chosen to analyze the data and data were analyzed by regression analysis. **Results :** Results showed life satisfaction of older adults was different by residential areas of study population. In order to explain these differences, further analysis was performed with several questions related to age friendliness based on 8 scopes of the WHO's guidelines of the Age-friendly cities. Socio-demographic variables such as employment, salary, education, and chronic disease were appeared to explain significantly life satisfaction of older adults. Among the individual level variables, transportation, participation in political and social organization, participation in life-long learning, experiences of volunteering, participation in the Job Creating Project, and ability to take advantage of the Internet variables were appeared as significant variables to predict life satisfaction of the elderly. **Conclusion :** Based on these results, further discussions for social work intervention concerning life satisfaction of older adults and age-friendliness were provided. **Keywords :** life satisfaction of the elder, Age-friendly cities, degree of age-friendliness

PP26 S-172

EMPOWERING OLDER ADULTS BY ADOPTING AN ACTIVE PARTICIPATORY APPROACH IN A UNIVERSITY SETTING

Teresa TSIEN, Wendy NGAN (Institute of Active Ageing, The Hong Kong Polytechnic University, Hong Kong)

Introduction : In 2012, Hong Kong became the city with the longest longevity in the world with men at 80 years and women at 86 years. This brings about new opportunities, including the potential for more knowledge on ageing and an expanding pool of older human capital. **Method :** The Institute of Active Ageing (IAA) of The Hong Kong Polytechnic University, adopts a unique and comprehensive model in the promotion of active ageing. It is supported by 45 faculty members from 23 disciplines across 5 faculties of the University. IAA is committed to innovative research, interdisciplinary education and evidence-based practices for the promotion of active ageing. IAA is unique in that it emphasizes the importance of empowering older adults for independent, healthy and active ageing by instilling a proactive, self help approach through the facilitation of their participation in lifelong learning, volunteer work, and gainful

employment under the Project for the Third Age. Results : By involving older adults as planners and trainers, teachers and students, leaders and members, they become advocates to help instill a positive image of older adults to the mass public. Conclusion : This paper will discuss the process in empowering the older adults through their participation in the "Self- help Management Committee" and the "Train- the- trainer Programme", and how this practice arm is supported by the interdisciplinary research and education strategic areas. The challenges and issues of this unique empowerment model will be analyzed. Finally, some recommendations will be outlined as to how it can be applied to other universities. Keywords : empowerment, self-help, evidence-based practices

PP26 S-173

THE COMPARISON OF MUSIC AND HORTICULTURAL THERAPIES ON OLDER ADULTS IN ADULT DAY CARE CENTER IN TAIWAN

Chin-Ying YU¹, Man-Tsu LIU¹, Tsuann KUO² (1. Department of Eldercare, Central Taiwan University of Science and Technology, Taiwan; 2. Medical Sociology and Social Work, Chung Shan Medical University, Taiwan)

Introduction : The use of music and horticultural therapies on older adults in community-based adult day care centers has been popular in Taiwan. This paper analyses and compares the use of music care and horticultural activities, or the combination of the two, on 7 older adults with different degrees of cognitive or functional limitations. Method : The elderly participated in music and horticultural activities for three months at once a week and 80 minutes per session. A detailed observational record was kept by taking photo, written notes, as well as conducting interviews with the elderly. After three months, workers were interviewed to express their views on the effectiveness of the two types of therapies on older adults. Results : After transcribing the observational notes combined with photo viewing, several themes revealed the effectiveness of the two therapies: 1. Music care allowed participants to relax and learn music skills after consistent practices led by the program leader. The participants seemed to have more self-confidence as a result. 2. Horticultural activities required more hands-on techniques sometimes can be difficult for participants. 3. Although the participants were willing to participate, people with Dementia could not always participate the whole way. Conclusion : Both music and horticultural therapies had positive effects on older adults. The leaders played an important role in guiding the older adults and designing programs based on their needs. The future design of these programs can be more effective by adding staff's reviews or letting different staff play a leader role in conducting the programs. Keywords: Music Care, Horticultural Therapy, Adult Day Care Center

PP26 S-174

THE EFFECTIVENESS OF MUSIC AND FITNESS PROGRAM FOR OLDER ADULTS AT A COMMUNITY-BASED CENTER IN TAIWAN

Li Chi CHANG¹, Yu Hsien CHIANG², Chin Ying CHAN³ (1. Eldercare, Central Taiwan University of Science and Technology, Taiwan; 2. Eldercare, The Red Cross Society of Republic of China's Taichung Branch, Taiwan; 3. Eldercare, Buddhist Tzu Chi Taichung General Hospital Nuclear Medicine, Taiwan)

Introduction : Over the past 5 years, more than 1,600 community-based centers were established to promote health and wellness of older adults and to serve as a complement of family care in Taiwan. This study examines the effectiveness of a creative program combining music and fitness for older adults with different chronic health issues.

Method : This study used focus groups and detailed observations to gather feedback from five participants whose functional status differed and ranged from normal to physical limitations or cognitive impairment. The effectiveness of music and fitness activities at biopsychosocial levels were the main purpose of evaluation. Results : The combination of music and fitness training added the fun and creative life aspects for the elderly participants. The elderly were more willing to participate because they seemed to have their fitness goals and life satisfaction met. Many elders changed their behaviors as well as the biological, psychological and social well-beings. For example, people changed from not willing to walk due to stroke, from having bad temper and not willing to interact with others, to confidently performed in front of others. The stabilization of emotions and relief of caregiving burden for people with Dementia were also evident. Conclusion : The combination of music and fitness program is an effective way to improve the well-beings of the elderly. A proper design of fitness difficulty and the right selection of music with reminiscence flavors are two keys to successful outcomes. This study will conclude by sharing the program design and the evaluation feedback. Keywords : Community-based center, health promotion, elderly

PP26 S-175

INNOVATIVE TECHNOLOGIES IN THE AREA OF MEDICAL-PSYCHOLOGICAL AND MEDICAL-SOCIAL REHABILITATION OF WAR VETERANS

Oleg YAKOVLEV, Nikolay LYSOV, Vladimir ARSHIN, Stanislav BORINSKIY, Sergey VASEMAZOV (Samara Regional Clinical Hospital for War Veterans, First research institute of rehabilitation of war veterans of Medical Institute 'REAVIZ', Russia)

Introduction : The purpose of rehabilitation as a part of innovative direction in medical practice of Samara Regional Clinical Hospital of War Veterans (SRCHWV) lies in the creation of system allowing to form, preserve, recover and promote health of veterans. Method : The main modern principles of organizing the process of rehabilitation in SRCHWV include: 1. Early start 2. Continuity 3. Staging 4. Sequence 5. Succession The complex rehabilitation in SRCHWV provides for conducting medical, social health, psychological health, household, spiritual, sports, endoecological rehabilitation. The school of household adaptation is a model of living space equipped with technical means for rehabilitation and training of disabled patients and the staff to adopt the rules of using and developing necessary skills related to illness specifics. The innovative technology in complex rehabilitation - high gravity stand, developed by a team of experts of Samara State Medical University headed by MD, Associate of RAMS, Professor G.P. Kotelnikov. Results : Our system of rehabilitation of SRCHWV and the First research institute of rehabilitation of war veterans of Medical Institute 'REAVIZ' allows to form, preserve, recover and promote health of veterans through realizing health potential for leading proper social and personal lifestyle, decreasing the rate of aging, premature mortality, and illness, increasing the average lifespan and quality of life, and improving the country demographics. Conclusion : The school of household adaptation, gravitation therapy stand, art therapy are among new unique effective innovative directions of the system of health rehabilitation. Keywords : innovative technologies, rehabilitation, war veterans

PP26 S-176

THE ARTISTIC EXPRESSION IN OLDER FEMALE CANCER PATIENTS: A PHENOMENOLOGICAL PERSPECTIVE

Carlos LARANJEIRA (Higher School of Health Sciences, Piaget College, Portugal)

Introduction : Cancer was chosen from the many chronic illnesses that affect older people because it is feared almost universally as a potentially life threatening illness, has a greater incidence in this population. Conventional approaches to cancer treatment typically do not address the personal experiences of the women with gynaecological cancer. The aim of this study was to develop a structural description of the lived experience of older women with gynaecological cancer who create art, specifically through painting, sketching or drawing. **Method :** A phenomenological approach was employed to explore the meaning of creating art for four elderly women (65 years and older) with a diagnosis of gynaecological cancer. Data were collected through face-to-face interviews and follow up telephone conversations. Giorgi's method for analyzing phenomenological data was used to elicit an invariant description of the meaning that creating art had for the participants. **Results :** Three predominate themes emerged from the analysis. Contextual constituents of the phenomenon were identified as that of giving back and time to create. Dynamic components consisted of creative space and creative expression. Enduring factors consisted of the creative experience and sense of self. **Conclusion :** The process of creating art serves as a form of meditation for some individuals. Whether in the form of gardening or painting, the creative outlet provides a spiritual transcendence for the individual. Nurses are in a unique position to facilitate the creative art process which holds the potential for self-healing and self-responsibility for their patients. **Keywords :** cancer, transcendence, creativity

PP26 S-177

HORTICULTURAL ACTIVITIES FOR ELDERLY WITH DEMENTIA AT AN ADULT DAY CARE IN TAIWAN

Man-Tsu LIU¹, Chin-Ying YU¹, Tsuann KUO² (1. *Eldercare, Central Taiwan University of Science and Technology, Taiwan*; 2. *Medical Sociology and Social Work, Chung Shan Medical University, Taiwan*)

Introduction : More people were diagnosed with Dementia and faced daily challenges on cognitive, emotional, activities difficulties in Taiwan. From literature review, the horticultural therapy was shown to reduce anxiety, increase social interactions, and improve functions for people with Dementia. **Method :** The purpose of this study was to evaluate the effects of horticultural activities on 10 elders with different degrees of Dementia at an adult day care center in Taichung, Taiwan. The activity was once a week for three months. The author used an observational method and a horticultural activity evaluation form to examine the effects on biological, social, cognitive and emotional domains. **Results :** The results showed that the elders started from very shy away from participating, or lack of knowing how to performing horticultural procedures, to welcoming the activities. From the observational notes and horticultural evaluation, the older adults were able to perform step-by-step and make small-plant products (biological effect), to appreciate others' work and have interactions (social effect) and to smile and wanting to participate (emotional and cognitive effects). **Conclusion :** A horticultural therapy can be used as an effective way to improve the bio-psycho-social side of demented elders so they can be more receptive to environmental stimulation, ability to express self and positive interactions. The detailed horticultural activities and step-by-step guidelines are also discussed in this study so information can be disseminated to more adult day care centers in the future. **Keywords :** Horticultural Therapy, Adult Day Care, Dementia

PP26 S-178

RE-TWEETING ABOUT THE "END-OF-LIFE": INFORMATION SHARING ON TWITTER

Jisue LEE¹, Jungup LEE², Ara JO³, Hohyon RYU⁴, Kyunghwa CHO⁵ (1. *College of Communication and Information Studies, Florida State University, USA*; 2. *College of Social Work, Florida State University, USA*; 3. *Sport Management, College of Education, Florida State University, USA*; 4. *School of Information, University of Texas-Austin, USA*; 5. *Educational Measurement and Statistics, College of Education, Florida State University, USA*)

Introduction : Many developed countries including Italy, Germany, France, the United Kingdom, and the United States have seen a dramatic increase of the aging population (Population Reference Bureau, 2011). This global growth of the aging population has allowed scholars in various disciplines to conduct research on the lives of seniors and the "end-of-life" stage. **Method :** This research explores information sharing on Twitter to understand how people communicate and exchange both information and opinions regarding the "end-of-life." This study particularly examines the most frequently re-tweeted messages including "end-of-life." This enables us to understand the ideas most popularly talked about and exchanged as a "community behavior of agreement or consensus" in a new social media of Twitter (Dann, 2010, p. 1). **Results :** The data set consists of the top 100 most frequently re-tweeted messages including "end-of-life" collected through Python Twitter API from October 9 to October 28, 2012. Messages were classified to examine various purposes of users' re-tweeting behavior: Information Sharing (58%), News Sharing (19%), Opinion (20%), Event Report (2%), and Job Information (1%). The messages including the actual URLs (65%) are more often re-tweeted than those without URLs (35%). The United Kingdom and the United States currently appear to lead the conversation about "end-of-life" on Twitter. The topical terms most frequently tweeted by Twitter users include palliative, social, support, debate, trust, government, research, and action. **Conclusion :** The discussion about "end-of-life" on Twitter is in its infancy, but this study suggests the growing potential of social media for distributing/exchanging information and opinions on "end-of-life." **Keywords :** Information Sharing, Twitter, End-of-Life

PP26 S-179

AAL-WELL- AMBIENT ASSISTIVE LIVING TECHNOLOGIES FOR WELLNESS, ENGAGEMENT, AND LONG LIFE

Andrew SIXSMITH¹, Alex MIHAILIDIS², Arlene ASTELL³, Louise NYGARD⁴ (1. *Gerontology Research Centre, Simon Fraser University, Canada*; 2. *Dept of Occupational Science and Occupational Therapy, University of Toronto, Canada*; 3. *School of Psychology and Neuroscience, St Andrews University, United Kingdom*; 4. *Department of Neurobiology, Care Sciences and Society, Karolinska Institutet, Sweden*)

Introduction : A globally aging population demands innovative approaches to ensure people across societies can live and age well. The AAL-WELL project aims to explore how ambient assistive living (AAL) technologies can be used to promote active and healthy aging, particularly amongst people with mild cognitive impairment. The project comprises partners in Canada, Sweden and the UK and is funded by the European Research Area in Ageing 2 (ERA-AGE) program. **Method :** The project comprises three parts in which we will: i. work with older adults to identify their priorities for active and healthy aging; ii. develop novel AAL technologies to support these priorities; and iii. test the technologies in the real-world by putting them into the older adult's homes. **Results :** The focus is on identifying the priorities of older adults in two key areas - independent completion of self-care activities and keeping mentally active. This information

will be used to develop specific examples of innovative and novel AAL technologies, which we will show to older adults to get their feedback at each stage of the development process. The novel technologies will be tested in real-life situations in the homes of older people to assess their usability, acceptability and effectiveness. Conclusion : Knowledge translation is an important component of the project. The AAL-WELL research is relevant to people with different national and cultural backgrounds. The project will ensure that information reaches the appropriate organisations and services: groups that support older adults, health and social care providers, policy makers and technology companies. Keywords : ambient assisted living, mild cognitive impairment

PP26 S-180

LEARNING HEALTH LITERACY VIA ONLINE LEARNING SYSTEM AMONG UNIVERSITY STUDENTS IN HONG KONG

Angela Yee Man LEUNG¹, William H.C. LI¹, Athena LIU², Eliza M.L. WONG³, Vico Chung Lim CHIANG⁴ (1. School of Nursing, The University of Hong Kong, China; 2. Faculty of Law, The University of Hong Kong, China; 3. Nethersole School of Nursing, The Chinese University of Hong Kong, China; 4. School of Nursing, The Polytechnic University of Hong Kong, China)

Introduction : Health knowledge is needed by students from all disciplines. Being the consumers in health care system, university students should be trained with the skills to understand and critically evaluate the health information. An e-health literacy online learning platform was set up to train university students the essential skills in online health information searching and critically evaluating the reliability of the sources of health information. This study reported the participants' performance before and after the online learning, and their reflection of their learning experience. Method : A randomized controlled trial design. A 8-item e-health literacy scale was used. Results : A total of 117 students were recruited, 88 students completed all the activities in the project. 43 students were randomized to intervention group (IG) and 45 to control group (CG). E-health literacy level of all students increased from pre-intervention mean (SD) = 24.13 (6.26) to post-intervention mean (SD) = 29.58 (4.61) ($p < 0.002$); however there was no significant difference between IG and CG ($p = 0.284$). However, student indicated that this online training was useful and they learnt how to engage in online searching for health knowledge (mean (SD) = 3.74 (1.12) and learnt to think more critically (mean (SD) = 3.19(0.85)). Conclusion : E-health literacy level of the participants increased significantly after their online learning. However there was no significant difference between IG and CG. Future study in e-health literacy is warrant. Keywords : e-health literacy, online health information, Chinese,

PP26 S-181

PROFESSIONAL BURNOUT AMONG NURSING HOME PERSONNEL: EFFECTS OF INTERACTIVE TRAINING INTERVENTION

Joan Julia BRANIN¹, Gloria JUAREZ² (1. Center for Health & Aging, University of La Verne, USA; 2. Nursing Research and Education, City of Hope, USA)

Introduction : Burnout among nursing home personnel has been associated with declines in professional effectiveness and empathy towards patients and can lead to deterioration in the quality of patient care. Among the principal contributors to burnout are work-related interpersonal conflicts. The purpose of this research was to investigate the effects of a training intervention program on empathy, group cohesion and burnout among nursing home personnel. Method : Fifty-

three nursing home personnel participated in a four-module computer interactive training program designed to increase group cohesiveness and empathic tendencies and decrease perceived levels of burnout. The majority of the participants were females (97%), ages 18-35 (43%) with daily direct patient contact (69.8%), employed full-time (77%), worked days (66%), and had a high school diploma (60%). Pre- and post-training measurements of burnout, empathy, and group cohesion were obtained using the Maslach Burnout Inventory Human Services survey (MBI), the Mehrabian Emotional Empathy Scale (MES), and Seashore's Group Cohesiveness Index. Results : Nursing home personnel reported significantly lower levels of professional burnout ($t = 3.11, p < .01$) after the training. Feelings of emotional exhaustion and depersonalization decreased while sense of personal accomplishment increased significantly ($t = 3.45, p < .001$). Decreased perceived burnout was associated with increased willingness to help one another on the job and greater feelings of getting along with one another and sticking together. Conclusion : These findings suggest that nursing home personnel can benefit from the time and money spent on computer-based training designed to enhance their feelings of personal accomplishment, improve group cohesiveness, and increase their empathy tendencies toward patients while decreasing overall professional. Keywords : Professional burnout, nursing home personnel

PP26 S-182

VIDEOCONFERENCING BETWEEN HOSPITALS : EMBRUN AND AIGUILLES - HAUTES ALPES - FRANCE

Pierre LUTZLER¹, Alain SOLIVERES², Odile BAUGE-FARALDI³, Olivier DRUNAT⁴ (1. Geriatric Department, Hospital Embrun - Aiguilles, France; 2. Association, AGEtIS, France; 3. Geriatric Department, Hospital Compiègne, France; 4. Geriatric Department, AP HP Paris, France)

Introduction : Situated in the Hautes Alpes is a population base comprised of four districts: the Queyras Valley, the Guillestrois region, and the towns of Embrun and Savines le Lac. These districts have a significant geriatric contingent; of the 19,000 residents, 20% are older than 65 in age, and 10% exceed the age of 75. This is a vast mountainous area, with the effect of isolating communities and resources. This population base is served by four medical establishments with a combined total of 450 beds. Method : In order to be able to provide a rapid response adapted to the needs, we have opted for a telemedicine network, joining the hospitals at Embrun and Aiguilles. The local hospital at Aiguilles (caller) is equipped with a patient station which includes a large screen and a video camera on a mobile cart stationed at the patient's bedside. The central hospital in Embrun (respondent) is equipped with a fixed-in-place system and a PC which permits access to computerized medical records. Results : In our experience over the last three years, this system addresses the challenges of isolation and lack of direct access to care by geriatric patients. Conclusion : Consequently, medical professionals are able to communicate easily without need for significant travel. The use of this tool by these teams has been well received, and improves patient comfort by obviating transport to other establishments. Also improved are working conditions, diagnostics, and decision making. Furthermore, the tool has provided a structural improvement of the medical activities. Keywords : Geriatric - Videoconferencing - Network

PP26 S-183

EXPERIENCES OF INTERNET USE IN THEIR DAILY LIVES AND ITS MEANING AMONG OLDER ADULTS

Jung-Don KWON¹, Yujin KIM², Tae-Young UM³ (1. Department of

Social Work, Mokwon University, Korea; 2. Department of Social Welfare, Kyungpook National University, Korea; 3. Department of Social Welfare, Kyungil University, Korea)

Introduction : The recent trend shows that the number of internet users among older adults and their level of the ability to use internet have been increased. The purpose of this study is to investigate the phenomenon of senior information technology. **Method :** Using qualitative descriptive method, this study aims to explore how and in which context older adults use internet. It also aims to address the nature and the outcomes of elderly people's use of internet in their daily lives. In-depth interviews with 16 older participants were analyzed with qualitative content analysis and constant comparison method. **Results :** The finding shows as follows: ① Á agonies felt by the "ambiguous" age group in the modern society, ② È the analogue generation joining the digital, ③ Ê daily changes according to the internet use, ④ Í senior information technology and its flip side of coin. **Conclusion :** Based on the research findings, implications for senior information policy are addressed in three ways: promoting productive use of internet among older adults, meeting their health-related concerns using internet, and finding ways to integrate the idea of humanities into senior information technology. **Keywords :** senior information technology, internet use, qualitative descriptive study

PP26 S-184
DOES TYPE OF ACTIVITIES MATTER? AGE AND GENDER DIFFERENCES IN LEISURE ACTIVITIES AMONG JAPANESE OLDER ADULTS

Madoka OGAWA¹, Yoshiko ISHIOKA², Yasuyuki GONDO³, Marina KOZONO², Yukie MASUI¹, Takeshi NAKAGAWA³, Megumi TABUCHI⁴, Yukiko TATSUHIRA², Kazunori IKEBE⁵, Kei KAMIDE⁶, Yasumichi ARAI⁷, Ryutaro TAKAHASHI⁸ (1. Human Care Research Team, Tokyo Metropolitan Institute of Gerontology, Japan; 2. Graduate School of Human Sciences, Osaka University, Japan; 3. Clinical Thanatology and Geriatric Behavioral Science, Osaka University, Japan; 4. Department of Psychological Science, Kwansei Gakuin University, Japan; 5. Graduate School of Dentistry, Osaka University, Japan; 6. Department of Geriatric Medicine, Osaka University, Japan; 7. Department of Internal Medicine, Keio University School of Medicine, Japan; 8. Vice-Director, Tokyo Metropolitan Institute of Gerontology, Japan)

Introduction : Our aim in this study is to explore whether and how participation in different types of leisure activities might vary by age and gender among Japanese older adults. Because level of involvement in leisure activities is closely associated with health status in older age, better understanding of individual differences in leisure activities is critical to identify who, among the older population, are less likely to participate in potentially health-promoting activities. **Method :** We used data from 1,966 older participants in the Septuagenarian, Octogenarian, Nonagenarian Investigation With Centenarian (SONIC), a multi-cohort survey project in Japan. Participants answered the number of activities they participate in regularly in each of the 11 categories (e.g., physical activities, social activities with close social partners, religious activities). Using the total number of activities in each category as participants' activity score, we conducted two-way analysis of variance to examine whether there is a difference in scores on each category by age cohort (age 70 versus 80) and by gender. **Results :** Significant differences by age and gender were observed for 3 categories: physical activities, social activities with close social partners, and travel. Of the age-by-gender groups, eighty-year-old women were significantly lower in scores on physical activities whereas eighty-year-old men were significantly less likely to

participate in social activities with close social partners. Scores on travel were lower for eighty-year-old than seventy-year-old participants. **Conclusion :** Age and gender differences in participation in leisure activities are not consistent across types of activities. **Keywords :** leisure activities, age and gender

PP26 S-185
LEISURE-TIME ACTIVITY REDUCES DEPRESSIVE SYMPTOMS: ARE THERE ANY AGE AND GENDER VARIATIONS

Shiau-Fang CHAO (Department of Social Work, National Taiwan University, Taiwan)

Introduction : Leisure-time activity is considered a key for enhancing psychological well-being in later life. However, relatively little information is available regarding the prevalence, trends, and long-term effects of leisure-time activity participation among the elderly in Taiwan. This session is interested in exploring the effects of leisure-time activities against depression across different age and gender groups. The objectives of this session are as follows: 1.To present the trajectories of leisure-time activity participation among the elderly in Taiwan. 2.To compare the relative effectiveness of various leisure-time activities on depressive symptoms across different age and gender groups. 3.To offer insights on improving program delivery to promote leisure-time activity participation and psychological well-being of Chinese elderly. **Method :** Data were drawn from the "Survey of Health and Living Status of the Elderly in Taiwan", involving up to six repeated observations of a national sample of 4,049 adults older than 60 years of age between 1989 and 2007. A series of hierarchical linear models were estimated. **Results :** 1.Rates of participation in outdoor activities, learning activities and solitary activities decreased over time. 2. The decreases in outdoor activities were steeper for older-old adults compared with younger-old. The declines in learning activities were steeper for older men than older women. 3. The effects of outdoor activities against depression were superior to other activities. 4. The benefits of increasing outdoor activities on reducing depressive symptoms arose primarily among older women. **Conclusion :** The results emphasize a good match among age, gender, and types of leisure-time activities could exert an optimal effect on psychological well-being in later life. **Keywords :** leisure, activity, depressive symptom

PP26 S-186
THE EFFECT OF LEISURE CULTURE ACTIVITIES ON DEPRESSION IN GRANDPARENTS RAISING GRANDCHILDREN

Yoon Jung LEE (Social Welfare for the Elderly, Hoseo Univ., Korea)

Introduction : Recently, an interest on parenting stress and depression of grandparents raising grandchildren is rising according to the increase of working couple and divorce. Discussing around developmental task of elderly, one of the influencing factors on increase of grandparents' parenting stress and depression is leisure restriction. But, this factor has received far less rigorous analysis. So, the purpose of this article is to offer an analysis of the effect of leisure culture activities on depression in grandparents raising grandchildren. **Method :** The data was collected from 172 grandparents raising their grandchildren in 2011 national survey results on the elderly life conditions. Their analyses were composed of descriptive statistic and multiple regression analysis. **Results :** First, grandparents' mean score of depression was 7.1 of 15 what suggests middle level of depression. Second, the rate of grandparents who take exercise is 41%, the rate of travel experienced grandparents is 21% and the rate of grandparents

who do leisure culture activities except exercise and travel is 18%. The score of leisure culture activities satisfaction is 2.9 on a five-point scale. Third, the depressive symptom of grandparents who are female, have spouse, uneducated (In comparison with graduated from middle school), have more chronic illnesses, have less leisure culture activities satisfaction, have more communication with relatives and friends, and do not exercise is higher. Conclusion : Although they could not have limited time for doing preference leisure culture activities, they have to be provided deliberate chances to relax and enjoy leisure activities to make good use of their leisure time through social support. Keywords : leisure, depression, grandparents raising their grandchildren

PP26 S-187

CHILDHOOD ADVERSITY EXPERIENCES, SELF-ESTEEM, AND DEPRESSION AMONG KOREAN MALE BABY-BOOMERS AND OLDER MALE ADULTS

Hey Jung JUN¹, Myoung Yong KIM², Janice I. WASSEL³, Kyu Young CHO¹ (1. Department of Child and Family Studies, Yonsei University, Korea; 2. Administration Bureau, Seoul Metropolitan Government, Korea; 3. The UNCG Gerontology Program, University of North Carolina Greensboro, USA)

Introduction : Although studies on adulthood health disparities from the life-course perspective are recently increasing, little is known on the association between childhood hardships and mental health in later adulthood. From the life-course perspective, this study examines the effects of childhood adversity experiences on depression in later adulthood and the differences between male baby-boomers and older male adults. Method : This study used the national longitudinal data (2006 to 2010) from the Korea Welfare Panel Study (KOWEPS). The sample included male baby-boomers (N=1,096) and older male adults (N=1,541). The structural equation model was used to identify longitudinal changes in depression and tested the mediating impact of self-esteem while controlling other socio-economic and demographic factors. Data analysis was conducted with Mplus 6.0. Results : This study found that childhood adversity experiences had no direct effects on the depression of neither male baby-boomers nor older male adults. However, it showed indirect impacts on the depression of older male adults through their level of self-esteem, while no such effects were found in the male baby-boomers. Conclusion : Childhood adversity experiences impacted on the depression level of only older male adults, with self-esteem playing a mediating role in the causal pathway. The mental health and well-being of older adults originates at an early age and casts a long shadow throughout the life-course. Thus, we need to pay more attention to the negative impact of childhood hardships and how to enhance self-esteem. Further, differentiated intervention approaches for baby-boomers and older adults are needed to prevent and reduce depression in later adult life. Keywords : Life course perspective, Childhood adversity experiences, depression in later adulthood

PP26 S-188

THE ANTECEDENT AND CONSEQUENCE OF SPOUSAL VIOLENCE

Hey Jung JUN¹, Miae CHUN², Min Kyoung PARK¹ (1. Department of Child and Family Studies, Yonsei University, Korea; 2. Department of Social Work, Chongshin University, Korea)

Introduction : There has been a growing concern regarding spousal violence in elderly populations. However, little is known on spousal violence perpetration. Given this, it is necessary to achieve a comprehensive understanding of spousal violence perpetration in terms of both its antecedents and consequences. From a life-course

perspective, this study aims to explore the association between childhood socio-economic status, spousal violence perpetration, self-esteem and depression and the gender differences of these associations among older Koreans. Method : Data for the present study were taken from the Korea Welfare Panel Study. The sample included the aged over 65 living together with their spouses at 2006 (male=1,362, female=931). For analyses, Mplus 6.12 for Structure Equation Modeling was used. Results : The results indicated that inflicting either verbal or physical violence on one's spouse was associated with childhood SES, elderly self-esteem among male respondents. Lower childhood SES had effects on higher level of tendency to perpetrate. Further, older male perpetrators demonstrated lower self-esteem, and ultimately the elderly who reported lower self-esteem showed higher levels of depression. For female respondents, there was no such significant association. Conclusion : This study makes an important contribution to the understanding of how childhood SES impacts later life in terms of the perpetration of spousal violence, self-esteem and depression as the consequences. The findings suggest that the policy makers, practitioners, and researchers not only need to consider appropriate prevention methods for present perpetrators, but also need to identify the portentous characteristics of potential perpetrators and implement early intervention programs from a more long-term point of view. Keywords : Childhood socio-economic status, Spousal violence perpetration, Depression in later life

PP26 S-189

QUALITY OF LIFE OF OLDER PERSONS IN URBAN AND RURAL SETTINGS IN THE KHOMAS REGION, NAMIBIA

Janet ANANIAS¹, Herman STRYDOM² (1. Social Work, University of Namibia, Namibia; 2. Social Work, North-West University, Potchefstroom Campus, South Africa)

Introduction : Namibia is one of few African countries that have a social protection system in the form of a non-contributory pension scheme to all citizens above the age of 60 years. However, older people in Namibia are still facing many socio-economic challenges because of the increasing costs of living that affect their quality of life. Few research projects have been done to examine the socio-economic conditions and quality of life of older people living in urban and rural areas in Namibia. Thus, the objective of this presentation is to report on the findings from a needs assessment on the quality of life of older people living in urban and rural settings in the Khomas region in Namibia. Method : Key informant interviews were conducted with professionals and community leaders, while focus group discussions were held with older people and informal caregivers. Results : Key themes identified in this study were food security of older people, outstanding debts of older people, poor public and private transport and substandard housing. Findings suggest that older people in urban and rural settings face unique challenges. In urban areas, influences due to westernization and urbanization robs older people from enjoying peace of mind, while social and economic infrastructure are out of reach of older people from rural areas. Conclusion : The study implies that equal resource distribution between urban and rural settings can improve the quality of life of aging communities. Keywords : quality of life, older persons, Namibia

PP26 S-190

PSYCHOGENETIC ANALYSIS OF COGNITIVE FUNCTIONS IN ELDERLY TWINS

Liudmila Filippovna OBUKHOVA¹, Olga Borisovna OBUKHOVA² (1. Developmental Psychology, Moscow Psychologo-Pedagogical University, Russia; 2. Clinical Psychology, Moscow State University of Psychology and Education, Russia)

Introduction : Interest in old age due to demographic changes in the world, and especially in the developed countries. Understanding of old age as a total involution is gradually replaced by examining the various compensatory mechanisms for the elderly not to reduce the level of physical and mental performance. In psychological studies of the elderly found fact increase interindividual variability indicators of mental regulation of behavior on many cognitive criteria - fluid intelligence, reaction time, certain types of memory (Barton et al., Morse). What is the etiology of individual differences and the reasons for the increased variability in the elderly? The answer to this question can be obtained within psychogenetic studies of cognitive functions in the elderly. **Hypothesis :** In old age, there are features of the development which gives reason to expect changes in the genotype-environmental relations in the interindividual variability of psychological (cognitive) function. **Subjects.** 32 pairs of monozygotic twins and 27 pairs of dizygotic twins, living in Moscow. Only 118 people. Age of subjects from 43 to 62 years. Gender, sample characteristics - 38 men and 80 women. **Methods :** Wechsler test, neuropsychological methodology (Luria), a formal survey of dynamic properties of individuality (Rusalov), SPSS. **Results :** It was shown that aging in the cognitive process begins primarily in the area of non-verbal intelligence. **Conclusion :** Changes in genotype-environmental relations in the variability of cognitive functions (Plomin, McGue, Fulker, etc.) during late stages ontogeny confirmed the data obtained on twins aged in Russia. **Keywords :** aging, genotype-environmental relations

PP26 S-191

TIME USAGE AND PATTERNS OF TIME USE: AGE DIFFERENCES

Soondool CHUNG¹, Hyeji CHOP¹, Eunjin LEE¹, Suhyun KIM¹, Yuhwi KIM¹, Minhyeon SUNG¹, Heesoo YOUN¹, Kyoungmin LEE² (1. Graduate School of Social Welfare, Ewha Womans University, Korea; 2. Dept. of Social Work, Seoul Women's University, Korea)

Introduction : The purpose of this study was to understand time usage and pattern of time use by three different age groups such as the young, the middle-aged, and the elderly. **Method :** The data used for this study were from "Korean Time Use Survey" which is collected every five years by Statistics Korea (KOSTAT). Data collected in 1999, 2004, and 2009 were used for the analysis. **Results :** The results are summarized as following: The amount of time usage for personal care took first place in all age groups, followed by social life/recreation and leisure activities. Learning, work, and household care took third place and it was appeared to be different from each age group. Three different patterns of time use were classified based on the cluster analysis, which were work-centering, learning-centering, and social life/recreation and leisure-centering cluster. It was revealed mainly higher as for learning-centering in the young, work-centering in the young and the middle-aged, and society/leisure activity-centering in the elderly. The patterns of time use represented by three clusters have not been changed across the data for three different years, except for a few differences in the amount of time use at each pattern. **Conclusion :** Further discussions concerning no significant differences in time usage by age were provided and measures for changing time use in later life were discussed. **Keywords :** time usage, patterns of time use, age differences

PP26 S-192

THE CONCEPTUALIZATION OF PERSONAL GROWTH AFTER SPOUSAL BEREAVEMENT IN LATE LIFE

Sujie CHANG (Department of Social Welfare, Kyungsung University, Korea)

Introduction : The purpose of this study is to explore the personal growth process after loss of a spouse in late life, and to conceptualize "personal growth after spousal bereavement." **Method :** A qualitative study was conducted. The participants of the study were 17 seniors who experienced the death of a spouse within the past 10 years and in-depth interviews were conducted. The data were analyzed according to Strauss & Corbin's grounded theory(1998). **Results :** The analysis resulted in 134 concepts, 40 subcategories, and 18 categories. Paradigm showed that during the growth process after spousal loss, the causal conditions were "marital relationships," "independent/dependent tendencies," and "emotional readiness for spousal death," and the phenomena were "depression," "hopelessness," "daily stress," "psychological intimidation," "regret," and "sense of being freed." The contextual conditions were "desire for intimate personal relationships" and "desire to maintain independence"; the action/interaction strategies were "facing reality" and "efforts for the new life"; and the mediating conditions were "social support" and "spirituality." The results were "reconstruction of the meaning in life," "increase in self-esteem," and "embrace and acceptance." Furthermore, when personal growth after spousal bereavement was analyzed focusing on changes over time, the growth process consisted of three steps: "sadness and despair," "embracing and moving forward," and "personal growth". **Conclusion :** The results of the study show that personal growth after spousal loss is an integrative process in life after crisis, and can be conceptualized as the process of overcoming the despair that follows spouse's death, seeking a new life by actively taking control, and discovering a strengthened self. **Keywords :** Spousal bereavement, late life, personal growth

PP26 S-193

THE EFFECTS OF NEGATIVE LIFE EVENTS IN PRE-ADULTHOOD ON PSYCHOLOGICAL WELL-BEING OF MIDDLE AGED ADULTS: A COMPARATIVE STUDY ON SOUTH KOREA AND THE UNITED STATES

Yu Jeong KIM¹, Jeong Shin AN² (1. Master, Dept. of Child & Family Studies, Pusan National University, Korea; 2. Associate Professor, Dept. of Child & Family Studies, Pusan National University, Korea)

Introduction : The purposes of this study examined whether negative life events in pre-adulthood had influences on psychological well-being of middle aged adults in Korean and American. **Method :** The data came from 511 adults in Korea and 1622 in U.S. (using the MIDUS± data) aged 40-59. **Results :** The negative life events concerning parent($\beta = -.18, p < .001$), violence($\beta = .15, p < .001$), and death($\beta = .11, p < .01$) were significant predictors of psychological well-being in Korean middle aged adults. In, U.S., negative life events concerning school($\beta = -.08, p < .001$), parent($\beta = -.10, p < .001$), and violence($\beta = .13, p < .001$) effected on psychological well-being in mid-adulthood. There were significant differences in the associations between negative life events and psychological well-being dimensions. **Conclusion :** These findings support life course perspective that past experiences have cumulative effects and the individual life is connected with people having meaningful relationships. The negative life events had diverse influence in each dimension of psychological well-being for Korean and American differently. These differences might be due to cultural differences between Korea and the U.S. Overall, findings suggest that negative life events in pre-adulthood are significantly associated with various dimensions of psychological well-being of middle aged adults, sometimes contingent on the cultural context, supporting the assumptions of life course perspective. **Keywords :** psychological well-being, life events, life-course perspective

PP26 S-194

RETIREMENT PLANNING AND DECISION-MAKING PROCESSES AMONG MARRIED COUPLES

Sung-Eun YOON (*Retirement Research Center, Samsung Life Insurance, Korea*)

Introduction : The purpose of this study is to examine the impact of various types of financial management and decision-making among married couples in preparing for retirement. Special attention is given to how the distribution of financial decision-making power between spouses affects their level of financial retirement preparation. How couples make decisions about household finances and the role that each spouse plays is a critical part in determining the allocation of family resources, thereby affecting the couples' long term preparation for retirement. However, there is little empirical investigation on the issue. This study is a modest step to fill the gap in this area of retirement studies. **Method :** Data was gathered from 1,220 married non-retirees residing in 6 metropolitan areas in South Korea. Statistical methods used for the data analysis include descriptive statistics and multiple regression using the SPSS 19.0 program. Average monthly total household savings and retirement savings, and the level of overall financial retirement preparation were measured and compared by the type of decision-making arrangement of each household (i.e., Husband-dominant, Wife-dominant, and Shared). **Results :** Results show that couples who share financial decision-making power devote more effort to retirement preparation compared to other types of couples. Results of regression analysis show that Shared Couples not only have higher levels of total household savings and retirement savings, but also are generally better prepared for retirement than Wife-dominant Couples. **Conclusion :** This research shows the importance of financial teamwork in marriage in preparing for retirement. Implications of the study are discussed in detail. **Keywords:** married couples, financial decision-making, retirement preparation

PP26 S-195

EXPECTATIONS AND PLANS OF ACADEMICIANS AFTER RETIREMENT

Ayşe CANATAN (*Sociology, Gazi University, Turkey*)

Introduction : Retirement is an important stage in human life. In 20th.century people enrolled social security system, they work at least 25 years. How do people accomodate retirement days after the long working years? What do they think about their salary decrease? Some jobs suitable to put a stop, such as official, public servant, but for academicians is not easy to put a stop working, they continue to work after retirement (if they want) can study outside of university. In this research it was asked the questions about their retirement plans and what do they think about retirement. It is important to know their plans to prepare new areas for them. In our country (Turkey) scientists and academicians are valuable for our development. **Method :** The sample of the research was composed to women and men academicians working and newly retired (for one year). Sample size is 200 (112 men and 88 women) and sampling format is purposive sampling. Data analysing is made by SPSS 21.0. The first hypothesis of this research is women retiries can easy accomodate than men to retirement stage. The second one is men are more willing to work than women after retirement. **Results :** These two hypothesis of research are corrected. Women accomodate to retirement more easily than men. After retirement men are more wiiling to work after retirement. **Conclusion :** Retirement is one of the most important stages, coming at transititon to old age. In this era, in our country the number of retired people and elderly people are increasing. **Keywords :** retirement, academicians,

old age

PP26 S-196

AGING AND RELIGIOUS PARTICIPATION IN LATE LIFE

Kuan-Yuan WANG¹, Kyle KERCHER², Jui-Yen HUANG³, Wen-Ming WANG⁴, Ming-Shyan HUANG⁵, Karl KOSLOSKI² (*1. Department of Internal Medicine, Kaohsiung Municipal Hsiao-Kang Hospital, Taiwan; 2. Department of Gerontology, University of Nebraska at Omaha, USA; 3. Department of Maternal and Child Health, Gillings School of Public Health, University of North Carolina at Chapel Hill, USA; 4. Department of Internal Medicine, Kaohsiung Municipal Ta-Tung Hospital, Taiwan; 5. Division of Geriatrics and Gerontology, Department of Internal Medicine, Kaohsiung Medical University Hospital, Taiwan*)

Introduction : The aim of the study is to evaluate the relationship between two dimensions of religiosity, religious service attendance and religious beliefs, and the process of aging. **Method :** Secondary analysis of longitudinal data from the Florida Retirement Study was used to assess the trajectories of religious development over time. We analyzed data from six interview waves (Waves 1 and 5 - 9) with 1000 older adults age 72 or over. Covariates included demographic factors (age, gender, marital status, income, education and religious preference), functional disability, and self-rated global health. A latent variable growth model of religious attendance and religious belief was estimated using Mplus version 6.1. **Results :** A baseline model of growth processes only indicated significant variation and mean decline in religious attendance, but no significant variation nor mean change in religious beliefs over time. A second model was estimated that included an intercept for both latent variables, but included a slope term for religious attendance only. Finally, a third model was estimated that included the latent variables of model 2 and constrained error variances, plus a set of 17 covariates. The model fit statistics for the final model of religious attendance indicated very good fit for this latent growth curve model. **Conclusion :** The decline in mean religious attendance across time did not accompany a mean increase in religious beliefs as expected. There were numerous individual differences in the trajectory of decline for religious attendance, as well as in the initial levels of attendance and religious beliefs. **Keywords :** Aging, Religion, Health

PP26 S-197

RELIGIOSITY PATTERNS AMONG OLDER KOREAN IMMIGRANTS IN U.S.: A LATENT PROFILE ANALYSIS

Soonhee ROH¹, Yeon-Shim LEE², Jaehoon LEE³, Michael J. LAWLER⁴, Elizabeth TALBOT⁵, Kyunghag LEE⁶, Dongpil YOON⁷ (*1. Department of Social Work, University of South Dakota, USA; 2. Social Work, San Francisco State University, USA; 3. Center for Research Methods and Data Analysis, University of Kansas, USA; 4. School of Health Sciences, University of South Dakota, USA; 5. Social Work, University of South Dakota, USA; 6. Social Work, Wichita State University, USA; 7. Social Work, University of Missouri-Columbia, USA*)

Introduction : Using Latent Profile Analysis (LPA), the purposes of this study were to: (1) empirically develop profiles of religiosity and (2) examine the association of the religiosity profiles to depression and life satisfaction in older Korean immigrants. **Method :** A total of 200 older Korean immigrants residing in New York City (M age=72.50, SD= 5.10; 42.5% female) participated in the surveys. LPA was conducted to identify classes that are homogenous within and heterogeneous between groups in religiosity. Religiosity was measured by daily spiritual experience, values/beliefs, forgiveness, private

religious practice, religious/spiritual coping, and religious support. Identified profiles were examined to differentiate levels in depression and life satisfaction. Results : Two distinct latent profiles were identified: Profile 1 (25.6%) constituted low levels of religiosity ("Low-R"), whereas Profile 2 (74.3%) showed high levels of religiosity ("High-R"). These two latent profiles did not differ in age, education, income, marriage status, and living arrangement of their members. Yet there were more Korean elderly women in the "Low-R" than older Korean men. Although a level of depression was similar across the two latent profiles, greater levels of social support and life satisfaction were found in the "High-R". Conclusion : This study found the strong association of religiosity profiles with life satisfaction among older Korean immigrants, but not with depression. Geriatric clinicians need to consider gender as an important factor in specifying the association between religiosity and quality of life, and address how to best formulate policy toward creating more health-promotion interventions. Keywords : Religiosity , depression, life satisfaction, latent profile analysis

PP26 S-198

PREDICTORS OF SUCCESSFUL AGING AND SUBJECTIVE WELL-BEING OF KOREAN-AMERICAN ELDERLY IN HONOLULU, HI

Haekyung CHOI (*Department of Social Welfare, Chungnam National University, Korea*)

Introduction : The purpose of this study was to investigate the level of Korean-American elderly's quality of life in terms of successful aging and subjective well-being and to examine the effects of various personal resources and formal welfare benefits and resource utilization. Method : Data were collected from 117 elders aged 60+ by face to face interview or self-administered survey using structured questionnaires. SPSS 19.0 software was used for descriptive analysis of successful aging and subjective well-being and multiple regression analysis measured the impact of personal resources, filial responsibility expectations, formal support on successful aging and subjective well-being. Results : The findings indicated that the mean score of Korean concept of successful aging measured by 5 point likert scale was 3.53 and regarding subjective well-being measured by Philadelphia Geriatric Center Morale Scale, the mean was 10.21. 34.9% among 117 participants were classified by low morale (under 9 points in high morale responses) and 27.4% were mid-range morale (10-12 points in high morale responses) while 37.7% were high morale (13-17 points in high morale responses). Results of the multivariate analysis indicated that significant variables predicting quality of life were Korean-American elderly's informal social support, economic status, and health status. Conclusion : The substantial numbers of elders aged 60+ in Honolulu, HI were fairly good with their quality of life in terms of successful aging and psychological well-being. However, their quality of life was significantly influenced by personal resources. Based on the findings, implications for social welfare interventions in order to improve Korean-American elderly's successful aging and subjective well-being were discussed. Keywords: successful aging, subjective well-being, predictors

PP26 S-199

OLDER KOREAN IMMIGRANTS IN THE US: PERSPECTIVES ON WISDOM

Holly NELSON-BECKER, Younhee HARM (*School of Social Work, Loyola University Chicago, USA*)

Introduction : The ancient search for wisdom and wise behavior is an increasingly important area for modern gerontology. While some

scholars define wisdom as expert knowledge (Baltes & Staudinger, 2000; Sternberg & Jordan, 2005), others explore implicit wisdom available to all (Ardelt, 2004). Although wisdom may not be a set of rules or virtues that can be easily transmitted, it does form part of optimal living. Thus exploring people's beliefs about what wisdom is and how it is expressed can add to understanding of positive aging. Method : This qualitative study explored views of wisdom among older Korean immigrants in the US. Two focus groups (FG) were conducted in a midwestern city (n=8) and suburb (n=10). The former FG had an age range of 79 to 97, while the latter had an age range of 66-83. Data was analyzed using a constant comparative method and Atlas.ti software. Results : Participants in FG1 were generally older and more religiously oriented, while participants in FG2 were younger and represented broader philosophical, religious, and political views. Elements of social, emotional, and religious wisdom were highlighted in the first FG that suggested learning control of one's mind, one's feelings, and respecting others were important. The second FG underscored political and social influences of wisdom, including skillful social interaction, environmental experience, and balancing feminism and Korean mothers' judgment. Conclusion : Implications suggest that achieving harmonious relationships, holding back first reactions and striving for learning in all, even adverse, situations are important to these groups of older immigrant Koreans.

Keywords : wisdom, Korean immigrants

PP26 S-200

SELF-REPORTED EXHAUSTION AMONG OLDER ADULTS WITH MILD COGNITIVE IMPAIRMENT; PHYSICAL FUNCTION, PHYSICAL ACTIVITY LIFE SPACE

Kota TSUTSUMIMOTO¹, Takehiko DOI¹, Hiroyuki SHIMADA¹, Hyunte PARK², Hyuma MAKIZAKO¹, Daisuke YOSHIDA¹, Sangyoon LEE², Yuya ANAN¹, Kazuki UEMURA¹, Tadashi ITO¹, Takao SUZUKI³ (*1. Section for Health Promotion, National Center for Geriatrics and Gerontology, Japan; 2. Section for Physical Functioning Activation, National Center for Geriatrics and Gerontology, Japan; 3. Research Institute, National Center for Geriatrics and Gerontology, Japan*)

Introduction : Exhaustion among older adults is one component of frailty and related to several aspects of walking activities; speed, endurance, quantity. Cognitive impairment, such as mild cognitive impairment (MCI), was a risk of transition to frailty. However, which aspects of walking-related activity were associated with exhaustion among MCI subjects. The aim of this study was to investigate whether exhaustion had relation with walking speed, gait endurance, quantity of physical activity, and life-space among older adults with MCI. Method : Participants in this study met the definition of MCI using Petersen's criteria and were recruited from our databases (n = 5104). Self-reported exhaustion was assessed using the criteria from SOF index and participants were classified into exhausted group: EG (n = 62) and, non-exhausted group: non-EG (n = 294). We measured demographic data, walking speed, six minutes walking test, physical activity and life-space assessment. Results : EG had significantly smaller life space, compared to non-EG (p < 0.001). Even if using stepwise backward method, life space was independently associated with exhaustion state (OR = 0.97 [0.95 - 0.99]). Conclusion : Smaller life space was associated with having exhaustion among older adults with MCI. As the outer shell of walking-related activity, life-space may precociously be deteriorated by exhaustion compared to other aspects. To elucidate the association between exhaustion and function among MCI subjects would contribute to successful aging in older adults with cognitive impairment. Keywords : Self-reported exhaustion, mild cognitive impairment, life space

PP26 S-201

I AM ACTIVE: EFFECTS OF A PROGRAM FOR PROMOTING SUCCESSFUL AGING

Neyda M.A. MENDOZA RUVALCABA¹, Elva Dolores ARIAS MERINO², Jazmin CUEVA CONTRERAS³, Beatriz Adriana CORONA FIGUEROA³ (1. Department of Health Sciences, University of Guadalajara. CUTONALA, Mexico; 2. Department of Public Health, University of Guadalajara. CUCS., Mexico; 3. Department of Public Health, University of Guadalajara. CUCS. PhD Program in Public Health, Mexico)

Introduction : I AM ACTIVE is a program designed to encourage successful aging in people 60 years and over, through improved physical activity, healthy nutritional habits and cognitive functioning, that promotes better quality of life. The objective of this study is to assess the effectiveness of this program. Method : Longitudinal Design (RCT). 64 healthy elderly (experimental n=31, control n=33), the program consisted in theoretical-practical sessions of physical exercise, nutrition habits and cognitive training, based on the Precaution Adoption Process Model. A pre-post and 6 month follow-up battery was applied. Mean differences and effect size was calculated. Results : Groups were similar at baseline. After the program the experimental group improved significantly in the different areas compared with the control group: Physical activity: risk of falls(p<.05,d-Cohen=.34), balance(p<.05,d-Cohen=.40), range of motion(p<.05,d-Cohen=.65), self-efficacy for physical activity(p<.001,Cohen-d=.76). Nutrition: nutrition self-efficacy(p<.01,d-Cohen=.61), nutritional status(or<.05), water consumption(p<.05). Cognitive performance: processing speed(p<.001,d-Cohen=.50), working memory(p<.05), self-efficacy to improve memory(p<.001,d-Cohen=.89). QOL: general(p<.01,d-Cohen=.63), health-functionality(p<.01,d-Cohen=.54), psychological and spiritual(p<.05,d-Cohen=.44) and family(p<.05,d-Cohen=.36). In the follow-up, improvements remained at risk of falls, self-efficacy for physical activity, self-efficacy for nutrition, processing speed, QOL general and its spiritual and psychological component. Most of the experimental group progressed of stage in the behavioral change from PAMP between pre-post test, and maintained at follow-up, while the control group remained without significant changes. Conclusion : Findings show that the program promotes a behavioral change for the enhancement in domains of successful aging as well as in quality of life in healthy elders. Keywords : successful aging, active aging, physical activity, nutrition, cognitive function

PP26 S-202

THANK GOODNESS FOR MY COMPUTER!: CASE STUDY OF A 95 YEAR OLD AUSTRALIAN WOMAN

Suzanne BYERS (Palliative and Supportive Services, Flinders University, Australia)

Introduction : The application of technology in older age often revolves around the opportunities to enhance independent living. Exploration and examination of the role of technology for the purposes of recreational pleasure, social networking and healthy ageing remains more limited. This paper considers the role of computer technology in the quality of life of a now 95 year old Australian woman. Method : Personal interviews and observational studies were conducted across a span of fifteen years. Results : The introduction of a computer to the life of a single woman of 80 years old created an important foundation of compensation as skills, physical abilities, particularly mobility and social networks decreased over time. Personal interests were able to be maintained across a fifteen year life span such as playing scrabble, completing jigsaws puzzles, keeping in touch with distant relations, and staying connected with music, books and global events.

Conclusion : Decreased mobility and frailty can have a significant impact on the quality of life of an older person. Digital technology should be considered within the suite of interventions to assist an older person in maintaining preferred lifestyle choices and a good quality of life. Keywords : Older people; social environments; computer technology

PP26 S-203

THE ASSOCIATION BETWEEN LIFETIME MUSICAL ACTIVITIES AND COGNITIVE FUNCTION OF THE ELDERLY

Alicia NEVRIANA¹, Pandu RIONO¹, Tri Budi Wahyuni RAHARDJO² (1. Biostatistics and Population Studies, Faculty of Public Health, Universitas Indonesia, Indonesia; 2. Center for Ageing Studies, Universitas Indonesia, Indonesia)

Introduction : Decreasing cognitive function of the elderly is one of the most common problems that might affect their quality of life. Music is an element that is believed to be able to contribute to quality of life of the elderly. However, whether musical activities that are done throughout the life span related to cognitive function is unclear. In this research, we evaluated the association between lifetime musical activities and cognitive function. Method : Fifty three older adults from three nursing homes in East Jakarta were selected and interviewed regarding their characteristics and lifetime musical activities. Cognitive function was also measured using MMSE. Results: The results of this preliminary study revealed that a possibility of an association between lifetime musical activities and cognitive function of the elderly was indicated. The result also showed that the participants who were not actively involved in musical activities during their lifetime were twice more likely to develop cognitive function impairment than the elderly who were actively involved in musical activities, after being adjusted by the characteristics. Conclusion : These results suggest the beneficial effect of musical activities throughout the life span on cognitive functioning for the elderly. Keywords : Ageing, Cognitive function, Music

PP26 S-204

THE RELATIONSHIPS BETWEEN MULTIPLE DIMENSIONS OF NOSTALGIA AND POSITIVE EMOTION

Ayumi ISHII, Yasuyuki GONDO, Shinichi SATO (Graduate School of Human Sciences, Osaka University, Japan)

Introduction : Previous research has shown that nostalgia is an affective process that can accompany autobiographical memories. Nostalgia has been described as a complex feeling that elicits positive emotion. However, most of these studies have measured nostalgia on only a single dimension, so it remains unclear which dimension is responsible for positive emotion. This study aimed to develop a scale that measures multiple dimensions of nostalgia and to determine which of these dimensions elicit positive emotion. In this study, we focus on nostalgia evoked by music because recent investigations have suggested that nostalgia is often triggered by music. Method : Participants were 41 undergraduates and graduate students. They were asked to answer a multi-dimensional nostalgia scale after listening to nostalgic music for their generation. They also answered two scales on the elicited deactivating-positive emotion and the musical mood. Results : Exploratory factor analysis identified three factors: familiarity, wistfulness, and old-fashioned humor . Multilevel model analysis showed that only wistfulness significantly enhanced deactivating-positive emotion, even when controlling for the musical mood. Conclusion : The wistfulness dimension of nostalgia comprises several ambivalent emotions such as missing someone/something,

sentimentality, and longing, which can be linked with autobiographical memories for a specific target. Ambivalent emotions and these autobiographical memories triggered by music might interact to enhance deactivating-positive emotion. Future research is required on whether the findings could be replicated among older adults, as people generally have more nostalgic experiences associated with music as they age. Keywords : nostalgia, positive emotion, music therapy

PP26 S-205

SELF-PERCEPTION OF AGING IN WESTERN MEXICO

Jazmin CUEVA-CONTRERAS¹, Elva Dolores ARIAS MERINO¹, Neyda M.A. MENDOZA-RUVALCABA², Martha Judith ARIAS-MERINO², Martha Elena VAZQUEZ-ARIAS³ (1. *Public Health, CUCS, University Of Guadalajara, Mexico*; 2. *Health Sciences, CUTONALA, University Of Guadalajara, Mexico*; 3. *Maestria en Gestion y Politicas de la Educacion Superior, CUCEA, University Of Guadalajara, Mexico*)

Introduction : The self-perception of aging is a very important component in the lives of people as they get older. Have a positive self-perceptions of aging are indicators of active aging, age-identity and part of the processes of self-regulation and adaptation. Method : This study was developed from Self-perception of Aging Study in the CASOENAC project, FONCICYT-94670 (EU-CONACYT). A cross-cultural study in western Mexico, with a sample of 1564 people aged between 60 and 108. Analysis was performed on SPSS program. Results : Mean age was 70.78±8.4, 51.7% female, 54.3% reported being married, 59.9%, only the 7.0 obtained an upper level degree, and 31.4% have elementary school. In average more people lives in the same household (3.2). The values showed that the elderly people perceived the subjective age 60.39±19.02 and looks like 66.37±25.18. The self-perception was associated with educational level (p=.000), satisfaction of life (p=.000), optimism (p=.002), subjective health (p=.000), doubts of generativity (p=.012), integrity-acceptation (p=.001) and the same way integrity-transcendence (p=.011), the concern of generativity was not significant (p=.111). Conclusion : In general the elderly people had a perception of their age most favorable, which is reflected in a sense of having fewer years than they actually had because this they feel lest identifying themselves as part of the group of elderly. The people are not of sure of their contributions to the betterment of the community. The participants also perceived social exclusion to older persons, which involves being seen as useless (after working life). Keywords : self-perception of aging

PP26 S-206

TRAFFIC SAFETY FOR OLDER ADULTS: THE EXPERIENCE OF THE TAICHUNG-BEITUN LIFELONG LEARNING CENTER

Keng Shen LIN¹, Man-Tsu LIU², Chin-Ying YU², Li Chi CHANG² (1. *Eldercare, Feng An Hospital, Taiwan*; 2. *Eldercare, Central Taiwan University of Science and Technology, Taiwan*)

Introduction : In 2009, one in every four deaths from traffic accidents was someone 65 years old or over. The percentage of traffic accidents continues to increase and has become one of the top ten reasons for deaths among the elderly in Taiwan. Therefore, the purpose of this study was to examine the effectiveness of traffic safety education and its creative design to be promoted throughout the Taichung-Beitun Lifelong Learning Center. Method : Several methods to promote awareness on traffic safety were designed by using pamphlets, songs, films, case studies, and personal testimonials. Through group discussions or one-on-one education, the elderly were taught to pay attention to traffic accidents especially during early morning or

evening, to equip with safety devices, as well as to be aware of personal frailty such as vision and mobility. Results : After 30 different sessions spread over six months, the elderly were able to answer various questions on traffic safety, practice safety rules and help promote safety behaviors in their communities. The outcomes of such results were also noticeable and awarded at a national level by the Department of Transportation. Conclusion : The promotion of traffic safety for older adults requires a creative design of educational materials and fun activities so the elderly can remember the information, which later can be transformed into knowledge and behaviors for safety practice. The content on how to promote traffic safety will also be shared and discussed in this study. Keywords : Traffic Safety, Lifelong Education, Elderly

PP26 S-207

AGE DIFFERENCES IN THE RELATIVE IMPORTANCE OF SIX COGNITIVE CHANGE FACTORS IN FORGIVING PROCESS

Kyeong-Sun WEE, Gahyun YOUN (Department of Psychology, Chonnam National University, Korea)

Introduction : In previous studies, six cognitive change factors on the forgiving process in old age were found [F1: children's ascent in their SES level, F2: interaction with the others, F3: deterioration in health, F4: observation of death owing to natural disaster, F5: healing through religion, F6: indirect intervention such as education]. With a sample of older generation, there found differences in the relative importance of the factors according to the ages when they had forgiven. This study was to explore if there would be any similarity in the relative importance of the six factors across different generations including younger participants. Method : Participants were 397 male, 408 female community-dwellers, aged 30-83 years. A research instrument was a questionnaire with 19 items representing the six factors, with a 5-point Likert type response format. Results : The relative importance of the factors was similar to that with older generation only. For instance, participants in their 50s of this study evaluated F1 and F5 as important as older generations did when they had forgiven in their 50s. Moreover, F2 was important for the older generations when they had forgiven in their 30s while participants in their 30s of this study evaluated it as important. However, there was an obvious difference in assessing F3. That is, F3 was not an important factor for the older generations at whatever age they had forgiven, but participants in their 50s or 60s of this study evaluated it as very important. Conclusion : All the findings were discussed in the context of the healthy aging. Keywords : Cognitive change factor, Forgiving process, Older generation

PP26 S-208

THE RELATIONSHIP BETWEEN LEISURE ACTIVITIES AND COGNITIVE FUNCTION IN OLDER ADULTS IN JAPAN

Marina KOZONO¹, Yasuyuki GONDO¹, Madoka OGAWA², Yoshiko ISHIOKA¹, Yukie MASUI², Takeshi NAKAGAWA¹, Megumi TABUCHI³, Yukiko TATSUHIRA¹, Kazunori IKEBE⁴, Kei KAMIDE⁵, Yasumichi ARAI⁶, Ryutaro TAKAHASHI⁷ (1. *Graduate School of Human Sciences, Osaka University, Japan*; 2. *Human Care Research Team, Tokyo Metropolitan Institute of Gerontology, Japan*; 3. *Center for Applied Psychological Science, Kwansai Gakuin University, Japan*; 4. *Graduate School of Dentistry, Osaka University, Japan*; 5. *Graduate School of Medicine, Osaka University, Japan*; 6. *Graduate School of Medicine, Keio University, Japan*; 7. *Research on Social and Human Sciences, Tokyo Metropolitan Institute of Gerontology, Japan*)

Introduction : Leisure activities occupy a considerable part of older adults' lives. Previous research has shown significant associations between leisure activities and cognitive function among older adults. However, there seems to be unclear that which elements of leisure activities affect cognition in old age. Thus, we examined the relationship between leisure activities and cognitive function in older adults. We evaluated leisure activities by counting total number and total duration in which older adults participated. **Method :** Participants were 1000 adults, aged 69-72 years. They completed a questionnaire about various leisure activities and the time spent on those activities per week. The items of activities were divided into 11 activity categories and participants' scores were summed for each category. The duration of leisure activities in which older adults participated was calculated. We conducted four assessments of cognitive function: the Montreal Cognitive Assessment (MoCA) and immediate free recall, recognition, and inductive reasoning. **Results :** The total number score of the "experimental activity" category (e.g., watching movies and shodo) was associated with MoCA, immediate free recall, and inductive reasoning scores. There was no correlation between time spent on leisure activities and all measures of cognitive performance. **Conclusion :** The results showed that the relationship between cognitive function and leisure activities lies in the quality of the leisure activities, and not time spent on those activities. Future research should investigate what elements of activities and how these elements affect cognitive function. Furthermore, we must reappraise the "experimental activity" category because it includes a wide range of items. **Keywords :** Lifestyle, Leisure activity, cognitive function

PP26 S-209

ART THERAPY AND SPIRITUAL REHABILITATION - OPTIMISTIC FACTORS OF MENTAL HEALTH OF WAR VETERANS

Oleg YAKOVLEV (*Samara Regional Clinical Hospital for War Veterans, First Research Institute of Rehabilitation of War Veterans of Medical Institute 'REAVIZ', Russia*)

Introduction : The history of art therapy in Samara Regional Clinical Hospital of War Veterans (SRCHWV) has a long and successful history since 1943. The hospital is headed by M.D., Professor O.G. Yakovlev, since 1986. Who is also the head of hospital's amateur art activities, while preserving and multiplying the traditions of art therapy. **Method :** In 1995 a Board of Trustees of SRCHWV was introduced. It consists of honorable, respected and socially responsible people of our region - Governor, heads of large enterprises and organizations, creative teams. The method of art and faith therapy is based upon the idea of self-expression, which lets patients with physical and mental deviations enlarge their rehabilitation potential. For the first time among hospitals in Russia in 1995 SRCHWV hosted an Orthodox temple of George the Victorious and prayer room for Muslims. The service in the orthodox temple is held by the monks of Sviato-Voskresensky monastery. **Results :** The hospital's club hosts over 68 concerts and 50 film screenings per year. The hospital's library offers more than 5000 items of high-quality books. The halls and the departments feature artworks of V.D. Gerasimov depicting military and patriotic themes (triptych, panel). **Conclusion :** Art therapy and spiritual rehabilitation uncover the creative potential of every person on the way to reaching spiritual health, internal bliss and social harmony. **Keywords :** art-therapy, spiritual rehabilitation, spiritual health

PP26 S-210

"ONCE UPON A TIME..." THE CONTRIBUTION OF OLDER PERSONS' LIFE STORIES AND ITS VALUE ON YOUNG

ADULTS

Susan JANSEN VAN RENSBURG (*Psychology, Department of Psychology North West University Potchefstroom Campus South Africa, South Africa*)

Introduction : The aim of this presentation is to describe the value of stories of older persons for young adults. The theoretical framework that underpinned this research is that relationships are continuously created through on going communication. The stories voiced by older people are regarded as a form of communication with young adults. **Method :** Eighteen white and coloured, Afrikaans- and English-speaking students (aged 21 to 31) from a tertiary educational context participated. Data were collected through the Mmogo method®, a projective visual research method, focus group discussions, individual interviews, as well as personal journal entries. The participants were asked to make visual representations of their relationships with older people (aged 60 years and older), using clay, beads and straws. Data were analysed thematically and by applying visual data analysis. **Results :** The findings revealed young adults expresses appreciation for the knowledge that older people share with them. The young adults conveyed that they value the wisdom of older people; that they learn from how the older people displayed resilience, despite challenging life situations and they appreciate the positive outlook of older people. **Conclusion :** In conclusion these stories seem to involve the relational capacity of young adults to adapt, grow and recover from adversities and become more resourceful. It is recommended that these findings serve to inform the development and application of further research. **Keywords :** positive outlook, resilience

PP26 S-211

WELL-AGING IN KOREA: MOVING TOWARD MATURED AGING

Young-Sook CHONG (*Department of Psychology, Pusan National University, Korea*)

Introduction : In last 20 years, there were numbers of researches about successful aging in Western and Korean cultures. We identified the problems of successful aging studies in two cultures: diversity of successful aging concept, different rate of successfully aged people based on diverse measurements, lack of considerations about the different characteristics of older adults and cultural differences. Therefore, this study aimed to develop and introduce the matured aging as a complimentary construct of successful aging. **Method :** We reviewed 79 researches on successful aging in Western and Korean cultures. We identified several problems of successful aging studies. **Results :** First, there was no academic agreement about successful aging concept among researches. Successful aging was accessed with various different components and there was mixed using of components and influential factors of successful aging in diverse empirical studies. Second, there were differences on rate of elderly's reports as successful aging because of the disagreement of what was successful aging. Lastly, this study compared the components and influential factors of successful aging between two different culture. **Conclusion :** We found cultural influences on conceptualization of successful aging and necessity of reconceptualization of aging well in Korea. We suggest the matured aging construct which is emphasizing psycho-socially matured characteristics of the elderly: Especially, we present the matured aging model from the confucianism with 3 dimensions: self-discipline, harmonized relationships, and social responsibility. **Keywords :** successful aging, matured aging, cultural differences

PP26 S-212

DESCRIPTIVE DATA FOR THE MONTREAL COGNITIVE

ASSESSMENT (MOCA) IN A SAMPLE OF JAPANESE COMMUNITY-DWELLING ELDERLY

Yukiko TATSUHIRA¹, Yasuyuki GONDO¹, Hiroki INAGAKI², Yukie MASUI³, Madoka OGAWA³, Takeshi NAKAGAWA¹, Megumi TABUCHI⁴, Yoshiko ISHIOKA¹, Marina KOZONO¹, Kazunori IKEBE⁵, Kei KAMIDE⁶, Yasumichi ARAI⁷, Ryutaro TAKAHASHI⁸
(1. Graduate School of Human Sciences, Osaka University, Japan; 2. Research Team for Promoting Independence of the Elderly, Tokyo Metropolitan Institute of Gerontology, Japan; 3. Human Care Research Team, Tokyo Metropolitan Institute of Gerontology, Japan; 4. Department of Psychological Science, Kwansai Gakuin University, Japan; 5. Graduate School of Dentistry, Osaka University, Japan; 6. Graduate School of Medicine, Osaka University, Japan; 7. School of Medicine, Keio University, Japan; 8. Research on Social and Human Sciences, Tokyo Metropolitan Institute of Gerontology, Japan)

Introduction : The Montreal Cognitive Assessment (MoCA) is a brief measure of global cognitive function that was originally developed to detect mild cognitive impairment (MCI). Its translated versions have been developed in several international populations, but no data are available for the general Japanese population. The present study provided descriptive data for the MoCA in a sample of Japanese community-dwelling elderly persons. **Method :** The Japanese version of the MoCA (score range: 0-30, cutoff point: 25/26) was administered by trained personnel to 1000 septuagenarians aged 69-72 and 973 octogenarians aged 78-82 (participation rate: 23.2% and 18.1%, respectively). Raw scores were calculated according to the MoCA manual. To correct for education effects, 1 point was added to the total MoCA scores of participants with 12 years of education or less (if score was below 30). **Results :** The mean total MoCA scores of septuagenarians was 23.46 (SD = 3.28, skew = -.50, kurtosis = .27), and of octogenarians was 21.79 (SD = 3.83, skew = -.53, kurtosis = .63). The distribution of septuagenarians with scores below the cutoff (<26) was 71.9% (77.8% without correction for education) and of octogenarians was 81.8% (87.9% without correction for education). **Conclusion :** Normality of the MoCA score distributions was almost confirmed in this study. Thus, the MoCA can accurately measure general cognitive function. However, the cutoff score might over-detect MCI. It should thus be re-examined for Japanese community-dwelling elderly persons. **Keywords :** The Montreal Cognitive Assessment (MoCA), Descriptive data, community-dwelling elderly

PP26 S-213

CHALLENGES ON LIFELONG EDUCATION IN TAIWAN - A PRACTICE EXPERIENCE IN "TAICHUNG CITY BEITUN DISTRICT PLEASANT AGE LEARNING CENTER"

Ming-Fang HSU, Tsuann KUO, Man-Tsu LIU, Chin-Ying YU
(Eldercare, Taiwan University of Science and Technology, Taiwan)

Introduction : How to promote the healthy living of the elderly has been an important objective of planning elderly welfare. In this study, we focus on lifelong education, as to be called "pleasant age learning" in Taiwan. **Method :** In this empirical study, we analyzed how to design attractive curriculum for three centers in the past three years. The objective of curriculum design is "P.H.D", which means Prevention, Health, and Dream Aging. Under this objective, senior members can go to any of the three learning centers and learn different contents. In this report, we will clarify how curriculum design influences senior members by analyzing the original statistical data and observational data which we recorded and collected over 3 years. **Results :** The main findings about changes in senior members are as followed. 1. Increasing personal attractiveness: more smiling, friendly, desire for knowledge. 2. Became more sociable: inviting her/his

grandchildren, relatives and friends join the classes. 3. Increasing confidence: make suggestions about course design and methods of presentation on learning. 4. Desire to study became stronger: some senior members went to different learning center to study. Some members started self learning. **Conclusion :** From this study, it is very clear if we can design courses in accordance with pleasant learning, it is useful to most seniors to increase their confidence. Besides, most of them have better relationships with their family and they made new social networks. These are all useful for seniors' health promotion and active aging. **Keywords :** Taiwan, Health Promotion, Lifelong Education

PP26 S-214

OLDER-ADULTS INTERESTED IN FORMAL EDUCATION IN SOUTHERN BRAZIL

Angelo Jose G. BOS¹, Vera Lucia FELICETTI² (1. Institute of Geriatrics and Gerontology, Pontifical Catholic University of Rio Grande do Sul, Brazil; 2. Master's in Education, UNILASALLE, Brazil)

Introduction : The fast population aging in developing countries as Brazil is getting public health concerns. Under Active Ageing Philosophy of the World Health Organization (WHO), an age-friendly society should also provide resources for education and information for the older-adults. Thus it is important to understand who are the older-adults that want to continue their formal education. **Objectives:** To show the sociodemographic characteristics of those older-adults, living in Southern Brazil, willing to or engaging in formal education. **Method :** This study is a result of the research "Older Adults Profile in RS" involving 7316 older adults from 59 different cities. They answered a questionnaire based on the WHO report "Global Age-Friendly Cities: A Guide". Participant answered about the willingness to engage or who are currently getting formal education. We exclude those questionnaires answered by care-givers and did not want to include their level of education. Education levels were divided into 6 levels from alphabets to higher education and more. Logistic regression was used to assess the chances of willing to continue formal education. **Results :** We analyzed data from 6580 respondents, 1004 (15%) of them wanted to continue formal education (only 58 actually studying). Women at younger ages were more likely to desire continuing formal education. Lower and higher levels of education were least likely to want to continue formal education even when adjusting for age and gender. **Conclusion :** We conclude that older-adult are willing to continue formal education which should also be a concern for the modern societies. Special programs should be improved for this end. **Keywords :** Education, Age-friendly Society, Adult Education

PP26 S-215

SOCIAL WORK EDUCATION TO PROMOTE AGEING IN PLACE IN RURAL AREAS

Arja KILPELAINEN¹, Kirsi PAYKKONEN², Maarit KAIRALA²
(1. Social Sciences, Social Work, University of Lapland, Finland; 2. Social Work, University of Lapland, Finland)

Introduction : Lately, population of peripheral rural areas has been at the same time ageing and decreasing globally. Despite the migration of the younger people to urban areas, most ageing persons wish to age in place and remain at their homes in depopulating villages. This development places significant challenges to the community? How to provide statutory welfare services to sparsely inhabited areas? Many services cut down to be offered only in population centres due to retrenchments. This makes daily lives of remaining elderly in rural

villages harder since the services they need are no longer available near them, and at the same time their mobility outside home might be decreasing. Conclusion : Because of long distances, the trend in developing services stresses ICT-mediated e-services. This trend highlights new know-how needs for service providers and social workers. In best case scenario, accessible and easy-to-use e-services promote independent living of the aged people in rural areas. To design, implement and provide such services, we need to meet changing demands of the field of welfare services. The University of Lapland has Master's Degree Program of e-Competence in Social which combines the disciplines of social work and applied information technology. The program gives students competence in social work and readiness to utilize ICTs as a tool to improve social services also in sparsely populated areas. In this presentation we analyze how social work education enhances e-competence to produce ICT-mediated services. Keywords : rural areas, social work education, e-services

PP26 S-216

A NEW APPROACH TO GERONTOLOGICAL EDUCATION IN UNDERGRADUATE TRAINING

Eric TAM, Teresa TSIEN (*Institute of Active Ageing, The Hong Kong Polytechnic University, Hong Kong*)

Introduction : The growing population of elderly worldwide has greatly increased the demand for individuals to work in the field of ageing. In Hong Kong, one out of eight people are now aged 65 or above. This population is expected to grow double by 2030. With the advancement of medicine, older adults are expected to have better health and longer lives. These elderly will have high demand on their quality of life. This paradigm shift will bring enormous opportunities to the silver market industries. In order to prepare our young generation to face the challenges of ageing in the society, a new program in applied ageing studies has recently been developed. Method : Unlike other undergraduate training which have their focus in the health and welfare sectors; this program adopted a holistic and interdisciplinary approach. Drawing from biological, social and behavioral sciences, finance, business and management, technology, design and environmental study, policy and cultural study, our program aims to equip students with a broad-based of knowledge, education and skills as required in ageing-related practice and industries. In addition to equip students with an enquiry base mindset through research works, this program also put emphasis on having practical experiences in the silver markets. Results : Over 800 applicants applied for the program and among them, 46 students were admitted. These students received either an associate degree or higher diploma in social sciences; health studies; psychology; general science and/or business administration. Conclusion : This presentation will discuss the benefits and challenges encountered in this new program. Keywords : undergraduate education, apply ageing studies

PP26 S-217

EDUCATION FOR OLDER PEOPLE IN RUSSIA: TRADITIONS AND CURRENT SITUATION

Gulnara Afruzovna MINNIGALEEVA (*Centre for Studies of Civil Society and Nonprofit Sector, National Research University Higher School of Economics, Russia*)

Introduction : Despite the slowly recovering birth rate and low life expectancy in 2016 older population is predicted to constitute almost a quarter of the Russian population (24.8%). After the economic and political transition of the 1990-s - 2000-s the situation of older people in the Russian Federation, though still not perfect, has improved both in terms of financial situation, visibility in the society and range of

services offered for them by governmental and non-governmental organizations. Method : The data from literature review, content analysis of the media, over 40 interviews with service providers and questionnaire of over 1100 older adults from 8 cities in the Russian Federation is used for this report. Results : Whereas in late 1990-s nationwide there were just a few branches of the "Znanie" ("Knowledge") Nonprofit Association offering education for older adults, nowadays there are several dozens of "People's universities for older people" throughout the country, which mostly follow the tradition of informal education set by "Znanie", are trying to respond to the needs of older people by offering a wide range of classes (computer skills, gardening, languages, etc). However, most of them are still limited by traditional view of the role of older people in the society, hobbies oriented rather than teaching skills for employment, volunteering or self-development. In many regions the role of governments has increased as they have started sponsoring and organizing special educational programs for older people. Conclusion : The need for older adults's education has been recognized in Russia by NGOs and government but needs improvement and further development. Keywords : education, Russia, older people

PP26 S-218

POSITION ANALYSIS OF ADULT TEACHER'S ROLES IN TAIWAN

Hsiu-Lan Lucy CHIN¹, Jenn-Chuen LIN², Ying-Tsun HUNG³
(1. Department of Aged Welfare and Social Work, Toko University, Taiwan; 2. Department of Adult & Continuing Education, National Taiwan Normal University, Taiwan; 3. Department of Senior Citizen Service in Management, Ching Kuo Institute of Management and Health, Taiwan)

Introduction : This research is the position analysis of the adult teacher's roles and the comparison of cognitive properties of these roles. Method : The participants are 36 adult teachers. All the participants and researcher sort out 10 adult teacher's roles, and designs the "Questionnaire of Adult Teaching Role Position Analysis." Through the analysis by two dimensions of Multi-Dimensional-Scaling (MDS) and get the Derived Stimulus Configuration. Results : The MDS data shows 10 teaching roles can be roughly summarized as:(1)Quadrant I: the property of Cluster A is highly interactive, individualized guidance orientation. (2)Quadrant II: the property of Cluster B is highly interactive, group guidance orientation. (3)Quadrant III: the property of Cluster C is high teacher-led, group guidance orientation. (4)Quadrant IV: the property of Cluster D is high teacher-led, individualized guidance orientation. Therefore, the researcher combines 'teacher-led' and 'teaching interaction' as the property of "X"-axis, and name the "X"-axis as "the teaching interaction level". Then, combine 'group-led teaching' and 'individualized guidance' as the property as the 'Y' axis. And name the Y-axis as "the teaching orientation level". Conclusion : The research discovers four clusters teaching roles. (1)Cluster A: curriculum-planner, counselor and coaches. The properties of these roles are highly interactive teaching and individualized guidance. (2)Cluster B: learning-guide, group-leader. The properties of these roles are highly interactive teaching and group-led learning. (3)Cluster C:teaching-manager, role-model and good-questioner. The properties of these roles are highly teacher-led high and group-led learning. (4)Cluster D: facilitator and listener. The properties of these roles are highly teacher-led and individualized guidance. Keywords : adult teachers, adult teaching, position analysis of teacher's roles

PP26 S-219

THE BENEFIT OF REGISTERED FINANCIAL

GERONTOLOGIST (RFG) PROGRAM: COMPREHENSIVE UNDERSTANDING OF AGING AND UTILIZATION OF ACQUIRED KNOWLEDGE

Joe HAN¹, Eun Ock SONG², Soo Hyung KIM², Min Woo YOO²
(1. Executive Director, Future Mosaic Institute, Korea; 2. Department of Education & Research, Future Mosaic Institute, Korea)

Introduction : Researching the effectiveness of RFG program in promoting enhanced sensitivity and knowledge of older clients and increasing job performance, by attending to their needs. Method : Using a quantitative study, we conducted a survey of questionnaire to the RFG graduates covering an extensive set of topics. Results : Upon completion of the RFG program, survey proves that the RFG graduates felt a significant increase in both the understanding of aging and benefit in job performance. Conclusion : The RFG program benefits the older clients by providing financial gerontologists professionally trained to attend to their specific needs, and also benefits the RFG graduates by giving them a new set of skills that will ultimately increase their performance and sales. In the future, we can apply the same approach to various industries other than finance. Comprehensive understanding of gerontology will benefit both the consumer and corporations in all aspects. Keywords : Registered Financial Gerontologist, Multi-disciplinary, Aging, Older clients, Financial Professionals, Financial Gerontology

PP26 S-220

THE RESEARCH ON GENDERS' DIFFERENCES IN THE CASE OF ELDERS' ACTIVE AGING LEARNING NEEDS AND PARTICIPATION IN TAIWAN

Peggy Hui-Chuan WEI¹, Juo Hsiang SUN¹, Yu Feng HSIAL²
(1. Department of Adults and Continuing Education, National Chung Cheng University, Taiwan; 2. Department of Aged Welfare and Social Work, Toko University, Taiwan)

Introduction : The study aims to explore the genders' difference in the case of elders' active aging learning needs and participation in Taiwan. Method : Questionnaire survey method was adopted in the current study. The subjects were sampled from elder learners in active learning resource center (209), active learning college (56) and Evergreen Academy (290). Each organization was given 10 copies of questionnaires, a total of 5,870 questionnaires were distributed and 3080 valid ones were received (valid response rate of 52.5%) for data analysis. The collected data were analyzed based on mean, standard deviation, frequency distribution, percentage, chi-square test, t-test. The main results are as Results : The highest level of active aging learning needs of male and female elder learners in Taiwan are exercise/health, followed by living and safety, spiritual growth, social interaction and contribution service. Besides, as for the levels of participation of Taiwan's male and female elder learners' active aging learning, "participated" is the highest among each learning theme. Taiwan's senior learners' active aging learning needs were significantly different because of different genders. The female elder learners' learning needs are higher than those of their male counterparts when it comes to exercise/health, spiritual growth, social interaction and contribution service, but there was no substantial difference in the participation level of living and safety. Conclusion : According to the results of this study, it is recommended that the elderly educational institutions in Taiwan can develop diversified and suitable curricula based on different levels of participation and various active aging learning needs of different genders of senior learners. Keywords : active aging, learning needs, learning participation, elderly learners, Taiwan

PP26 S-221

PREDICTING ACCIDENT RISK IN JAPANESE ELDERLY PEOPLE

Kazue SAWAMI, Chiyoko SEKI (Medical Health, Tsukuba International University, Japan)

Background : As for the risk management in gerontology nursing, importance is increasing by social aging. About the accident which can be predicted, training which takes preventive measures is important. Basic research was performed in order to evolve the method of accident forecast training. Purpose: Using an accident prediction sheet, the student nurses of gerontology carry out elderly people's simulation, and extract the factors of a risk forecast from their description. Method: Target people were junior years and were 69 students of gerontology nursing. The skill training of the predicting accident is called KYT (Kiken Yochi Training) in Japanese. In this research, elderly people's simulation was performed using the tool for predicting a risk of calling it a KYT sheet. Furthermore, the influence about the significance of predicting a high risk was extracted from students' description. Results : The students who answered that the result of the simulation was higher-risk than prior anticipation reached to 94.2%. Bathing, wheelchair operation, stairs, the slope, and the elevator had the high correlativity of the situations which were higher-risk than prior prediction ($r > 0.5$). A concrete high-risk situation and solution were extracted from content analysis. Conclusion : The simulation using the KYT sheet in the student nurses of gerontology raised the skill which predicts the risk. They explain the concrete situation and evolve the solution. This paper describes a number of concrete accident situations and explains how risk may be reduced. In this way, the high-risk accident situations for elderly people and their solutions can be generalized and better predicted. Keywords : risk management, elderly, prediction, accident, skill training

PP26 S-222

THE CONSTRUCTIONS OF CORE COMPETENCE INDICATORS AMONG TEACHERS FROM ELDERLY EDUCATION AND THE NEEDS OF ON-THE-JOB TRAINING AND OUTCOMES ASSESSMENT

Meng Ching HU¹, Chia Ming YEN², Yi-Fen WANG² (1. Adult and Continuing Education (Professor), National Chung Cheng University, Taiwan; 2. Adult and Continuing Education, National Chung Cheng University, Taiwan)

Introduction : Due to the arrival of ageing society in Taiwan, it has shown the lacks of insufficiency of on-the-job training among the teachers from the elderly education. Also the teaching knowledge and skills on ageing and the needs and outcomes assessment in terms of on-the-job training are seldom seen and rarely to be available in Taiwan. Hence the first phase of this two-year length study is mainly focused on the constructions of core competence indicators among the teachers from the elderly education. Then, this study will be in the position to draw out two models. Method : The first year study adopts document analyses, focus group interviews and Delphi technique. A set of indicators are drawn from the questionnaires where Delphi technique is used to collect the data. Survey and content analyses will be used in the second year study. Results : The results of first year study concluded that, in total, 132 indicators are developed. The indicators of core competences among the teachers cover two aspects: 1) teacher's current and further needs of teaching knowledge and 2) teacher's current and further needs of teaching skills. The previous is categorized into six, the latter is categorized into two. Conclusion : The above indicators will be used as the resources, as it is planned in the second year of this study, to develop "A Core Competence Model"

and “A Core Competence Training Programme Model” to promote, and assess at the same time, the teaching capabilities among the teachers from elderly education in the future in Taiwan. Keywords : teaching knowledge and skills on ageing, indicators of core competence, needs assessment,

PP26 S-223

EDUCATIONAL PROGRAMS FOR GROUP HOME MANAGERS IN JAPAN;FOR COMMUNITY-ORIENTED CARE

Wonkyung KIM¹, Yuko OKUDA², Shigeyuki TAKAMURO³, Takayuki HIRANO⁴ (1. *Research Promotion Center for Community Care, Nihon Fukushi University, Research Promotion Center for Community Care, Korea*; 2. *Research Promotion Center for Community Care, Nihon Fukushi University, Japan*; 3. *Chief, Caretown Reserch Institute, Japan*; 4. *Professor, Social Policy, Nihon Fukushi University, Japan*)

Introduction : The general management of group homes (GH) for those with dementia, a residency service in Japan aimed at providing cohabitation and care to cope with dementia, is the responsibility of a single manager. Previous research has revealed that these managers experience several difficulties in their work, such as lack of staff education and managing complaints and accidents. This research clarifies the types of programs required to address the GH managers' problems. Method : Individual interviews were conducted with five GH managers, followed by a focus group interview. Codes and categories were inductively created from the verbatim records of these interviews. Results : °Analysis revealed the following educational programs GH managers require to help them run the GH: (1) A systematized advanced dementia care program,(2) A nursing care program,(3) A human resource training and management program,(4) A risk management program, and (5) Supervision. Conclusion : As of now, no official educational programs have been available to GH managers in Japan. As this survey indicates, GH managers require a wide range of educational programs;this in turn indicates the need to systematize educational programs based on, for instance, years of service and qualifications of GH managers. Another issue is the future creation and validation of educational programs for GH managers. Keywords : Educational Programs for Group Home Managers

PP26 S-224

THE EFFECTIVENESS OF A TRAINING PROGRAM FOR TRAFFIC SAFETY EDUCATION OF ELDER VOLUNTEERS

Yi-Hsin KU¹, Ya-Hui LEE², Hui-Chuan WEI², Meng-Ching HU² (1. *Graduate Institute of Elder Education, National Chung Cheng University, Taiwan*; 2. *Department of Adult and Continuing Education, National Chung Cheng University, Taiwan*)

Introduction : The security of the elders is one of the three basic pillars within WHO's policy framework 2002 for Active ageing. The traffic safety deeply affects the quality of the daily life of the elder people. Method : In order to provide a friendly traffic environment and to help senior citizens understand the importance of road safety, the Ministry of Transportation and Communications (MOTC) in Taiwan has implemented an annual “Volunteer Training Program of Traffic Safety Education for the elders” since 2011. Results : The aim of this study is to discuss the changes and the empowerments of the voluntary trainees in the aforesaid programs. Conclusion : The authors present a qualitative study and conduct it with a semi-structured interview with ten trainees to understand the changes and the empowerments on their advocacies to the elders. Keywords : Traffic Safety for Elders, Elders, Training Program

PP26 S-225

THE DEVELOPMENT ON THE FIRST TWO-YEAR BACHELOR PROGRAM OF GERONTOLOGY IN TAIWAN

Yi-Hsiu LIN¹, Tsuann KUO² (1. *Department of Eldercare, Central Taiwan University of Science and Technology, Taiwan*; 2. *Medical Sociology and Social Work, Chung Shan Medical University, Taiwan*)

Introduction : Taiwan has become one of the fastest aging places in the world. The Ministry of Education in Taiwan granted the establishment of gerontology programs offering Bachelor Degrees since six years ago. The Department of Eldercare at the Central Taiwan University of Science and Technology thus became the first two-year program aiming to train professionals in aging services. The main professional roles to be trained were Care Workers, Community Workers, and Long-term Care Managers. Method : This study examined training competencies for this Bachelor program and evaluated whether the curriculum was design to fulfill the 8 competencies set by faculty members. For each course, the course outline, weekly topics and matching competencies were designed, weighed and examined. Results : The competencies in which the courses attempted to accomplish were somewhat lower than the original goals set by the faculty members. Three competencies such as Ethics, leadership, and role development were consistently rated lower than targeted for all three professional roles. Two competencies such as reflection and caring as well as creativity and expression were rated lower than targeted for Care Workers and Long-term Care Managers. Conclusion: detailed examinations of competencies on all required courses, the department can find its weakness in designing courses. The future design of gerontological programs is to put more weights on training competencies such as ethics, leadership and role development. This study completes with a discussion on how future competencies can be set for newly established gerontological programs in Taiwan or other parts of the world. Keywords : Gerontology Education, Competencies, Curriculum Design

PP26 S-226

DO WE STILL NEED EMPATHY IN MEDICAL PROFESSION?

Halina Gajlewicz KUSZ, Anne DOHRENWEND, Jamie FOREBACK (Medical Education, McLaren Flint Health Care/ Michigan State University, USA)

Introduction : A literature search on empathy and medical profession revealed that contemporary physicians may be losing the ability to empathize, even while medical education continues to value of empathy and promote the need to nurture it as a skill. (1,2). Our primary objective is to review current methods on where and how we teach clinical empathy in our residency training program. Our second objective is to investigate empathy levels in our residents. Method : In 1999 at McLaren-Flint, community-based, university-affiliated internal medicine residency program we developed and implemented behavioral science and geriatric medicine curricula. Curricular structure includes block rotation in behavioral science which is lead by the psychologist, and one-month geriatric block rotation with longitudinal nursing home experience lead by geriatrician. The main goal for both curricula is to teach empathetic and compassionate care of patients. Empathy and communication skills are especially reinforced throughout bedside teaching, direct interactions with older and demented patients and faculty role modeling. Faculty evaluates residents by direct observation and video-tape review. Constructive feedback is given to each resident. Results : Residents' satisfaction with the rotations is reported as high. Subjectively, faculty can attest that some residents are empathetic. To measure residents' level of

empathy, we are planning use The Jefferson Scale of Physicians Empathy (JSPE). The results will be included. Conclusion : The empathy as the most desirable from physicians by their patients can not be neglected in practicing evidence-based medicine. Behavioral science and geriatric medicine offers some promise to fulfill this educational need. Keywords : Empaty and Medical Education

PP26 S-227

AGE DIFFERENCES IN HANDLING WORKPLACE CONFLICTS AND STRESS

Dannii Y. YEUNG (*Dept of Applied Social Studies, City University of Hong Kong, Hong Kong*)

Introduction : With a growing number of older workers in the workforce, it becomes increasingly important to understand the ways they handle workplace conflicts and stress, relative to their younger counterparts. Socioemotional selectivity theory posits that older people focus more on emotionally meaningful goals when they perceive future time as increasingly limited (Carstensen, 2006). Emphasis on emotional goals may motivate older workers to utilize more passive emotion-focused strategies to deal with workplace conflicts and stressful situations. This study therefore investigates age differences in conflict and emotion regulatory strategies. Method : Chinese younger and older workers were invited to complete a set of questionnaires that assessed their behavioral responses in handling workplace conflicts and stressful situations. Results : Preliminary analyses (N=268) showed that older workers were less likely to use dominating and comprising strategies than younger workers. Age differences in avoiding strategies were also shown. Conclusion : Older and younger workers react differently when dealing with interpersonal conflicts and stressful situations. Implications on training and development will also be discussed. Keywords : Older workers; workplace conflict; stress

PP26 S-228

THE IMPACT OF THE OLD WAGE EARNERS FORM ON THE LIFE SATISFACTION

Mee Hye KIM, Wonji LEE, Pyunghwa JUNG, Sang A. LEE, Enkyung SHIN (*Graduate School of Social Welfare, Ewha Womans University, Korea*)

Introduction : To promote employment and labor support for the elderly, a variety of employment policy is executed in the country. However, jobs that are provided by the country are low quality of labor and the contract period is very short less than seven months. I want to investigate that how these precarious employment forms affects the lives of individuals in addition to insufficient income guarantee. Method : National retirement security panel v.3.6 which was conducted at the Korea National Pension Researchers in 2011 is used. Total of 2473 old wage earners over the age of 55 were analysed using the SPSS 18.0. Descriptive statistics was used to evaluate the average of the life satisfaction. ANOVA was used for group-specific differences of the life satisfaction. Regression analysis was performed to see the impact of labor forms on the life satisfaction. The independent variable was the form of employment and the dependent variable was life satisfaction. Results : Regular life satisfaction was the 3.29 points, the highest in three groups. The difference of the group specific form of labor on the life satisfaction showed significant. Daily and temporary employment forms influenced negativity on the life satisfaction. Regular showed no significant affect on the life satisfaction. Conclusion : Research results showed that the stable form of employment was an important factor in order to improve the quality of life of old wage earners. Keywords : life satisfaction, old wage earners , old wage earners

PP26 S-229

EMPLOYMENT PROMOTION INTERVENTION FOR IMMIGRANT WOMEN IN KOREA: THE RESULTS AND CHALLENGES IN PROVIDING CERTIFIED CARE WORKERS TRAINING PROGRAM

Hae Sung KIM¹, Jeong In JANG² (*1. College of Social Welfare, Kangnam University, Korea; 2. Welfare Work Team, Seongnam Center of Senior Health, Korea*)

Introduction : Statistics(2012) demonstrates that immigrant women through transnational marriage face financial difficulties, language barriers, high rate of unemployment. Previous literature reports that immigrant women experience inadqaute employem,ent and discrimination in labor market. With a large immigrant population, Seongnam si starts to be aware the need to provide job training program for immigrants. Especially for women it is because gender discrimination could be more worse in job market. As Korea is ageing rapidly, Seongnam si is no exception and create large care service job market. Method : 'Employment Promotion' is a job traning program of the 2012 from Seongnam Center of Senior Health located at Seongnam Si, aiming empolyment promotion of immigrant women in care service job market which require national licence for certified care workers. This program is a multilevel intervention which comprises job education and training, outreach services, counseling, home visit, and parenting education. Seven immigrant women participated in this study. Group based services and individual services were provided along with the circumstances such as child care or language proficiency. Results : The primary outcome was the ratio of successful acquisition of national certificate of care workers, The ratio of success among participants is 85%, while the average ratio in nation is 78.2% in which almost all of testers are born in Korea. Participants reported frequently positive experience with husband and child(children) and felt appreciated their strengths to challenge from the neighborhood too. Conclusion : Further step is needed to find for participants a job place which fits with the needs and strengths of participants. Keywords : employment promotion immigrant women care worker

PP26 S-230

THE WORK ENVIRONMENT OF VISITING NURSES IN JAPAN

Keiko ONO (*Department of Home Health Care Nursing, Gumma Paz College, and Research Division, The Dia Foundation for Research on Ageing Societies, Japan*)

Introduction : The role of home-visit nursing care is increasingly important in Japan following the implementation of Long-Term Care Insurance (LTCI) for ageing in 2000. The number of Visiting Nurse Stations (VNSs) is less than sufficient to provide nursing services to patients at home and there is a lack of research on the topic. The purpose of this study was to identify productivity in home-visit nursing care in Japan and to examine relationships between nurse characteristics, productivity and job satisfaction. Method : A descriptive correlational design was used. There were 28 VNSs and 100 visiting nurses providing data and two instruments in the survey: the nurse workload form (time survey) and the nurse questionnaire (the Nursing Work Index-Revised and a single item indicator of satisfaction using a visual analog scale). The study was approved by the Institutional Review Board of the Case Western Reserve University at August in 2007, and was conducted through December in 2007. Results : There was a weak negative correlation ($r=-.19$; $p<.05$) between productivity and job satisfaction score from the NWI-R. Productivity was 3.76 (SD=1.05) visits/day using the formula that included both direct and indirect care. The proportion of direct care /

indirect care was 58/42 ratio. The percentage for the amount of indirect care time spent on each activity was as follows: travel (41.5%), documentation (20.2%), telephone (4.5%), meeting (14.4%), preparation (8.0%), and others (11.4%). Conclusion : The results of the present study are important in understanding the work environment of nurses in home health care settings in Japan. Keywords : Nurse, Japan, Productivity

PP26 S-231

WORKING LONGER? RETIREMENT DUE TO CARING RESPONSIBILITIES

Liesbeth DE DONDER¹, Nico DE WITTE², Sarah DURY¹, Dominique VERTE¹ (1. *Adult Educational Sciences, Vrije Universiteit Brussel, Belgium*; 2 *University College Ghent, Belgium*)

Introduction : This contribution focuses on the reconciliation of paid work and informal care. Caring for ill or disabled spouses, elder parents or grandchildren will increasingly be required and performed by active workers. Consequently, it can be expected that older adults will increasingly need to combine multiple roles including paid employee, parent, grandparent, carer ... This study aims to examine the impact of conflicts between multiple roles (informal carer vs. employee) on labour market exit decisions (decision to retire) among older adults. Following, the individual profile (e.g., socio-demographic, socio-economic, type of work) of people who leave the labour market due to family responsibilities will be examined. Method: Survey data from the Belgian Ageing Studies, a research program that collected data from 65,650 older adults from 142 municipalities across Belgium, provided the empirical evidence for the analysis. Results : The results reveal that 11,3% of older adults retired because of caring responsibilities. Women, older adults with an average education or income, widowed or never married older adults, and former office workers, were more likely to retire due to caring roles. Analyses also demonstrate that those people retired earlier than on average. Conclusion : The implications of these findings in terms of inclusion and participation of older people in the labour market are highlighted. In order to enable a longer working life, health and labour sectors need to develop more supportive actions to reconcile work and informal care. Finally, attention is given to the presentation of a future research project in this field. Keywords : retirement, caring, work-family conflict

PP26 S-232

THE PSYCHOLOGICAL EFFECTS OF ELDERLY WORK PROGRAM

Seonhee MO (*Dept. of Social Welfare, Kongju National University, Korea*)

Introduction : Along with the rapid increasing aged population, Elderly Work Program has been one of the major elderly welfare policies since 2004 in Korea. The purpose of this study is to examine the psychological (depression and self-esteem) effects of Elderly Work Program and to analyze the differences of depression and self-esteem by demographic variables and work types. Method : The purposive and blocked samplings by regions were used. The respondents were 917 participants and 303 screen-outs, as compared group, who applied for work program but not selected. The data were collected by face-to-face interviews in 2008. The psychological effects were analyzed by Propensity Score Matching (PSM) method. Also, t-test and ANOVA analysis were used. Results : The results of PSM method analysis showed no statistically significant effects. Although the psychological effects were not significant, there were noteworthy changes in depression: the depression was increased by 13.5% among participants

in public program but decreased by 39.7% among those in educational program and by 16.0% among those in welfare program. The level of depression and self-esteem were significantly different by age, region, type of living, educational level, and work types. After work participation, some positive perceptions such as self-reliance and valuable person in the society were found. Conclusion : The Elderly Work Program is very important to improve the quality of life for the elderly by social participation. The findings imply the possibilities of different psychological effects by work types. The work types and individual differences should be significantly considered for job training of Elderly Work Program. Keywords : elderly work program, depression, self-esteem

PP26 S-233

GRANDPARENTS WHO CARE FOR THEIR GRANDCHILDREN IN CHINA: FACTS AND EFFECTS

Juanjuan SUN (*Institute of Gerontology, School of Sociology and Population Studies, Renmin University of China, China*)

Introduction : In China, due to traditional intergenerational support among family members, older adults are also important provider of support to their grandchildren. It is a productive activity and generates immense economic and social value. However in China, little research has been done on the effects of grandchildren caring on the older grandparents. The aim of this study is analyzing the situations, reasons and effects of grandparents as caregiver, and trying to get implications for public policy. Method : Based on the Longitudinal Survey Data on the Situation of Urban and Rural Elderly of China in 2006, this study explores the characteristics of the Chinese older grandparents and the effects of the care on their psychological well-being, life satisfaction etc., by using qualitative and quantitative research methods. Results : There are about 40% of older people provide care for their grandchildren in China. Traditional intergenerational support, rapid urbanization, incomplete social service system as well as increased women's labor participation are the main reasons to the popular grandparents' care-giving. Rural older grandparents especially those in the "skipped-generation" families face much heavier burden to provide the care. Although the care of grandchildren may improve older grandparents' positive psychological feelings and life satisfaction, the results show that there are a number of difficulties for these older adults. Conclusion : Grandparents play a major role in taking care of grandchildren in China. The activity is beneficial to the different generations including grandparents themselves. Social support policies and programs for the group are very necessary to enhance their quality of life. Keywords : grandparents, grandchildren, care

PP26 S-234

THE SOCIAL PARTICIPATION AND SUCCESSFUL AGING

Bo Sun KOH¹, Eun Jung KO² (1. *Department of Social Welfare, Jeju International University, Korea*; 2. *Department of Social Welfare, Soongsil University, Graduate School, Korea*)

Introduction : The purpose of this research was to test causal relationships among health status, self-esteem, mental health, and successful aging in the social activity participated elderly. Method : A questionnaire was used to interview a sample of 200 elderly over 65 years old, who live in Jeju, Korea, 2011. Dependent variable was successful aging(KSAS; Kim, M.H. & Shin, K.L., 2005). Independent variables were health status, self-esteem(Rosenberg, 1965), and mental health(KGHQ-20; Shin, S.I., 2001). Statistics analyses included descriptive analysis, Pearson's correlation, Hierarchical regression, and path analysis. SPSS for the WIN 12.0 program was used for these analysis. Results : Self-esteem and mental health were exposed as

important variable and self-esteem was the strongest predictor of the successful aging for the social activity participated elderly. The greatest total causal effect of successful aging was health status and health status had higher indirect effect of successful aging than direct effect of it. Health status and self-esteem appeared to be important intervening variables(H3) and this research model was supported. Conclusion : Successful aging is human capital. In order to enhance of successful aging, it is need to keep social activity interactions and improves mental health along with this. These efforts leads to various social capital in community. Successful aging is cooperative efforts. This is required joint efforts of old people, family, community, and nation. Successful aging is a significant subject to solve aging and integrate between the younger generation and older generation in society. Keywords : Successful Aging, Social Participation, Health status, Self-esteem, Mental health

PP26 S-235

MOVE TOWARDS AN EXTRAPROFESSIONAL LIFE AFTER RETIREMENT: A CASE STUDY OF 6 RETIRED TEACHERS' EXPERIENCE OF VOLUNTEER IN MUSEUM

Ching-Yi YANG¹, Ying-Tsun HUNG² (1. Center for General Education, Army Academy R.O.C., Taiwan; 2. Department of Senior Citizen Service Management, Ching Kuo Institute of Management and Health, Taiwan)

Introduction : The primary purpose of this study would like to explore how to create an extraprofessional life and re-include the wisdom or energy into society with the new way through volunteer. Method : Six retired teachers volunteering in the National Museum of Nature Science, Taiwan (60 years and older, being a volunteer docent more than 5 years) were in-depth interviewed and observed in order to understand their successful experiences with volunteer. Results : For the retired elders in this study, participate in museum volunteer was a serious leisure as well as an "intermediary stage" before they re-integrate into society with new identities. There were three reasons to promote them to dedicate the rest of personal time and energy to it, moreover, encourage them to exceed in performances and move for professional. (1) Achieve a new social role to replace the lost one because of retirement. The symbolic signification behind museum and museum volunteer docent conform to a lifestyle and an idea identity they desire for. (2) Seek identification of a new social role from others, as educators, peers and visitors of museum. (3) Enjoy the satisfactions offered by museum environment and volunteer of guide tour, such as possess a variety of multi-sensory and creative experiences different from daily life, share with others and affect other people. Conclusion : Implications for enhancing productive and active retirement living through volunteer were discussed. Keywords : volunteer docents, museum, identification

PP26 S-236

A STUDY OF THE INFLUENCE OF ELDERS' PARTICIPATION IN SOCIAL ACTIVITIES ON SATISFACTION IN LIFE- FOCUSING ON PARTICIPATION IN THE NATIONAL SENIOR PUBLIC WORK AND SENIOR VOLUNTEER ACTIVITIES

Mee Hye KIM, Yong Hee KWON, Eun Kyung SHIN (Graduate School of Welfare, Ewha Womans University, Korea)

Introduction : South Korea has been making great efforts to encourage old people to take part in social activities since 2000, and these are exemplified by the National Senior Public Work(NSPW) and Senior Volunteer Activities(SVA). Based on the types of elders' participation in social activities, the present study shall examine the difference

between features in sociology of population and satisfaction with life, aiming to analyze the influential factors that affect the difference. Method : This research has used the fifth year of data in the Korea Welfare Panel Study (2010), and analyzed 331 participants in the NSPW and SVA who are over 60 years old. The SPSS 18.0 has been used as a research tool to carry out a t-test and multiple regression analysis. Results : The degree of satisfaction of the participants in the NSPW has shown a meaningful difference from that of the participants in SVA: the latter is a bit higher than the former. The degree of the latter's satisfaction with life has appeared to be affected by the level of education, the status of health, and familial support, yet the degree of the former's satisfaction with life has appeared to be influenced by the existence of the spouse, the level of education, the status of health, the existence of chronic illnesses, and familial support. Conclusion : It is necessary not only to consider the quantitative expansion of elders' participation in social activities but also to put serious attention to the factors that improve satisfaction with life according to the type of a participant. Keywords : National Senior Public Work, Senior Volunteer Activities, Satisfaction in Life

PP26 S-237

DEMENTIA AND IMAGINATION: CONNECTING COMMUNITIES AND DEVELOPING WELL-BEING THROUGH SOCIALLY ENGAGED VISUAL ARTS PRACTICE

Gill WINDLE (Dementia Services Development Centre, Bangor University, United Kingdom)

Introduction : People with dementia and their families often become disconnected from society through the stigmatizing effect dementia has on taking part in everyday activities. Added to this, the current economic climate has meant reductions in many services, and there is often a lack of meaningful activity available to this population. Method : This poster presents the first phase a new research study which aims to address the disconnection and marginalisation of people with dementia. It will explore how the vision for dementia supportive communities might benefit from creative activities. Specifically, it will use a visual art intervention as the catalyst for change for understanding community connectivity, challenging attitudes and promoting well being. Results : To understand the impact, the research will assess changes over time in the well-being and social connectedness of people with dementia, and how these changes can in turn have positive effects in communities (facilitate change in societal attitudes and promote participation and inclusion) through social contagion. The processes and outcomes of the research will be assessed using a range of quantitative and qualitative approaches, and will use art, both as a tool for analysis and for visual, creative representations of the results. Conclusion : The research builds on existing relationships and develops new ones with community and policy partners, such as arts organisations, museums, galleries, health and social care practitioners, charities and local government. This will ensure full engagement and maximum benefit and impact for research, policy and practice. It will also contribute towards building future sustainability. Keywords : Dementia, participation, art

PP26 S-238

DO TYPES OF PARTICIPATION IN ACTIVITIES MATTER IN IMPROVING HEALTH AND MENTAL HEALTH OF OLDER CANCER SURVIVORS?

Hee Yun LEE¹, Jeehoon KIM², Greg RHEE³ (1. School of Social Work, University of Minnesota, Twin Cities, USA; 2. Dept. of Sociology, Social Work and Criminal Justice, Idaho State University, USA; 3. School of Public Health, University of Minnesota, Twin Cities, USA)

Introduction : This study examines how older cancer survivors' self-reported health status and depression were associated with different types of activities, including: (1) social activities; (2) physical activities; and (3) activities involved in online technology use. **Method:** 1,430 older cancer survivors were drawn from the first round of 2011 U.S. National Health and Aging Trend Study, a nationally representative study of community-dwelling Medicare beneficiaries aged 65 and over. The outcome variables are older cancer survivors' self-reported health status and depression. Social activities include older cancer survivors' visiting to friends or family, attending clubs or organized activities, and going out for enjoyment in the last month. Physical activities are measured as participating in light exercise or vigorous activities (e.g. walking out, swimming, running or biking) in the last month. Online technology uses are measured as email or text use, or seeking health information using the Internet. **Results :** Older cancer survivors' health status was positively associated with social, physical, and online activities. For example, participating in clubs or other organized activities ($\beta=.10$), going out for enjoyment ($\beta=.09$), walking ($\beta=.07$), and email or text use ($\beta=.07$) were positively associated with older cancer survivors' health status. For depression, all types of social activities were negatively associated, and physical and online activities were not associated with respondents' feeling depressed. **Conclusion :** This study revealed that different types of activities matter in improving health or mental health status. Online technology use can be a pronounced medium to promote health among cancer survivors while encouraging social activities can specifically endorsing mental health elevation. **Keywords :** Activity participation, health status, technology use

PP26 S-239

WHAT RESOURCES ACCOUNT FOR VOLUNTEERING INTENTIONS: COMPARISON OF BABY BOOMER AND CURRENT OLDER ADULTS

Hyunkee LEE (*Department of Welfare for the Older People, Joongbu University, Korea*)

Introduction : We make attempts to determine what resources do cause Korean baby boomers and Older adults to make volunteering-participation intentions and examine what resource factors are different in affecting two age cohorts. we argue that resource uses are differential owing to different life stage. **Method :** For the analysis, we uses Statistics Korea's 2009 Social Survey data. The data include totally 37,049 subjects aged from 17 to 109. As a study sample, the paper selects 6,903 baby boomers who are born in 1955-1963 and 10,268 senior people who are born before 1954. The research estimates the coefficients of resource factors as independent variables for two age cohorts by using ordered multinomial logistic regression. In this equation, the statistical model controls for environmental variables and socio-demographic variables. **Results :** The results show that all variables come to be in statistically significant relationships with volunteering-participation intention for both baby boomers and older adults. However, there are slight differences in effects of resource variable for two groups. For Korean baby boomers, education is the most strongest among human resource variables, but subjective health is the strongest for older adults. Also, social resource variables are more stronger for older adults, compared to the baby boomer. **Conclusion :** This results suggests that a cohort difference exists in utilization of resources in volunteering intention. In addition, for volunteer recruit of baby boomer, individuals with higher education are more likely to participate in volunteering than ones with lower education. Finally, for both groups, utilization of individual social resources is desired in recruiting and retention. **Keywords :** volunteering intention, resource approach, Baby boomers

PP26 S-240

THE EFFECTS OF LIFE ENVIRONMENTS ON VOLUNTEERING AMONG OLDER ADULTS

Hyunkee LEE (*Department of Welfare for the Older People, Joongbu University, Korea*)

Introduction : The paper aims to determine effects of life environments on volunteering among older adults in South Korea and explain how the life environmental variables affects the volunteering participation and yearly frequency with the concepts of environmental gerontology which has been recently conceptualized by Wahl and Oswald(2010). We apply two major concepts of experiences and behavioral levels, Belonging and Agency to person-environments(p-e) interaction. **Method :** For the purpose, the study uses 2009 Statistics Korea data of Korean Social Survey and selects a sample of 10,268 people who are more than 55 years old. The Binary Logit model and Tobit model are used for data analysis. **Results :** he results show that a dependent variable, money volunteering participation is positively related to all environmental variables in statistically meaningful level($p<.000$). Also, another dependent variable, yearly frequency of money volunteering is positively related to social environmental variables in statistically meaningful level but the study fail to find statistically meaningful relationships between the latter dependent variable and residence environment variables. **Conclusion :** Under the thesis of environmental theory on aging the results are interpreted as follows. Money volunteering among the older people is promoted by identity and autonomy which become formed by Belonging and Agency which are emergent in the process of p-e interaction and as result of long aging in place. This suggests that civic engagement among senior citizens can be improved by bettering environmental conditions in place and environmental variables are considered to be important in the volunteering studies. **Keywords :** volunteering, Environmental Gerontology, Tobit

PP26 S-241

INTEGRATION OF ELDERLY PEOPLE IN A SOCIAL CARE HOME AS A PARTICIPATION PROCESS

Ineta ROBINA (*Faculty of Education, Psychology and Art, University of Latvia, Latvia*)

Introduction : This study is actualized in socio political and economical contexts related to active ageing comprehension and the necessity of providing participation opportunities of elderly people in integration process in the social care home as a new social environment. **Objectives are:** 1) to explore the subjective well-being of the elderly people in social care home; 2) to describe the intervention of social pedagogue for facilitation of opportunities of elderly people participation in design of life and work activities in social care home; 3) to explore the interaction structures between the elderly people wellbeing and quality of institutional integration by providing of participation opportunities. **Method :** Mix-methods (video observation, semi-structured interview) has been conducted to find the evidences to elderly people wellbeing in integration process related to participation opportunities provided by social pedagogue. The theoretical background of research is based on inter-disciplinary understanding of wellbeing as quality indicator in institution integration process. 62 respondents of the age 65-86 were involved into the research, 8 of them (active participants) were selected for interviewing and video observation. **Results :** The data processing applying AQUAD-6 programme, the code linkages explore implicit interaction structures between wellbeing and participation meta-codes and explore the implicate interaction structures between participation codes and wellbeing codes. **Conclusion :** Participation in institutional integration

establishes and enhances the well-being of elderly people. It gives people an opportunity of confidence rebirth. Keywords : well-being, participation, social care home.

PP26 S-242

COLLEGE STUDENT VOLUNTEERS' MOTIVATIONS, BENEFITS, SATISFACTIONS IN MOBILE PHONE EDUCATION FOR THE ELDERLY

Jungran HAN (*Department of Aging Welfare, Hanseo University, Korea*)

Introduction : The purpose of this study is to analyze motivations, benefits, and satisfactions of the college student volunteers. Method : We carry out the pre-to-post survey with 615 college student volunteers (male 245, female 367) who have participated in the mobile education program for the elderly funded by a Telecom. The instruments consist of VFI (Volunteer Functions Inventory) developed by Clary & Snyder (1999), including 30 items for motivations, 12 items for achievements, and 5 items for satisfactions of volunteering. The items for motivations and achievements are comprised of 6 subcategories: career, value, understanding, protective, enhancement, and social. Results : The results of this study are as follows: ① Enhancement motivation is the highest, followed by understanding, value, career, protective, and social motivation. ② Social benefit is the highest, followed enhancement, career, understanding, value, protective benefit. ③ The difference between motivation and benefit in social category is the largest, followed by career, enhancement, value, protective, and understanding category. While benefit is higher than motivation in all other categories, motivation is higher than benefit just in value category. ④ High motivation-high benefit, high motivation-low benefit, low motivation-high benefit, and low motivation-low benefit groups are dichotomized by the median of each motivation and benefit. In all six categories, high motivation-high benefit group shows the highest satisfaction, but low motivation-low benefit group shows the lowest. Conclusion : We can conclude that benefit shows stronger correlation with satisfaction than motivation does in volunteering. Keywords : motivation to volunteer, benefit to volunteer, satisfaction to volunteer

PP26 S-243

A LIFELONG LEARNING CURRICULUM HAS PROMOTED 2000 SENIORS FOR VOLUNTEER INSTRUCTORS IN JAPAN

Satoko SHOWA¹, Sumiko OSHIMA², Kazutoshi KITAZAWA¹ (*1. Public Health, Sapporo Medical University, Japan; 2. Department of Psychology and Communication, Hokusei Gakuen University, Japan*)

Introduction : In Japan, 80% of senior people older than 65 years old are free of care and spending active life. In order to promote these active seniors for volunteers who teach exercise program to people in the communities, we developed a short curriculum of lifelong learning education. Method : This curriculum has two unique characteristics. One is the unique exercise program, Fumanet™. The Fumanet is a 4 m _ 1.5 m net and comprises twenty-four 50 cm side grids arranged in a 3 _ 8 fashion. Participants were required to walk, carefully but rhythmically, from one end of the Fumanet to the other, without stepping on the ropes or getting caught in the net. The second point is the support system of these senior volunteers. A non-profit organization for community health was established in Hokkaido in 2005. This NPO has been providing courses for the short curriculum and supporting senior exercise activities by providing training programs and publishing newsletters. Results : With this curriculum, more than two thousands of active seniors (average age 63 years old,

the oldest 89 years old) have contributed to provide exercise opportunities in the communities of their neighborhood in Japan. Conclusion : An attractive program and institutionalized support are effective to encourage seniors' volunteer activities. Keywords : Volunteer, lifelong learning, NPO

PP26 S-244

A STUDY ON FACTORS AFFECTING INTENTION TO PARTICIPATE IN VOLUNTARY ACTIVITIES FOR LATER LIFE OF THE BABY-BOOMERS

Meehye KIM, Kiok SEONG, Junghwa MOON (*Graduate School of Social Welfare, Ewha Womans University, Korea*)

Introduction : Korean baby-boomers reach 14.6% of total population. Expecting that Korea is going to enter the aged society in 2019, all of baby-boomers would be the aged in 2018. In later life, the social participation like voluntary activities is important. The voluntary activities are known to give roles to the aged, promote self-esteem, help to overcome the sense of alienation, and improve QOL. This study aimed to figure the factors affecting intention to participate in it for later life of the baby-boomers. Method : This study is based on 2011's survey of the study project about baby-boomers. We operated frequency analysis, descriptive statistical analysis, t-test and binary logistic regression(n=1,021). The dependent variable is the intention of voluntary activities for later life, and the independent variables are demographic factors, resources factors, social participation factors, and psycho-social factors. Results : 77.3% of baby-boomers hope to be a volunteer in later life. More women than men had the intention of volunteering. Family total assets and subjective assessment of economic state showed positive relation with it. Experience of preparation program for later life, experience as volunteers, and the intention of donation are connected to it. Leisure hours showed negative relation with it. Conclusion : There need to expand the chances of volunteering and make fields where baby-boomers in financial stability can participate in. We need to develop the preparation programs for later life that take interest in community spirit. The policy to lean men who return to community after retirement in it is important. Keywords : Baby-boomer, Voluntary Activity, Social Participation

PP26 S-245

OLD PEOPLE VOLUNTEERING IN RESIDENTIAL CARE HOMES: AN EXAMPLE OF IZMIR-TURKEY

Sema OGLAK¹, Shereen HUSSEIN² (*1. Vocational School of Health Care, Dokuz Eylul University, Turkey; 2. Social Care Workforce Research Unit, King's College London, United Kingdom*)

Introduction : Social inclusion and participation, including civic engagements such as volunteering, can be regarded as one of the prerequisites for increasing the quality of life of individuals particularly among older people. In the context of low retirement age in Turkey and a general lack of public activities of older people, volunteering can provide meaningful way to achieve social inclusion and improve quality of life. Increasingly new strategies facilitating the involvement of elderly people in community and volunteer working in Turkey have come to prominence. At the same time changes in the population demographics increases demand for long-term care and volunteering can address both the shortages of formal care as well as potential benefits for volunteers themselves. The current study reports on research aimed to determine the extent of voluntary work in for profit as well. Method : This study is a descriptive and cross-sectional field study and covers state, municipal, foundation as well as private residential care homes operating within the borders of the Izmir

Province, we researched on these 41 residential care homes. This study was conducted between the 14th of April and 30th of May of 2011. Data were collected by contacting all residential care homes and through written and telephone interviews. Results : The findings indicate that nearly 10 percent of Izmir residential care homes had benefited from older peoples voluntary work. Conclusion : While considerable percentages of care services appeared not to utilise voluntary work of the older population, those who did indicated high level of satisfaction with the contribution of older volunteers. Keywords : older people, volunteering, residential care

PP26 S-246

COMMITTED SERVICE OF RETIRED FIREFIGHTERS

Stacey KOLOMER (*Social Work, University of North Carolina Wilmington, USA*)

Introduction : For over 20 years, the GFBB has operated a weeklong summer camp named Burn Camp for children with burn injuries. This organization boasts an extremely high return rate of camp volunteers. Many returning volunteers are now retired from the fire service. Camp may serve as a means of self-care for retired volunteers. Method : To better understand why these retired firefighters volunteer at Burn Camp, a series of in-depth qualitative interviews were conducted to explore what volunteering at the camp means to them. Some interviewees had volunteered for the past 15 years. The data presented will be based on responses of six retired firefighters. Results : Several common themes were identified from the interviews. These themes include, but are not limited to 1) campers are an inspiration, 2) camp feels like family, and 3) interactions with children who have been burned helps one to appreciate his own life. Conclusion : Working with burn-injured children is meaningful and inspiring to long-term volunteers. Identity and bonding with other volunteers has as much meaning as the experience of helping children. Anecdotal evidence has long suggested that volunteering at Burn Camp appears to be as beneficial and meaningful for the volunteers as it is for the children. The interviewees identified that camp provides support and comfort for volunteers and campers. As fire service personnel retire much earlier in the U.S. than their same age cohort, they appear less prepared for not working. Tactics to increase service participation of retired firefighters and program development for this population will be discussed. Keywords : Volunteering, Retirement

PP26 S-247

A WORKSHOP PROGRAM TO INCREASE THE UNDERSTANDING OF SENIORS THROUGH INTERGENERATIONAL COMMUNICATION

Sungsook PARK (*Intergenerational Practice Project Team, Donbaek Co., LTD, Korea*)

Introduction : This workshop is designed to increase intergenerational communication effectively targeting on teenagers. The participants attend to 5 session activities to understand the principal of intergenerational communication. They have a chance to think and discuss aging issue. Method : The "Mokdong Community Explorer Initiative" (MCEI) is a voluntary group to know about seniors at their local community. MCEI consists of teenage students from primary school to high school. MCEI attends 5 sessions include orientation, workshop, interview, sharing the result and making a report. The orientation is planned to write/ draw the image of the seniors and take pretest of aging issue and their intention to intergenerational practice. Teenagers attend half day workshop about the principal of intergenerational communication. They have a chance to think and discuss the following issues; 1) what intergenerational communication

is, 2) why it is important, 3) How benefits it has, 4) the possible activities how to integrate the different generations effectively. They also learn to how to interview seniors using both mobile and paper. The next session is to share the result of interview. The final session is to analyze them and discuss the gap of the image or thought and make a report. There is other purpose to develop a book targeting on teenagers to address aging issues and give them appropriate education of them through the workshop with the focus group. Results : This project is planned during the winter vacation and starts in January 2013. It will be discussed later. Conclusion : It will be discussed after enhancing the project. Keywords : image of seniors, community participation, intergenerational communication

PP26 S-248

A STUDY OF CONSTRUCTING ELDER VOLUNTEERS TRAINING MODEL : AN EXAMPLE OF ELDERLY TRANSPORTATION SAFETY EDUCATION PROGRAM

Hui-Chuan WEI, Meng-Ching HU, Ya-Hui LEE, Yi-Fen WANG (*Adult & Continuing Education, National Chung Cheng University, Taiwan*)

Introduction : Many medical units, social welfare units, educational institutions, and non-governmental organizations use the power of volunteers, even develop many volunteer recruitment, training, supervision, evaluation and reward approach, for using the society's human resources effectively in public affairs. Method : The purpose of this study is to develop a training mode among the elderly educators by using Kirkpatrick's theory, in the context of 2012 transportation safety education program. Results : In the first part of training, the study used "Single group pretest and posttest experimental" with 142 volunteers, finding significant differences after their training, showing that they were wake-upon this issue of great importance and the concept of change. Secondly, qualitative research method was adopted in this study, in depth interviews with 10 volunteers who preached transportation safety education, to understand their empowerment and energizing after the end of training. Conclusion : Based on the study conclusions, the study constructs elder volunteers training model, and provide the recommendations to the public and private sectors. Keywords : Volunteer, training model

PP26 S-249

ELDERLIES ACTING AS CAREGIVERS AND SUPPORTERS

Yolanda Maria GARCIA¹, Valmari Cristina ARANHA², Claudia Emi REGIS², Erica GONCALVES³, Wilson JACOB³ (*1. Clinical Medicine, Sao Paulo University Medical School, Brazil; 2. Psychology, Clinics Hospital - Medical School of Sao Paulo University, Brazil; 3. Geriatrics Division, Clinics Hospital - Medical School of Sao Paulo University, Brazil*)

Introduction : The participation of elderly individuals with important comorbidities in housekeeping and as caregiving receivers or providers may be underestimated. Method : Ninety-five out-patients of the Geriatrics Division from Clinics Hospital of Medical School of Sao Paulo University where invited to be interviewed, regarding to their social condition: income, sharing of home expenses, offering or receiving financial of physical support. Results were compared by ANOVA and Chi squared test. Results : Mean age was 76,36 years (62 to 81); 73 (76,04%) were females. All had at least three different and significant clinical diseases; 19,79% worked, 17,71% were paid for it; 88,54% had a social security income, 84,38% participated on home expenses; from those who provided this information, 27,08% offered financial help to people not living with them or to an institution; 72,92% received financial help, 61,46% from people not living with

them; 80,21% participated on housekeeping; 30,21% received, and 32,29% offered physical support from/to others. Mean age of those who participated on housekeeping was 75,59, and 79,47 of those who didn't (p=0,0142). Mean age of those who received or not physical support was not different. Mean age of those who offered physical support was 74,74, and those who didn't was 77,15 (p=0,07609). The proportion of females participating on housekeeping was higher (p=0,0010). No gender difference was found for receiving or offering physical support. Conclusion : Despite its high age and poor health condition, this elderly population had an important participation on living arrangements of their social groups. Higher age, more than gender, interfered on their participation. Keywords : caregiving, social participation

PP26 S-250

GERIATRIC CARE MODEL IN CHILE: COSTS OF BENEFITS DELIVERED IN THE DIFFERENT LEVELS OF CARE IN THE NATIONAL INSTITUTE OF GERIATRICS

Juana SILVA¹, Carlos ARANDA², Pablo FLORES³, Edgardo CAROZZI², Carolina PEREZ³, Sergio CASTRO⁴ (1. Director, National Institute of Geriatrics, Chile; 2. Management control unit, National Institute of Geriatrics, Chile; 3. Research and teaching departament (DIDE), National Institute of Geriatrics, Chile; 4. Day Hospital, National Institute of Geriatrics, Chile)

Introduction : The National Institute on Geriatrics (INGER), is a public hospital in Chile and is known for being the only establishment nationwide to give attention exclusively aimed at the elderly, also assisting in the formulation of national policies and providing ongoing training to health professionals. Method : Descriptive, using own statistical data and those provided by the system WinSIG (PAHO), that allows analytical information and management information system regarding the financial management of the establishment. Results : For 2012, ran the following levels of care: Geriatric Unit Acute Inpatient, 26 beds, with an average monthly expenditure of 73, 10 day stay at a cost of US\$3,320 per discharge; Specialty Center Ambulatory, with 514 consultations per month, at a cost of US\$77 per visit; unit Neurology and geriatric psychology, with 173 consultations per month at a cost of US\$165 per visit, and Day Hospital, with 50 beds daily, with 279 consultations per month at a cost of US\$225. Conclusion : The level of care that showed a higher cost was the Geriatric Unit Acute Hospitalization. This implies that to achieve greater efficiency and effectiveness in geriatric patient care, the treble unit must be integrated with other levels of care in geriatrics, which will facilitate the implementation of the monitoring and control of patients discharged after his hospitalization. This will reduce the likelihood of readmission to hospital, preventing patients functional impairment and associated cost of care. Keywords : Elderly, integrated units, cost of care

PP26 S-251

HOME PRODUCTION AND INTERGENERATIONAL TRANSFER : FOCUSING ON ELDERLY

Namhui HWANG (Population Strategy Research Division, Korea Institute for Health and Social Affairs, Korea)

Introduction : If we understand the full age-nature of consumption and production, we should consider not only money but also time. Because time input such as household chores can also improve economic welfare. In this sense, we examine patterns of production, consumption and transfer by age in home production. Method : The National Time Transfer Account (NTTA) and Korean Time Use Survey in 2004 are used. NTTA is new methodology to examine how people produce,

consume and transfer by age and gender in home production based on time input. Results : The annual scale of home production is represented approximately 2.3% of the GDP. Especially, the scale of female elderly is about 1.9% of the GDP and 3~8 million won per capita. In view of intergenerational resource allocation of home production by gender, males are the net beneficiary that consumption is larger than production regardless of their ages. It is about 200 million won per capital annually and mainly financed by females throughout intrahousehold transfer. On the other hand females are identified to be the net contributor in only the prime working ages but also elderly over 65. Conclusion : Elderly also plays the role of subject of production if considering home production and it is allocated by intergenerational transfer. It is needed to positively change the recognition into the recognition that the elderly also is a subject of production that contributes partially to the national economy. Keywords : home production, intergenerational transfer, National Time Transfer Account

PP26 S-252

THE IMPACT OF INCOME AND ASSETS ON FINANCIAL INDEPENDENCE OF KOREANS OVER 50 YEARS OLD

Seojin WON¹, Yongpil MOON², Inuk SONG¹ (1. Department of Social Welfare, Daegu Cyber University, Korea; 2. Department of Social Welfare, University of Seoul, Korea)

Introduction : While life expectancy is getting higher, retirement age has been decreasing since the economic crisis of the late 1990s. Although the current elderly population has more retired lives than their previous generation, social security does not fully support the financial needs of the elderly. Thus, this study addressed the effect of public and private income sources, as well as assets, on financial independence. Method : Researchers conducted a secondary data analysis using the third wave of the Korean Retirement and Income Study from the National Pension Service. Logistic regression was implemented to identify whether income and assets influence financial independence. Based on the Andersen model, age, sex, education, and marital status were included as predisposing factors. For enabling factors, income and assets were included. Need factors were monthly living expenses, expenses to family, perceived health condition, ADL, and IADL. Results : Results indicated that monthly salary was positively related to financial independence for those who were between 50 and 69 years old (OR=1.001, 1.001). Income from real estate was significant in all age groups; however, it had a greater impact on the older generation. Special professional pension had a significant impact on financial independence in all age groups (OR=6.719, 14.876, 19.912, 20.715), while national pension was significant among those in their 60s and 70s (OR=1.660, 2.686). Private pension was not significant in any of the age groups. Conclusion : Based on the result of this study, it is considered to strengthen the multilayer pension system and reduce gap between national pension and special pension benefits. Keywords : financial independence, social security, pension

PP26 S-253

UNEQUAL ACCESS TO FOOD IN OLD AGE: EVIDENCE FOR MEXICO CITY

Alberto RIVERA-MARQUEZ¹, Concepcion DIAZ DE LEON² (1. Health Care, Metropolitan Autonomous University (Xochimilco), Mexico; 2. Faculty of Medicine, National Autonomous University of Mexico, Mexico)

Introduction : For some, poverty is not a problem during old age as the elderly were capable of saving and cumulate assets in early stages of

the life cycle. This assumption is, at least for older populations of Mexico City and its metropolitan zone, not true. There is strong evidence suggesting that unequal access to food due to socioeconomic inequalities and poverty is a major concern in households with elderly members. The objective of this paper is to analyze associations between access to food and socioeconomic group based on household expenditure measures. Method : Using multivariate methods adjusted for design effect, food insecurity and socioeconomic variables were explored in a multi-stage sample of 1,247 households with elderly members from Mexico City and its metropolitan zone. The study population was divided in quintiles of per capita household monthly expenditure, as a proxy for poverty. Results : 60.0% of the elderly had no secure sources of economic resources. Lack of access to food (i.e. food insecurity) affects 45.0% of the elderly in the poorest quintile, whereas 1 out of 10 subjects from the wealthiest quintile has experienced limited or uncertain access to food ($p = 0.000$). Diet is less diverse in the poorest socioeconomic group than in the wealthiest quintile (44% vs 26%; $p < 0.01$). Conclusion : Both socioeconomic inequalities and poverty are crucial for the understanding of access to food in old age. These issues should be taken into account by both the local and the federal governments. Keywords : food insecurity, poverty, Mexico City

PP26 S-254

ECONOMIC INDICATORS OF EXPECTED OLDER ADULT POPULATION GROWTH

Anthony SETARI (*Family Sciences, University of Kentucky, School of Human Environmental Sciences, USA*)

Introduction : It is expected that the percent of the U.S. population that are older adults will rise as the Baby Boomer generation ages into older adulthood during the coming years. The rise in the older adult population is expected to increase demand for healthcare providers and related services more so than has previously been seen. To prepare, many areas have begun to encourage the hiring and training of healthcare professionals and to develop more healthcare facilities. The purpose of this study is to test if the expected growth in the older adult population can be explained using variables related to an area's economic climate. Method : For the analysis, the 120 counties within the state of Kentucky will serve as the subjects and the percent change in the older adult population from 2010 through 2050 will serve as the dependent variable. The independent variables for the study are rural/urban status, median household income, poverty level, and unemployment level. Kentucky counties were selected for their variety regarding rural/urban status, their overall number which aids in detecting effect sizes, and given that the state is not traditionally known for having a large older adult population. Results : It is expected that, of all the independent variables, rural/urban status of a county will have the strongest positive effect on explaining the percent change of the older adult population. Conclusion : Findings from this study could aid governments or institutions in determining where to further develop healthcare facilities to meet the expected increases in need. Keywords : Population, Economic, Community

PP26 S-255

ANALYSIS OF THE PRESENT CONDITION OF THE GOVERNMENT R&D INVESTMENT TO THE FUTURE AGED SOCIETY

Hyun-Sook CHANG (*Department of Elderly Welfare, Namseoul University, Korea*)

Introduction : Toward ultimate goal of successful ageing and sustaining healthy life, it is essential for the government to invest

preemptive R&D budget. The purpose of this study is to analyze the present status on Korea government R&D investment on the elderly in order to provide basic data for establishing national strategies for future R&D investment on this area. Method : The study data was collected from database of the National Technology Information System (NTIS www.ntis.go.kr) using the key words related to the elderly selected by the expert panel. Also we developed the classification system of R&D topics for the elderly for the R&D planning and management. R&D topics can be classified to area of 10; research for policy making, biological ageing mechanism, clinical medicine and epidemiology, social behavioral science, elderly disease prevention and cure technology, prevention of chronic diseases and cure devices. long-term care and residential facilities, assistive devices, education and training program, statistics and information management. Results : We finally analyzed expenditure, field of research, related ministries and subject of research projects of some 980 performed (\$ 205 millions) during from 2007 to 2009. For examples of fields, biological ageing mechanism, 204 projects (\$ 24,494,000), clinical medicine and epidemiology, 172 projects (\$ 26,516,000), social behavioral science, 26 projects (\$ 1,411,000), long-term care and residential facilities, 41 projects (\$ 5,970,000). Conclusion : Policy direction of government R&D Investment to a brighter future, active and systematic investment of government R&D focused on quality of life and longer healthy life expectancy. Induction of the standards classification system for R&D investment focused on aged society. Keywords : Aged society, Government R&D Investment, Classification System,

PP26 S-256

OLDER WORKER POLICIES IN EU COUNTRIES - RESULTS OF PROJECT 'EQUALISING OPPORTUNITIES ON LABOUR MARKET FOR PEOPLE AGED 50+'

Piotr SZUKALSKI (*Institute of Sociology, University of Lodz, Poland*)

Introduction : The European Union is experiencing rapid population ageing which leaves an impression of labour market. Poland is one of the countries where the scale of changes concerning the economic activity of people over 50 is still relatively low. The Polish Ministry of Labour and Social Policy decided to disseminate an idea of equalizing opportunities in the labour market to people aged 50+. The Ministry commissioned a special research project whose one element is research on solutions promoting active ageing in selected EU Member States. The paper is result of the project which is conducted in 2011-2013. Method : Two different methods were used: analysis of secondary data (documents, papers, articles) and collecting information during study visit in national institutions responsible for older workers policy. Results : There are 3 types of preferred older workers policies aimed at: 1) working older people; 2) unemployed older people; 3) reforming pension systems. The preferences are differentiated and the main reason of differences could be found not in economic circumstances but rather in dominant ideals on life-course. Conclusion : Good measures of older worker policies could be found in almost all EU countries but only in part of them the measures form holistic programs affecting simultaneously basic careers (professional, educational, familial ones) and statuses (health). And only the holistic approach is prerequisite of successful older worker policy. Keywords : older workers policy

PP26 S-257

RESEARCH ON THE PROFESSIONS OF CARE MANAGERS AT HOME-BASED CARE MANAGEMENT PROVIDERS BY COMPARISON WITH GERIATRIC WELFARE FACILITIES IN JAPAN

Hiroshi SUMII¹, Akiko SAKAI², Mika KUNISADA¹, Kana KAGEYAMA³, Hiroshi ISHIDA⁴, Hyeon-Kyu SEON⁵, Choon-Seek RIM⁶ (1. Faculty of Health and Welfare, Prefectural University of Hiroshima, Japan; 2. Graduate School of Comprehensive Scientific Research, Prefectural University of Hiroshima, Japan; 3. Medical Sciences, Health Sciences, Ph.D. of Science, University of Kyushu, Japan; 4. Graduate of Gerontology, University of Oberlin, Japan; 5. Faculty of International Business Administration, Kyoei University, Japan; 6. President emeritus, Korean Society for Welfare of the Aged, Korea)

Introduction : This study detected the professions of care managers at the home-based care management provider by comparison with geriatric welfare facilities in Japan to grasp the difference of care managements. Their performances could be especially influenced not only by personal but also environmental factors. **Method :** The mailing surveys revealed 374 care managers at 148 home-based care management providers selected around the country. We compared them and 799 care managers at 342 geriatric welfare facilities. **Results:** The care managers consisted of mainly certified care workers by national licenses (68.7% at home-based, 80.9% at geriatric ones), though less nursing licenses (14.4% at home-based, 7.8% at geriatric ones). As their average age of 41.5 years old at home-based, they are 1.8 years older than at geriatric ones. Average 14.2 years of total experience in the care managers at home-based was shorter 0.8 years than at geriatric ones in significant level by Mann-Whitney analysis. The average 30.2 cases and 27.6 care plans were treated by a care manager with their rate of full-time jobs and part-time distributed from 86.9% to 11.2% at home-based ones. **Conclusion :** To enhance their management performances of care managers at the in-home care management providers, it is necessary to revise the processes of care management systems according to their professions. As their performances were influenced not only by personal but also environmental factors, care managers should make multiple efforts to adjust the users to their social municipal resources. **Keywords :** Care Management, Care Manager, Care Management Provider

PP26 S-258 **ISSUES IN DEMOGRAPHIC CHARACTERISTICS OF CARE MANAGERS IN JAPAN**

Kana KAGEYAMA¹, Yuki SAWADA², Hiroshi SUMII³, Mika KUNISADA³ (1. Department of Health Sciences, Graduate School of Medical Sciences, Kyushu University, Japan; 2. Center for Well-Being and Society, Nihon Fukushi University, Japan; 3. Department of Health and Welfare, Prefectural University of Hiroshima, Japan)

Introduction : In 2000, the government of Japan established the Long-Term Care Insurance (LTCI) system which mandated the development of individualized care plan by care managers (CMs). The purpose of this study is to determine whether there are any issues in demographic characteristics of CMs that can be addressed. **Method :** Survey questionnaires were mailed to 745 CMs of 308 home care agencies between October 15th and December 18th, 2011. Of those agencies, 141 agencies were individually approached and 90 agreed to participate. The rest of agencies (n=167) were randomly selected from the Welfare and Medical Service Network System (WAM NET; a web-based program that offers information for LTCI-certified nursing homes and home care agencies) based on the distribution of population in Japan. A total of 374 responses were received from 138 agencies (50.2%). **Results :** The majority of CMs are female (82.6%) and nearly one-thirds of them aged 50 years and over (32.1%). Nearly one-half of all CMs (45.4%) had at least a junior college degree. While less than one-sixth of CMs (14.4%) had a nursing license, many of them had a

nurse's aide certification (68.7%), home care aid certification (38%), social service director certification (22.7%) and social worker license (12.3%). Over four-fifths of CMs (86.9%) were full-time employees. **Conclusion :** Although care plans are an important part of providing care, many of them are created by non-health professionals and/or those whose highest level of education is high school or less. It suggests that there is a need to discuss the qualifications for becoming a CM. **Keywords :** Long-Term Care Insurance, Care Managers, Demographic Characteristics

PP26 S-259 **AN IMPACT ANALYSIS OF THE MARKETIZATION OF WELFARE: A CASE STUDY OF THE LONG-TERM CARE INSURANCE PROVIDERS IN KOREA** Seonhee CHOI (Tokyo Metropolitan University, Japan)

Introduction : This study empirically investigates the efficacy of marketization in welfare in Korea, where the long-term care insurance scheme for the elderly been introduced since 2008. **Method :** By conducting semi-structured interviews with the sixteen long-term care service providers, this study analyzes effects experienced by different types of providers, including profit and non-profit, as well as institutional and in-home service providers. In addition, this study focuses on the differences in the efficacy between preexisted providers and the other new providers that have been in the quasi-market since the introduction of the insurance scheme. The study employs five indicators to systematically evaluate impact, including efficiency, responsiveness, choice, equity, and service quality. **Results :** Results show that: (1) lower efficiency is reported among the new providers; (2) higher responsiveness is perceived for the new in-home service providers; (3) the range of choice is no relevance between the preexisted and the new providers; (4) inequity is increased for the new providers; and (5) service quality is improved for the new providers. **Conclusion :** In conclusion, this study indicates that marketization of welfare led to different effects among various types of service providers; more detailed investigation is required to verify its efficacy. Finally it is suggested that appropriate measures should be employed by the public authority to maximize the efficacy of the scheme by reducing negative effects caused by the marketization. **Keywords :** Long-term care service in Korea, Marketization of welfare, Impact analysis

PP26 S-260 **EXPLORING EMPIRICAL PATHWAYS IN THE USE OF HOME MODIFICATION FOR AGEING-IN-PLACE** Songiee HONG¹, Mi Jin LEE², Chang-keun HAN³, Mingi JEONG⁴ (1. Department of Social Work, National University of Singapore, Singapore; 2. Department of Social Welfare, Konkuk University, Korea; 3. Department of Social Welfare, Sungkyunkwan University, Korea; 4. Department of Social Work, Japan College of Social Work, Japan)

Introduction : Although ageing-in-place is valued by older adults and their families in Korea, households of Korean older adults rarely use home modification services, which is essential to realizing ageing-in-place especially for older adults with disabilities. We aim to study how functionally disabled older adults who are using assistive devices and their family caregivers are adapting to their home environment through home modification services. **Method :** Qualitative in-depth interviews were designed as a tripartite set of an older adult, his or her family caregiver, and a formal helper supported through the National Long-Term Care Insurance. The interview data from seven households of older adults were audio-taped, and then transcribed and independently

coded by the investigators. Data coding was crosschecked to enhance analytic decisions during data analysis and interpretation for accurate coding validity. Results : Using the Andersen model (1995), we identified service needs, enabling resources, health care system and outcomes of home modification services. Intriguingly, more diverse and comprehensive behavioral, psychosocial, and cultural factors which facilitate or deter older adults and their family caregivers' home modification service use were found. The dynamic and recursive nature of home modification service use model incorporating outcomes was illustrated. Conclusion : The findings may contribute to improving the Andersen model's explanatory power. Furthermore, we discuss policy implications for restructuring systematic service use barriers and facilitators that are responsive to concerns and preferences of potential service users of home modification and may lead more disabled older adults to stay in their community. Keywords : home modification services, assistive devices, ageing-in-place

PP26 S-261

HOW ARE EFFECTS OF RETIREMENT TRANSITIONS AND EMPLOYMENT DURATIONS ON OLD-AGE PENSIONS CHANGING IN GERMANY?

Julia SIMONSON, Laura ROMEU GORDO (*Research, German Centre of Gerontology, Germany*)

Introduction : An ongoing welfare state reform in Germany gradually increases legal retirement age to 67. Additionally, in recent years the opportunities for early retirement have been progressively reduced. These developments evoke the question, how far employees are able to prolong their working lives and arrange their transitions to retirement without serious consequences for their old-age incomes. Method : Using panel data from the German Ageing Survey (DEAS) by means of regression analyses we examine how types of retirement transitions as well as duration of employment affect old-age pensions and how these effects have changed from 1996 to 2011. Results : Over the observed period the effective retirement age has increased by one year and more people retire directly from employment than from other states like unemployment or disability. However, for people who do not directly change to retirement the distance between end of working life and commencement of pension has increased. Furthermore, both a direct transition to retirement and longer durations of employment positively affect old-age pensions. These effects have not changed over time. Conclusion : There is an increasing proportion of people who postpone their exit of working life as reaction to the postponement of retirement age. However, several people are not able to adapt to these legal reforms. As a result they get lower old-age incomes due to increasing deductions of pensions. Therefore, welfare policy has to spend special attention to these groups. Keywords : Retirement transition, Pension, Old-age income

PP26 S-262

THE FUTURE DIRECTION OF THE LONG-TERM CARE INSURANCE OF JAPAN BY THE INCREASING COSTS BURDEN

Kyung Sung HWANG¹, Jin Pil UM² (*1. Department of Health and Social Welfare, Nanyo City University, Japan; 2. Centre for Research on Ageing, University of Southampton, United Kingdom*)

Introduction : It passed more than 10 years after introduced the Long-term care insurance system in Japan. The number of users of the system has been more than double from 1.49 million Yen of 2000 to 4.92million Yen of 2010 and the cost from 3.6trillion Yen of 2000 to 7.9 trillion Yen of 2010. The uneasiness of the users and heavy financial burden to government caused by the costs are increasing

every year while the satisfaction has been high ever. Method : We tried to analyse datas which were released by the government and other academic papers after the system has started. Results : There were twice regular revisions of 2005 and 2011 and significant changes in many points, especially to save the costs and try to make reasonable system like putting new agencies for supporting carer givers and care recipients. However although the system has done very helpful roll for them, the burden to the government is increasing every year therefore the contents of revisions were very serious for the carers and care recipients whenever it has revised. For example, in the revision of 2005, there was strict classification deviding 'care 1' into 'support 2' which means lower than before and put burden to pay the hotel costs in domiciliary care recipients. Another burden of the insurance rate for elderly people continued to rise every year from three thousand of 2000 Yen upto five thousand Yen of 2012. Conclusion : Like this serious fiscal situation will make more significant reform in the fure unless dramatic economic change. Keywords : Long-term care in Japan, Long-term care, carers, care recipients

PP26 S-263

THE DEVELOPMENT OF COMMUNITY-BASED ELDER CARE IN CHINA ?A CASE STUDY OF VIRTUAL NURSING HOME IN LANZHOU, GANSU

Xiulin GAO¹, Baozhen LUO², Feifei SHAN¹ (*1. Public Management, Lanzhou University, China; 2. Sociology, Western Washington University, USA*)

Introduction : To meet the increasing need of elder care, community-based care was brought on the table by the Chinese government to subsidize family and institutional care. The goal is to allow elders to age at home by receiving the much needed care at a low cost at community. "Virtual Nursing Home" in Lanzhou city is a successful example of such programs. This study offers a thorough exploration of the development and utilization of the virtual nursing home. Method : In-depth interviews with 1 government cadre, 13 service-providing business owners, 4 coordination center staff, 1 volunteer organization, 13 community administrative staff, and 224 seniors. Results : Several obstacles are presented: 1) sole reliance on local government funding makes it difficult to implement in economically disadvantaged areas where services are needed the most; 2) Due to the lack of regulations, care providers are not trained professionally which often lead to miscommunication between caregivers and care receivers; 3) The level of utilization due to seniors' preference to care provided by adults children and unwillingness to purchase outside services; 4) The services provided are largely one-dimensional, neglecting the importance of emotional support. Conclusion : The authors are calling for more involvement from the central government regarding financial and policy support and a deeper understanding of the impact of filial piety on seniors' utilization of community-based care by all party involved. A follow-up two-year project will soon be conducted to address the above concerns in a more detailed manner. Keywords : Community-Based Care, Government, Policy Support, Regulations, Filial Piety

PP26 S-264

ORGANIZATIONAL EFFICIENCY: A COMPARATIVE ANALYSIS OF EXERCISE PROGRAM PROVIDING AGENCIES FOR THE ELDERLY

Chang-Hwan KIM, Jung Won LEE (*Dept. of Physical & Rehabilitation Medicine, College of Medicine, Inha University, Korea*)

Introduction : To increase opportunities for participation of the elderly in exercise, and improve effectiveness of community investment

projects, we studied a nationwide analysis on the seniors exercise programs in four kinds of providing organizations. Method : Four kinds of institutions: Ministry of Health and Community Services investment business service provider 22 locations, 50 locations nationwide health center, senior center opening 150, Ward Athletic Center, and similar institutions were enrolled in 60 centers. Age structure, accessibility, price, category diseases, types of exercise program, participation rate and duration, assessment of exercise capacity, facilities, standards, qualities of leadership were investigated. Results : Service providers 22 clinics, health centers of 23 sites, senior center opened 33, 41 similar institutions, data centers have sent replies. Programs offered in all four groups: located 80.7% in urban areas. For transportation 40.9% had been operated a shuttle bus except local health center. Program participation rate was 67.5% in elderly women. Classification of disease was used in 37.8%. Conclusion : Facility standards, the type of exercise, the leader in eligibility criteria showed similar results for four agencies were. However, the service price offer business services in the community service investment institutions are overestimated. Elderly in small and medium sized cities have fewer opportunities to participate in exercise service. New investment programs for small city dwellers would be needed to improve health. Keywords : organizational efficiency, government, exercise

PP26 S-265 SUPPORTIVE COMMUNITY

Yitzhak BRICK (*Gerontology, University of Haifa, Israel*)

Introduction : Supportive Community The rapid increase in the number of elderly people increases the need for exploring for new and innovative programs that will be sustainable and inexpensive. The general trended in planning services for the elderly is for services which will make it possible for the elderly to continue to live at home. This presentation is about an innovative program which meets the goal of aging in place, sustainability and low expenditures to the public sector. The program was initiated and developed in Israel by Eshel, a national agency established by the JDC The supportive community program is based on a basic package of services provided to elderly people who live at home. each 'Supportive Community' Includes 200 households living in a defined geographic area. The basket of services includes : 1. Community father - A paid staff person who is on call around the clock. Provides assistance to the participants in the program. 2. Emergency call system - Connection to a call center by an alarm system to call in emergency cases. 3. Medical services - home visits by a doctor at nights, weekends and holidays and ambulance service. 4. Social activities - Group activities, trips, holidays parties. The cost of the program is about \$30 per month for every household. Follow up studies indicated high satisfaction. Method : Questionnaire and interviews. Results : High satisfaction by the elderly residents, strong feeling of security and improvement in quality of life. Conclusion: It is a successful, sustainable and inexpensive program. Keywords : services, community

PP26 S-266 THE HISTORY AND LOGIC OF STUDYING GLOBAL AGING

Frank J. WHITTINGTON¹, Suzanne KUNKEL², J. Scott BROWN³, Jasleen K. CHAHAL³ (*1. College of Health and Human Services, George Mason University, USA; 2. Scripps Gerontology Center, Miami University, USA*)

Introduction : For nearly half a century (roughly from 1945-1990) formal gerontology focused almost exclusively on aging in the U.S. and Europe. Thus, until about 1990 most of what gerontologists knew about aging was really only about aging in their own cultures. During

the 1990s the field began to expand into many other countries in Asia, Africa, and Latin America. Method : We review the brief history of gerontology and the study of global aging, focusing on Palmore, Whittington, and Kunkel's (2009) third edition of the International Handbook on Aging. Results : The Handbook documents a startling amount of growth and development in gerontology, geriatrics, and aging policy initiatives in all regions of the world but focuses on 46 countries with significant aging research, education, and public policies. The evidence presented makes clear that interest in aging, scholarly research, and formal training programs for both practitioners and scientists are on the rise in the non-western world, especially in the major Asian nations (Japan, Korea, and China) and in Latin America (primarily in Brazil, Argentina, and Mexico), but even in many developing countries with limited scholarly traditions and even more limited economic resources (Botswana, Cuba, Estonia, Malaysia, Pakistan, Uganda, and Zimbabwe). Conclusion : We argue that the study of aging globally and the comparison of findings across societies is necessary for gerontologists in all countries for 3 main reasons: 1) it is required for a complete scientific explanation of aging; 2) it is in our own economic self-interest; 3) it is politically wise. Keywords : Global aging, history

PP26 S-267 REQUIREMENT OF MULTI-DIMENSIONAL REGIONAL COALITION AND EDUCATION TO ESTABLISH DEMENTIA CARE IN COMMUNITY

Hajime TAKECHI¹, Toshio MORI², Takeya HASHIMOTO³, Shigenon NAKAMURA⁴ (*1. Geriatrics, Kyoto University, Japan; 2. Psychiatry, Kyoto Prefectural Rakunan Hospital, Japan; 3. Welfare, Dowan Long-term Care Facility, Japan; 4. Neurology, Otowa Hospital, Japan*)

Introduction : Patients suffering from dementia steadily increase. It is important to establish community care for dementia. In order to design the load map for effective community care for dementia, it is required to know present status of it. Method : Modified Delphi Method is employed to analyze present status of community care for dementia. Three times of questionnaire are carried out by an expert committee consisting of 26 members who are psychiatrists, geriatricians, neurologists, primary care physicians, nurses, care managers, care professionals, social workers and leaders of family caregivers. Results: Total 477 statements are raised for 9 questions and 236 statements reached agreement. Regarding what is accomplished at present, among 63 raised statements, only 2, e.g. "recognition of citizens about availability of long-term care insurance service for dementia", were agreed. As for unmet needs of patients and caregivers, 46 of 50 statements were agreed. Factors that cause difficulties in care consisted of 144 statements, resulting in 51 agreements which are classified to two categories; one for recipients, another for providers of care, consisting of health and care professionals and community people. The former further divided into four problems; stigma or complex emotional conflict of family members, lack of care for early stage of dementia, aggressive behaviors and comorbid physical condition. As for solutions to establish community care, among 155 statements raised, 112 were agreed. Conclusion : It was recognized that there are many subjects to be addressed to establish community care for dementia. Comprehensive approach would be required for the purpose. Keywords : dementia, community care

PP26 S-268 A STUDY ON SOCIAL EXCLUSION OF SINGLE AND MARRIED ELDERLY HOUSEHOLDS IN KOREA

Jeonghwa LEE, Young-Eun OH (*Department of Family Environment*)

and Welfare, Chonnam National University, Korea)

Introduction : The incidence of single and married elderly households is increasing rapidly in Korea, but the growing aging population face serious problems because they are unprepared to take realistic precautions. After reaching retirement age, many elderly Koreans find themselves in economic trouble due to exclusion from employment opportunities. The physical, social, and psychological health of impoverished elders is in danger. In this context, we need to discuss 'social exclusion', or the deprivation of and exclusion from resources for social, economic, and political participation. In this study, we investigated the degree of social exclusion in single and married elderly households as well as elderly citizens' experiences of multiple exclusion in Korea. multiple exclusion was calculated that how many the upper six exclusions were overlapped. **Method :** 527 people over the age of 60 who do not live with their adult children were selected for this study, which ran in July and August, 2012. The statistical analyses used in this study were frequency, percentage, and chi-square tests. **Results :** First, we found that all the social exclusions Korean elderly households face, health exclusion is the greatest, followed by residence, economy, education, social activity, and relations. Second, we analyzed differences of social exclusion by gender, age, and marital status. In conclusion, we found that women, the very old, and single people more frequently experience social and multiple exclusion. **Conclusion :** There is a great need to reduce social exclusion for women, the very old, and single people in Korea. **Keywords :** Social Exclusion, Single and Married Elderly Households

PP26 S-269

A STUDY ON LOCAL GOVERNMENTS' AGE-FRIENDLY COMMUNITIES: A COMPARISON OF SOCIAL WELFARE PROGRAMS FOR THE ELDERLY

Jin KIM¹, Seo-Young LEE² (1. Dept. of Elderly Care Management, Catholic University of Pusan, Korea; 2. Dept. of Elderly Welfare, Seoul Cyber University, Korea)

Introduction : A decreasing birthrate and an increase in longevity have accelerated the "greying" of the world's population. There have been changes in political paradigms and the theoretical development of concepts of aging to address the socioeconomic problems caused by rapid aging. In fact, as found in the World Health Organization's (WHO) guidelines on age-friendly cities, there are movements that emphasize the importance of responsibilities and functions of both the central government and local governments. **Method :** The framework is established based on the eight areas(outdoor spaces&Buildings, Transportation, Housing, Social participation, Respect&Social Inclusion, Civic Participation & Employment, Communication & Information) that WHO recommends for developing age-friendly communities. This targets local governments' welfare programs for elderly people. The characteristics of local governments (urban/rural type) are considered, and such government bodies are then categorized. It will focus on analyzing the welfare programs of local governments. **Results :** The following are the expected results of this study. Recommendations on the current status of preparation for aging populations at the local government level, based on WHO standards, will be made. Additionally, the performance of each of the eight areas will be compared in detail, which will enable an in-depth evaluation of the programs. **Conclusion :** This study will recognize problems local governments are facing based on not only international standards but also a comparison between local governments' policies on aging populations. This study suggests a direction of active post-retirement life policy by examining the elder friendliness of communities in Korea based on international standards of welfare programs for elderly

people. **Keywords :** again populations, age-friendly cities, welfare programs

PP26 S-270

ACTIVE AGING VIEWPOINT A STUDY OF IMPLEMENTATION MODEL FOR ELDER EDUCATION IN TAIWAN

Yao CHING-TENG (Institute of Adult and Continuing Education, National Chung Cheng University, Taiwan)

Introduction : According to the Taiwan Ministry of the Interior census statistics, in 1993, 7.1% of the population was above the age of 65, surpassing the UNESCO defined 7% benchmark for an aging society. By December 2011, a record breaking 10.89% of the total population. Consequently, the issues surrounding an aging population has become increasingly important, and the topic on the elder education requires in-depth analysis and discussion. **Method :** The research method is analysis of literatures, theories, and interviews. This research aims to understand the current progress on the implementation of elder education, and discusses the Taiwan governing polices, established laws, budget situation, and resource integration mechanisms. Further analysis demonstrates the possibility of innovating elder education practices and provides strategic recommendations to resolve current implementation challenges. **Results :** The result showed that elder education was traditionally spearheaded by social agencies and has in place a wide variety of educational establishments and facilities. Following the amendment of the Senior Citizens' Welfare Act in 2007 and the issuance of the White Paper on Senior Education Policy, the government has demonstrated its commitment to elder education by allowing educational agencies to assume the leading role. Elder education has since shifted from a form of social welfare to an education-oriented policy. **Conclusion :** Despite recent progress, elder education still faces the challenges of policy implementation, legislative hurdles, budget funding, practical applications, academic research, and talent building. Learning from the experiences of developed nations, Taiwan can gain from the aspects of attitude, budget support, resource integration, marketing, and assistance programs. **Keywords :** Active Aging, Elder Education, Policy

PP26 S-271

ACTIVE AGEING INDEX 2012 FOR 27 EU MEMBER STATES

Asghar ZAIDI¹, Katrin GASIOR², Maria M. HOFMARCHER², Orsolya LELKES², Bernd MARIN², Ricardo RODRIGUES², Andrea SCHMIDT², Pieter VANHUYSSSE², Eszter ZOLYOMI¹ (1. Social Sciences, University of Southampton, United Kingdom; 2. European Centre for Social Welfare Policy and Research, Austria)

Introduction : The AAI provides a new tool for policymakers in European countries enabling them to devise evidence-informed strategies in dealing with challenges/opportunities of population ageing. The context is that 2012 was the European Year for Active Ageing and marked the second 5-year cycle of review and appraisal of the MIPAA implementation. **Method :** The AAI draws from the WHO widely quoted definition; bases itself on the three strands of the European Year 2012; and makes use of the methodology similar to the HDI of the UNDP. It enables comparisons between 27 EU countries by quantifying the differential extent to which older people have the unrealised potential in the distinct domains of employment; social participation; independent and healthy living and capability. The breakdown by gender highlights the specific social policy goal of reducing gender disparity in active experiences of ageing. **Results :** Two Nordic countries, Sweden and Denmark, and Ireland, the UK and Netherlands come at the top of the ranking. In contrast, majority of the

Eastern European countries, and Greece, are at the bottom. In almost all countries, women fare worse than men, particularly in Cyprus, Malta and Greece but also in the Netherlands and Luxembourg. A positive correlation with per/capita GDP shows that the countries with relatively higher standards-of-living are generally more successful. Conclusion : Additional future research required is to explore the link between active ageing and the quality of life of older people. What social policy contexts are important? What impact of life-course experiences? The toolset is publicly available for its adaptations and use. Keywords : Active and healthy Ageing, European Union

PP26 S-272

THE HEALTH OF ELDERLY KOREAN, CHINESE, AND OTHER HOME CARE CLIENTS, AND CAREGIVER DISTRESS IN ONTARIO, CANADA

Byung Wook CHANG, John P. HIRDES (*SPHHS, University of Waterloo, Canada*)

Introduction : Korean immigrants comprise about 0.3% of the total Canadian population. However, this population is increasing faster with a growth rate of 53% compared with 19% growth in the Chinese-Canadian population and only 4% for the general population between 1996 and 2001. Immigration later in life is a stressful because it forces cultural adjustments and may pose language barriers. Elderly Korean immigrants often lack information and preparation to adjust to the major changes in cultural norms and social conditions. The purpose of this study is to examine the health of elderly Korean-Canadians with a particular emphasis on distress among caregivers. Method : A cross-cultural comparison of Korean, Chinese and other Canadian home care clients was done using the Resident Assessment Instrument - Home Care (RAI-HC). The assessments were done as a part of normal clinical practice between January 2002 and December 2012 within Ontario. To investigate risk factors for caregiver distress, data from a sample of 773,276 home care clients were analyzed using descriptive statistics and chi-square analysis at the bivariate level and multiple logistic regression models. Results : The major finding of the present study was that Korean clients had higher physical impairments and higher prevalence of major chronic diseases but they were less likely to receive personal support or nursing services. Moreover, the results provide clear evidence of the importance of language barriers for all linguistic minorities, including Korean-Canadians. Conclusion : In addition to ensuring cultural competence of staff members dealing with minority home care clients, the practical problems caused by language barriers should be addressed by health and social service providers. Keywords : Home care, Ethnicity, interRAI, Caregiving

PP26 S-273

THE INTERACTION OF SOCIAL SUPPORTS AND DEPRESSION BETWEEN THE IN-HOME CARE ELDERLY WITH DEMENTIA AND THEIR FAMILY CAREGIVERS

Eun Sil JANG¹, Ki Woong KIM¹, Soong-Nang JANG², Kyung Sook CHOP¹ (*1. Department of Neuropsychiatry, Seoul National University Bundang Hospital, Korea; 2. Department of Nursing, Chung-Ang University, Korea*)

Introduction : This study has been attempted to provide basic data necessary for the development of effective nursing intervention by caregiving types of family caregivers for the aged people with dementia, analyzing their interactions with their family caregivers between social supports and their depression. Method : Research participants as the in-home care elderly who are more than 60 years of age in their local community and their family caregivers, are participated in 'Korean Longitudinal Study on Cognitive Aging and

Dementia (KLOSCAD)' which has been studied since 2011. The collected data have analyzed by use of the SAS statistic program based on Actor-Partner Interdependence Model (APIM) suggested by Kenny(1996). APIM is a model of dyadic relationships that integrates a conceptual view of interdependence in two-person relationships, and in this study, the research participants as the in-home care elderly and their family caregivers are 491 persons. Results : The interactive effects between social supports and depression of the participants of the elderly with dementia and the family caregivers are significantly shown in actors' effects. However partners' effects have been shown with the result that the partners' social supports do not impact upon actors' depression, but the partners' depression is impacted directly on actors' depression. Conclusion : As the above research results, the understanding of the interactive effects between the in-home care elderly with dementia and their family caregivers' social supports and depression are necessary for multi-dimensional approaches according to caregiving types of caregivers, for the managerial prevention from the depression of the elderly with dementia and their caregivers. Keywords : family caregiver, social support, depression

PP26 S-274

DEMENTIA, CAREGIVER AND HYPNOSIS

Josiane TARDIEU (*General Practitioner, Cabinet Medical, France*)

Introduction : The author wants to show if there is a link in between hypnosis sessions in order to help the caregiver and the behavior of the dement person. Method : After filling a NPIES scale, several sessions of hypnosis have been held in order to help the anxiety and the anger of the main caregiver. A second NPIES scale has been done afterwards. Results : A mild improvement appears specially for the apathy. Conclusion : Hypnosis could be another way to help the caregivers without using new drugs for the dement patient. Keywords : Dementia, caregiver, hypnosis

PP26 S-275

THE EFFECT ON EGO-INTEGRITY TO BE AFFECTED BY THE ELDERLY'S HEALTH AND FAMILY SUPPORT

Mi Ran LEE (*Department of Social Welfare, Kosin University, Korea*)

Introduction : This study is to investigate a mediated effect of family support in ego-Integrity and health, to grasp the relationship of the physical, the psychological, the social health, family support and ego-Integrity, with targeting 603 people of 65 years old or over residing in B city. Method : The collected data were analysed with reliability, validity, factor analysis and structural equation. Results : The results of summary are as follows. First, of the health of the elders, only social health affected family support, and all of the physical, the psychological and the social health affected ego-Integrity. In particular, the physical health showed the negative effect of ego-Integrity and psychological and the social health showed the positive effect of ego-Integrity. Second, out of the health, the physical health in the direct effect of ego-Integrity affected negative effects in the ego-Integrity, and the psychological and the social health affected the positive effect in the ego-Integrity. Only the social health in the restriction model, which controls the direct effect, affected ego-Integrity thru a family support, and total effect was bigger than the direct effect, which showed a partial mediated effect of family support. Conclusion : This study concluded that elderly people's ego-integrity is improved when family members support their roles and participation in social activities. Therefore, the managing strategy of family's support for special groups is necessary to be developed, and the informal support system from the point of old people's welfare level is needed to be strengthened. Keywords : elderly welfare, health, family

support, ego-Integrity

PP26 S-276

THE STRESS OF FAMILY CAREGIVERS FOR DEMENTIA PATIENTS IN LONG-TERM CARE SETTINGS

Mi Sook KIM¹, Hyun Sook KIM² (1. Graduate School, Department of Elderly Welfare, Korea National University of Transportation, Jeungpyung elderly nursing home, Korea; 2. Department of Social Welfare, Korea National University of Transportation, Korea)

Introduction : The purpose of this study is to provide basic data useful for preparing measures in relieving the stress of family caregivers for dementia patients in long-term care settings. Method : The subjects of this study were 222 family caregivers for people with dementia in geriatric medical and welfare facilities in Chungbuk province, Korea. The data were collected using the structured questionnaires including Korean version of Caregiver Burden Inventory (CBI) originally developed by Novak and Guest (1989) by self-reporting method or interview by research assistant. The survey data were analyzed using SPSS 18.0 for windows - descriptive analysis, t-test, or ANOVA, correlation analysis and multiple regression analysis. Results : Firstly, total stress score of family caregivers for dementia patients in long-term care settings were 94.70 ± 18.95 . The order of sub-domain family caregiver stress was arranged as follows: time dependence, economic burden, developmental burden, physical burden, social burden, and emotional burden. Secondly, the factors affecting the total family caregiver stress are the extrafamilial social support, degree of cognitive ability of the elderly care receiver, the cost needed to support them, and their disease conditions other than dementia. The adjusted R² value of these variables was 17.9, and the most influential factor was the extrafamilial support. Conclusion : This study finds that the most influencing variable that relieves the stress of the family caregiver for dementia patients in long-term care settings is extrafamilial social support. Hence, we strongly recommend to develop programs that improve social support for caregivers of dementia patients. *This study is part of the Mi Sook Kim's MSW thesis. Keywords : long-term care settings, dementia, family caregiver stress

PP26 S-277

THE EFFECT OF THE ELDERLY COUPLE RELATIONSHIP IMPROVEMENT PROGRAM

Nam Sook KIM (Dept. of Social welfare, Tongmyong University, Korea)

Introduction : It is expected that the number of the elderly couple households will be increased more and more. Husband retired to stay home and wife become familiar with the social activities outside, the couple's roles change! After retirement, the couple have conflict and relational problems because of their maladjustment in the changing role and lack of understanding. To make matter worse, their children are separated due to job or marriage. In 2000 more than 50's divorce cases number 7,481 accounted for 6.2% of the total, but 20,852 cases of divorce accounted for 12.4% of the entire in 2010. Method : 1. attention and period : from March 2012 to December 2012, 16 elderly couple households who are recommended by family counsel center. 2. committed program : Personality Type Test, Couples Psychotherapy, Couples Sex Education, Diary Exchange, Marital Communication Skill, sport dance, Couple Self-help Group, remind wedding photo, covenant ceremony 3. scale: Scale of Gender Role Attitudes, Scale of Marital Communication, Scale of Couple Sexual Satisfaction. Scale of Couple Relationship Results : Gender Role Attitudes : $51.2 \Rightarrow 52.3$ (1.1 $_$) Marital Communication : $64.8 \Rightarrow 66.2$ (1.4 $_$) Couple Sexual

Satisfaction : $66.8 \Rightarrow 70.0$ (3.2 $_$) Couple Relationship : $68.6 \Rightarrow 87.7$ (19.7 $_$) Conclusion : For the elderly couples who does not live with adult children as well as take themselves as a center of their daily family lives, it is assumed that active interactions between husbands and wives, such as effective couple programs are prerequisite for improving family life satisfaction. Keywords : the elderly couple, the elderly couple relationship, the elderly couple relationship improvement program

PP26 S-278

RELATIONAL PERSONHOOD: EXPLORING DEMENTIA CARING IN CHINESE IMMIGRANT FAMILIES IN GREATER VANCOUVER, BC, CANADA

Sing Mei CHAN¹, Deborah O'CONNOR² (1. Social Work and Family Studies, University of British Columbia, Canada; 2 Social Work, University of British Columbia, Canada)

Introduction : There is ongoing debate on best practices of care for persons with dementia (PWD). Some advocate for Kitwood's personhood or person-centred approach that focuses on the PWD. Others argue for relationship-centred care that emphasizes the importance of relationships around the PWD. Method : Given that there is extremely little information on the Chinese PWD, and even less on her or his relationship and interactions with the carer, this study used the case study method to explore whether and how four Chinese families actually practice and perform everyday caring for an elderly relative with dementia from a person-centred or relationship-centred approach. Each case comprising two or more family members and/or a service provider participated in in-depth interviews and observation sessions. Data were analyzed using ATLAS.ti. Results : Findings showed that these Chinese families practice cultural norms of a relational self whereby the individual and the relationship are not easily separable. Ironically, the emphasis of these carers on the relationship and its inherent obligation focuses attention on and affection for the PWD. As a result, this norm of a relational self fosters an inclusive kind of caring that in turn enhances the PWD, the carer and the relationship itself. Conclusion : Albeit a small sample, this study provides support to how, in a Chinese family setting, carers can practice the personhood and relational aspects of dementia caring in unison, and proposes the notion of relational personhood that embraces the individual-in-relationships as a viable approach to understanding and working with PWD and their families. Keywords : relational personhood, dementia, Chinese immigrant families

PP26 S-279

THE EFFECTS OF SELF-ESTEEM AND FAMILY FUNCTION ON SUICIDAL THOUGHTS OF ELDERLY ONLY HOUSEHOLDS IN KOREA

Jeong Hwa LEE¹, Eun Bi KWON² (1. Dept. of Family Environment & Welfare, Chonnam National University, Korea; 2. Ph.D. Candidate, Chon Nam National University, Korea)

Introduction : Suicides among the elderly in South Korea had become a serious social problem. According to the OECD (Organization for Economic Cooperation and Development), South Korea has the highest suicide rate in the world. To make matters works, the rate at which elderly people are committing suicide is rapidly increasing. Suicide among the elderly is caused by a number of variables. Method: Data were gathered from 533 elderly people living alone or with a spouse in G City, South Korea, using a structured questionnaire. The statistical methods used for data analysis were descriptive statistics, t-test, and hierarchical regression analysis with the SPSS 18.0 program. Results : It has been found that elderly people living alone are

older, in worse health and face tougher economic situations. They have lower self-esteem and lower family function. In addition, their level of suicidal thinking is higher than that of elderly people living with a spouse. The level of suicidal thinking of elders living alone is affected by family function, self-esteem and their subjective economic situation. The level of suicidal thinking among elderly people living with a spouse is affected by family function and self-esteem. Conclusion : These results demonstrate the importance of family function and self-esteem in the elderly. They show that the economic situation of elderly people living alone affects their likelihood of having suicidal thoughts. This study also indicates that elderly people living alone often experience economic difficulties and require help to solve the problems associated with poverty. Keywords : suicide-thinking, family function, self-esteem

PP26 S-280

A STUDY ON FAMILY VALUES, PREPARATION FOR OLD AGE AND LIFE SATISFACTION FOR BABY-BOOM GENERATION

Seong Ryung KIM, Chung-Sun PARK (*Family Welfare, Daegu University, Korea*)

Introduction : The purpose of this study is to investigate family values, preparation for old age, and life satisfaction, and to find out the factors influencing life satisfaction for the baby-boom generation. This study also aimed at providing preliminary data not only for enhancing the life satisfaction, but also deciding the direction of welfare policy for baby-boom generation. Method : The subjects were 206 baby boomers(born from 1955~1963) living in Daegu city and Gyeongbuk province. The data were collected by trained interviewers using the structured questionnaires. The collected data were analyzed using SPSS Win 18.0 with frequency analysis, reliability test, t-test, analysis of variance, correlation analysis and regression analysis. Results : The results of analysis are as follows: First, Most of baby-boomer showed relatively modern values about family values, and especially about gender roles Second, the preparation for old age was ongoing tasks for baby-boom generation. The emotional preparation showed the highest score, while the preparation for physical sphere showed the lowest. Third, with regards to life satisfaction for baby-boom generation, gender, religion, family structure, and family income were shown to significantly influence their life satisfaction. Fourth, among several factors, preparation for old age turned out to be the most important factor to influence life satisfaction for baby-boom generation. Conclusion : Therefore, in order to prepare for later life for baby-boom generation, the extensive support programs in physical, emotional, and economic spheres should be provided not only at individual level, but also at governmental level in near future. Keywords : Baby-boom generation, Family values, Life Satisfaction

PP26 S-281

THE EFFECTS OF BABYBOOMERS' LIFESTYLE ON THE SOCIAL PREPARATION FOR OLD AGE -CENTERING ON THE MEDIATED EFFECTS OF THE SATISFACTION WITH FAMILY RELATION

Mee Hye KIM, Eun Kyung SHIN, Yong Hee KWON (*Graduate School of Social Welfare, Ewha Womans University, Korea*)

Introduction : babyboomers have grown older, their lifestyles have been differentiated from those of previous generations and considered as an important factor to measure the old age life. also, social preparation for old age that deals with the insufficient social roles or social relations has not been discussed yet. Therefore, this study aimed to understand how babyboomers are socially preparing for their old

age according to the kinds of lifestyles and explore the relationship between lifestyles and family-related variables, for babyboomers are likely to have the closest social relations in family. Method : For this study, the data of total 965 babyboomers were analyzed by whether having spouse or not based on the data of the 2010 Population and Housing Census in South Korea. For the data analysis, SPSS 18.0 was employed for elementary statistics and Amos 20.0 for measuring model and mediated effects. Results : Conservative family values also directly or indirectly affect social preparation for old age as mediated by the satisfaction with family relation; among direct factors to affect social preparation for old age, the lifestyle to pursue health and leisure positively affects it, but the lifestyle to pursue outgoing challenge negatively affects it. Conclusion : To heighten the probability of the social preparation of babyboomers for old age, the lifestyle needs to be changed into valuing family and promoting cooperation among family members and, furthermore, social atmosphere and policy that are family-oriented need to be developed actively. Keywords : Babyboomers, Lifestyle, Social Preparation for Old Age

PP26 S-282

SIBLING RELATIONSHIPS AND PSYCHOLOGICAL WELL-BEING IN KOREAN OLDER ADULTS: DOES SIBLING SEX MATTER?

Yeon Kyung CHEE¹, Mihye LIM² (*1. Human Ecology Research Institute, Ewha Womans University, Korea; 2. Department of Psychology, Ewha Womans University, Korea*)

Introduction : In a close knit family-oriented society like Korea, relationships with siblings who have shared a long personal and family history can exert significant impacts on mental health in later life. Based on the hierarchical compensatory model suggesting that a preferred order exists in receiving informal support in elderly persons, we examined sibling relationships (warmth, conflict), social support, and life stress as predictors of psychological well-being (depression, life satisfaction) in different sex constellations of siblings (sisters, brothers, mixed sex siblings). Method : Data were drawn from 249 older adults (M age = 71.18, SD = 6.79) recruited in Korea with one closest sibling in mind. Results : Regression analysis showed significant interaction effects of sibling conflict and social support on depression as well as interaction effects of sibling conflict and life stress on life satisfaction in the entire sample. Further analysis of interaction effects indicated that brothers receiving low social support with high sibling conflict experienced greater depressive symptoms compared to those with low sibling conflict ($p < .05$). Also, brothers experiencing more life stress with high sibling conflict had lower life satisfaction than those with low sibling conflict ($p < .05$). Sisters only with high sibling conflict reported higher depression levels than those with low sibling conflict ($p < .05$). In mixed-sex siblings, no statistically significant main and interaction effects were found on both depression and life satisfaction. Conclusion : Findings partially confirmed the roles of siblings as support sources among same sex siblings in old age. Keywords : Sibling Conflict, Well-being, Korea

PP26 S-283

INTEGRATIVE REVIEW OF GERONTOLOGY NURSING PRACTICE IN A HOMECARE FACILITY

Pearl Ed Gillera CUEVAS (*Secretariat, Gerontology Nurses Association of the Philippines, Philippines*)

Introduction : Nursing leads the field in gerontology as nurses were the first professionals in the United States to be certified as geriatric specialists (Ebersole, 2001). Therefore, gerontology nurses need to know the facts about the older persons population to effectively deliver

services and educate the general public (Eliopoulos, 2005). The study's problem statement focused on how gerontology nursing practice is viewed in a homecare facility as a setting. Method : Literature published between 2000-2010 was reviewed from the University of the Philippines Library System and On-line sources was also reviewed using MEDLINE and the Cumulative Index of Nursing and Allied Health Literature (CINAHL) using the key words "gerontology" and "nursing practice of older persons". Results : The characteristics of gerontology nursing practice as explicated in the light of a homecare facility setting included the following: understanding the 'aging' process, key role of nurses in health promotion, giving holistic nursing care, fostering quality of life for the older person and rendering nursing practice that is reflected on the older persons needs. Nursing the older person appears to be relationship- centered and therapeutic for both the patient and the nurse. A nursing model is derived from these findings. Conclusion : Gerontology nursing practice develops as nurses' experience what it means to care for the older person in a homecare facility. Reflective nursing practice is advocated for nurses to learn from their experiences with the older persons. The nurses are likewise encouraged to develop meaningful relationships with the older person, their significant others and other members of the health team. Keywords : Gerontology Nursing Practice, Nursing Practice of Older Persons

PP26 S-284

"LEARNING TO FIND BENEFITS FROM FAMILY CAREGIVERS' EXPERIENCE" THE STUDY PROTOCOL OF AN INTERVENTION FOR CAREGIVERS OF PERSONS WITH ALZHEIMER DISEASE: A RANDOMIZED CONTROLLED TRIAL

Mak Pui Man EMILY, Cheng Sheung TAK, Ng Siu Siu NATALIE, Lau Wing Lam ROSANNA (*Psychological Studies, The Hong Kong Institute of Education, Hong Kong*)

Introduction : Caregivers of relatives with Alzheimer's disease are highly stressful and at risk harming physical and psychiatric conditions. Usually, intervention for caregivers focuses on delivering knowledge of dementia, skills, and support to help them coping with stress. To a certain extent, this practice is right however it neglects the construction of caregivers' stress. Caregivers also report rewards, uplifts, and gains, such as personal growth except burden. Benefit-finding through positive reappraisal may counteract the effect of caregivers' outcome. Method : Two randomized controlled trials are planned. They are essentially the same except that Trial 1 is randomization based on groups of participants whereas in Trial 2, randomization is based on individuals. Participants are randomized into three groups?benefit-finding, psychoeducation, and simplified psychoeducation. Participants in each group receive approximately 12 hours of training. Booster sessions are provided at around 14 months after the initial treatment. Results : The primary outcomes are caregiver stress, perceived benefits, subjective health, psychological well-being, and depression. The secondary outcomes are caregiver coping, and behavioral problems and functional impairment of the care-recipient. Outcome measures are obtained at baseline, post-treatment (2 months), and 6, 12, 18 and 30 months. Conclusion : The emphasis on benefits rather than losses and difficulties provides a new dimension to the way interventions for caregivers can be conceptualized and delivered. By focusing on the positive, caregivers may be empowered to sustain caregiving efforts in the long term despite the day-to-day challenges. The two parallel trials will provide an assessment of whether the effectiveness of the intervention depends on the mode of delivery. Keywords : Alzheimer Disease, Positive aspects of caregiving, Burden

PP26 S-285

A RANDOMIZED CONTROLLED TRIAL IN REDUCING BURDEN OF FAMILY CAREGIVERS OF ALZHEIMER'S DISEASE

Siu Siu NG (*Psychological Studies, Hong Kong Institute of Education, Hong Kong*)

Introduction : The burden from caregiving often results in depression and poor health, thus interfering with the ability of the caregiver (CG) to deliver care effectively. This paper reports results from a randomized controlled trial of an intervention intended to reduce stress through positive reappraisal training over a month's duration. Method : To evaluate this program, 101 primary CGs were randomly assigned into one of three experimental conditions: (a) psychoeducation, (b) psychoeducation plus benefit finding, and (c) simplified psychoeducation (control). The outcome measures were CG burden and role overload. Covariates included care-recipient behavioral and psychological symptoms, functional impairment and Clinical Dementia Rating-sum of box. Measures were taken at baseline and after the intervention. Data were analyzed using analysis of covariance. Results : Result supported the effectiveness of benefit-finding cum psychoeducation in reducing CG's role overload ($p=0.04$) and subjective burden ($p=0.02$). Psychoeducation alone had no effect. Conclusion : Caring for family member with dementia is a chronically stressful experience. Results from the present study supported the effectiveness of the benefit-finding intervention in reducing CG burden by altering the way CGs perceived the caregiving experience. This study revealed a mechanism to enhance the resilience of dementia CGs, i.e., by positive reappraisal training and daily reflections of benefit. Keywords : Alzheimer's Disease, Caregiver, benefit-finding

PP26 S-286

PENSAMIENTO DE SU SEXUALIDAD EN LA MUJER MAYOR DE 60 ANOS

Francisco AMADO (*Servicio de Geriatria y de Gerontologia, Hospital Nacional Arzobispo Loayza, Peru*)

Introduction : Seleccion de 110 personas de sexo femenino - Mujeres mayores de 60 a 75 anos. - No tener enfermedades cronicas. Method : Captacion de la informacion: se realizo a traves de la entrevista (vaciado de encuesta) durante los meses de abril a octubre del 2011). Results : la aceptacion del coito fue positivo en el 41.8 % y en el 50 % no hubo interes. En relacion la calidad del acto sexual, fue considerado como bueno el 26.3%. El 61.8 % refirieron haber tenido por lo menos un orgasmo durante el acto sexual. El 16.3 % estuvieron de acuerdo con la masturbacion. El 10 % manifesto el uso de juguetes eroticos con acompanamiento Con respecto a las fantasias sexuales: El 31.8 % refirio el deseo de tener un amante. El 52.7 % refirio tener conocimiento de las posiciones para realizar el coito. El 6.3 % refirio el deseo del sexo oral, el 22.7 % el deseo del sexo anal. El 70.9 % por el sexo vaginal. Sexo y envejecimiento: Solo el 25.4 % manifestaron que la frigidez es propia de la ancianidad. El 32.7 % lo relacionaron con la impotencia y ancianidad. Conclusion : Conclusiones: 1.- El deseo sexual de la mujer mayor ha sufrido una desinhibicion. 2.- La realizacion de la actividad sexual es muy importante para el desarrollo armonico de las actividades de la vida diaria de las Personas Mayores. 3.- La actividad sexual esta relacionada con el placer y con la realizacion de las fantasias sexuales predominantes en esta etapa de vida. Keywords : Frigidez ,Fantasias sexuales ,Actividad sexual

PP26 S-287

THE EFFECT OF THE ELDERLY'S DEPRESSION ON THEIR LIFE DISSATISFACTION-THE MEDIATION EFFECT OF

THEIR DISCRIMINATORY EXPERIENCES-

Dongbae KIM¹, Byungsun YOO², Jihee YUN¹ (1. Graduate School of Social Welfare, Yonsei University, Korea; 2. Gyeonggi Welfare Foundation, Korea)

Introduction : In case of Korea, the aging speed has been proceeding most rapidly. With the aging, due to a collapse with respect for the aged and filial piety, the discrimination against the elderly has been also on the rise as the serious social problem. According to the recent statistics, the old people, who experienced discrimination, are exposed to be 79.5% of all the aged. In this background, the goal of this research is to evaluate the effect of the depression of the elderly on their life satisfaction, and to verify the mediation effect of their discriminatory experiences between the depression and life satisfaction. **Method :** The independent variable is the depression of the elderly, and the dependent variable is the life satisfaction of the elderly, and the mediation variable is the discriminatory experiences against the old people. The data are used from the Seoul City Welfare Panel data of 2010. The structural equation model is employed using Amos program. **Results :** First, depression level has an influence on the life satisfaction of the elderly. Second, depression level also has associated with the old people's experiences of discrimination. Third, it is confirmed that the old people's experiences of discrimination have partial mediation effect on the relation between the depression and the life satisfaction of the elderly. **Conclusion :** Accordingly, eliminating the discrimination against the old people must be acknowledged as the important actions. With the society overall, the consciousness reformation about the discrimination against old people will have to be accomplished. **Keywords :** the depression of the elderly, the life satisfaction, the discriminatory experiences against the old people

PP26 S-288

INFLUENCES OF INTERGENERATIONAL LEARNING ON COLLEGE STUDENTS' RELATIONSHIPS WITH THEIR FAMILY AND OLD ADULT

Chiao Wei CHENG, Stephanie Yu-Ching CHEN (Department of Adult and Continuing Education & Graduate Institute of Elder Education, National Chung Cheng University, Taiwan)

Introduction : To explore students' experiences of participating in intergenerational learning, this study examined alterations in students' attitudes toward old adult and their relationships with senior family members. **Method :** The study adopted semi-structural interview to study six students in graduate programs on elder education. The interviewees averaged 24.6 years old. Five of the interviewees were females and one was male. Each interviewee participated, for longer than two months, in more than two intergenerational learning courses or activities, including intergenerational service learning, intergenerational co-learning, or intergenerational reminiscence activities. **Results :** Based on the results, the interviewees experienced dramatic changes in their relationships with elderly family members after participating in intergenerational activities to understand the life stories of seniors. There were five levels of learning alterations. From shallow to deep, the levels are as follows: (1) students demonstrated increased care for elderly members; (2) students were more willing to communicate with old adults; (3) intergenerational learning assisted students in establishing harmonious methods of interacting with old adults; (4) students learned to assume a role of consultant for elderly' healthcare and to serves as mediators between seniors and other family members; and (5) intergenerational learning united families and facilitated the continuation of familial culture. **Conclusion :** Intergenerational learning constitutes a learning model that should be promoted and explored because it improves college students' attitudes

toward elderly people, transforming their relationships with family members and old adult. **Keywords :** Intergenerational learning, elder education, intergenerational relationships in family

PP26 S-289

BOWEN'S CONCEPT OF DIFFERENTIATION IN PREDICTING PSYCHOLOGICAL DISTRESS IN THE AGED

Dohee KIM-APPEL¹, Jonathan APPEL² (1. Art Therapy and Counseling, Ursuline College, USA; 2. Behavioral and Social Sciences, Tiffin University, USA)

Introduction : This study examines the relationship between Murray Bowen's family system theory's concept of differentiation of self and psychological symptom status in individuals age 62 years and older. Specifically, this study examines through regression methods whether the self-reported differentiation dimensions of Emotional Reactivity, "I" Position, Emotional Cutoff, and Fusion with Others (FO) accurately predicted the level of psychological symptom status as measured by a brief symptom checklist. **Method :** The data in the current study were obtained from 227 participants age 62 years and older, who lived in assisted/independent living and retirement situations in Ohio, U.S.A. These individuals were from a nonclinical population. Multiple linear regression (MLR) was utilized as a means to test the research hypotheses of the study. Full and restricted MLR models represented each hypothesis and were used to determine the significance of the independent variables in predicting the dependent variables. The research hypotheses included (a) the level of Bowen's four self-differentiation dimensions (ER, IP, EC, and FO) will predict symptomatology in individuals age 62 years and older. **Results :** The major hypotheses of this study were found to be supportive of Bowen's theory of differentiation, even across the stages of later life (with the exception of the FO dimension). These findings have meaningful implications for the assessment and treatment of older individuals. **Conclusion :** The findings from this investigation support that clinical psychological distress in older adults is simultaneously an individual psychological (intrapsychic) and an interpersonal family relational phenomenon. This confirms the utility of a family relational perspective in assessment, diagnosis, and treatment. **Keywords :** Family Systems, Aged, Differentiation

PP26 S-290

INTERGENERATIONAL SUPPORT TO AGING PARENTS: THE EFFECTS OF ADULT CHILDREN'S LIFE EVENTS

Hui-Chih WANG, Ju-Ping LIN, Tzu-I. WEN (Human Development and Family Studies, National Taiwan Normal University, Taiwan)

Introduction : Taiwan is experiencing a rapid aging process. Influenced by the filial piety concept of Confucianism, compared to Western countries, most of the elderly in Taiwan still live with their children but the percentage has lowered. Whether this trend influences the intergenerational support between adult children and their parents has become an important issue. **Method :** This study examined the ways that life events (e.g., change in marital status, employment status, or birth of a child) affect adult children's provisions of financial support to their older parents, and whether patterns differ by gender. Data were taken from the Taiwan Panel Study of Family Dynamics in 2004 and 2007. In this study, only subjects aged from 20-50, with at least one of whose parents is alive were analyzed. Multiple regression analysis was used to determine whether the life events influence the relations between adult and elderly parents. **Results :** In Taiwan, sons remain the major providers of intergenerational financial support for their aging parents. While adult son have children of their own, they would provide more financial support to their older parents. Adult

daughters who get married, with lower income, tend to decrease the financial support for their older parents. Conclusion : Adult child's life events are associated with intergenerational support behavior, but divergent patterns between son and daughter. The changes of adult children's provisions of financial supports to older parents are mainly resulted from their own resources, not from the needs of their parents. Keywords : intergenerational support, life event, intergenerational relations

PP26 S-291

OLDER PEOPLE'S PERCEPTIONS OF GRANDPARENTHOOD AND LIFE SATISFACTION IN TAIWAN

Ping-Shan TAI, Ju-Ping LIN (*Department of Human Development & Family Studies, National Taiwan Normal University, Taiwan*)

Introduction : Chinese traditional culture is "The elder is always precious in a family." The elderly play the important role in family. However, little is known about the impact of perception of grandparenthood on life satisfaction in old age. The purpose of this study was to explore the perceptions of grandparenthood held by the elderly and explore whether the role perception has a positive impact on life satisfaction. Method : The sample consisted of 511 elders who are over 55 years old and at least have one grandchild. Factor analysis and hierarchical multiple regression were used. Results : The results shows that older people's perceptions of grandparenthood includes a multitude of meanings : "Family Historian", "valued elder", "indulgence", "playmate and companionate" "surrogate parent" and "mentor". The role perception of grandparenthood significantly related to elders' life satisfaction in Taiwan, particularly for those individuals who enjoy of playing with their grandchild and watching them grow up instead of teaching and caring them. Conclusion : There is relationship between grandparenthood experience and life satisfaction. Cultural context may influence the effects of older people's perceptions of grandparenthood on their life satisfaction. Keywords : Grandparenthood, Life Satisfaction, Taiwan's Older People

PP26 S-292

GRANDPARENTHOOD AND INTERGENERATIONAL RELATIONSHIPS IN CONTEMPORARY WESTERN SOCIETY: REVIEW OF THE LITERATURE

Rogério Manuel Clemente RODRIGUES, Isabel Margarida Marques Monteiro Dias MENDES, Rosa Cristina Correia LOPES, Zaida Aguiar Sa AZEREDO (*UICISA-E, Escola Superior de Enfermagem de Coimbra, Portugal*)

Introduction : As a result of demographic changes, the grandparent/grandchild relationship has the potential for spanning three to four decades of life. As a consequence, grandparenthood and its associated roles and relationships are achieving a growing prominence in contemporary Western society. By this way intergenerational support relationships between grandparents and grandchildren are a reality that can improve the communication among generations. Method : Objective: to review published studies about the role of grandparenthood and the intergenerational relationship in contemporary Western society. Method: Literature review using data bases in B-On, Academic Google, and Pub-Med. The search was limited to articles published from 2000-2011 in English, French, Portuguese and Spanish languages. Results : 45 studies were selected from 2710 articles of the Data bases. The main common themes found were: the role of grandparents as a family balance between generations, with interaction patterns of proximity, emotional closeness, and social support; mothers' intergenerational ties across lineage lines appeared to be more influential for grandparent-

grandchild relationships than father. Finally, grandparents bring the sense of intergenerational family identity, positively related to well-being of all members. Conclusion : Conclusion: The changes in the family structure and in the family life cycle together with the new roles and functions of each member can be a constrain of the intergeneration relationships, but the new grand-parents role on supporting and taking care of grand- children can improve the communication between generations, bringing the importance of the intergenerational relations in promoting a healthy ageing for the elder's and a healthy development for the younger's. Keywords : Intergenerational relationship , Grandparenthood, Family

PP26 S-293

FILIAL PIETY OF A TAMIL SON IN MALAYSIA

Elangovan SUBBIAH (*Kinta District Health Department, Ministry of Health Malaysia, Malaysia*)

Introduction : The Tamils in Malaysia are the largest of the Indians who migrated from India to Malaysia in the early 1900s. The Tamils are from the South Indian state of Tamil Nadu. They carry with them rich cultural and family traditions. Method : The role of a Tamil son to his parents, grandparents, family and his children will be illustrated. A Tamil son plays different roles in all this situations. Many of this roles have connections in the Hindu mythology. They are passed on from one generation to the other. The Tamil son's role is very unique and very special in a Tamil family. Various roles of a Tamil son will be discussed in various situations in Malaysia. Comparison of a Tamil son with the sons of other races in Malaysia will be illustrated. The current modernization and the challenges facing this ancient tradition will be discussed. The intergenerational living arrangements of the Tamil males in Malaysia will be discussed. Results : The role of a Tamil son is of paramount importance to a Hindu family. It cannot be eroded by modern times or by the digital divide. The Tamil son is a vanguard to the honour of a Tamilian family. He keeps up to the honour of his family at all costs. This tradition is ancient and still being maintained in Malaysia. Conclusion : The filial piety of a Tamil son to his parents is of utmost importance in the Tamilian way of life. It has withstood the rampant changes brought about time and modernity in this digital era. Keywords : Tamilian, Filial Piety, Intergenerational.

PP26 S-294

ACTIVE AGING FROM A COLLECTIVE CULTURAL PERSPECTIVE

Amone REDELINGHUYS (*School for Psychosocial Behavioural Sciences, North West University, South Africa*)

Introduction : Active ageing is an adaptive, lifelong process with the aim to maintain optimal physical and psychological health. Active ageing implies an engagement with life and social relations. The objective of this presentation is to describe active ageing through the eyes of an older African woman who function in a collectivistic culture. A collective culture emphasises relationships and a community orientation. Method : An intrinsic single case study, involving an older African woman, aged 76, from an informal settlement in South Africa was used in the research. Multiple types of qualitative data were gathered, namely extant text (documents about the awards that she received for communal upliftment projects), three personal in-depth interviews, and the Mmogo-method®, a cultural sensitive research method, consisting of malleable clay, beads and straws was used to make visual constructions of her lived experiences. The textual data were thematically analysed. Results : Active ageing implies an active involvement in the community to assist vulnerable groups of people to address their needs for security and protection.

Active ageing is also a relational phenomenon ? older people age actively in relation to members of the community, ancestors and a Divine reality. It is recommended that the findings be verified with a more diverse research population to better understand active ageing in a collectivistic culture. Conclusion : The findings revealed that active ageing in a collective culture is experiences in social, ancestral and spiritual terms. Keywords : Active ageing, collective culture, older woman,

PP26 S-295

MULTIDIMENSIONAL EFFECTS OF ACCULTURATION ON PSYCHOLOGICAL WELL-BEING OF OLDER IMMIGRANT IN THE U.S.

Borin KIM¹, Eunwoo LEE² (1. Health Management and Policy, School of Public Health, University of Michigan, USA; 2. Workforce Development, Korean Community Services of Metropolitan New York, Inc., USA)

Introduction : The goal of this study is to investigate how acculturation, particularly ethnic solidarity and English fluency, independently and jointly influences mental health among immigrant older adults in the U.S. Method : Data came from the 2002-2003 National Latino and Asian American Study. Our sample was restricted to respondents over 60 years who were not born in the U.S. (N=501). Weighted logistic regression was used to examine the effects of ethnic solidarity and English fluency on self-rated mental health (poor or good). Ethnic solidarity was measured using four indexes: (1) how close they identify with others of same racial/ethnic descent, (2) how much they feel close in their feelings with people of same racial descent, (3) how much time they would like to spend with people of same racial/ethnic group, and (4) how important of same racial/ethnic group marriage to them. Results : Weak ethnic solidarity and strong English fluency were associated with better mental health. However, the effect of ethnic solidarity on mental health varied depending on English fluency. While ethnic solidarity positively influenced mental health among elders who spoke English fluently, strong ethnic solidarity was negatively associated with mental health among elders with poor English. Conclusion : It has been believed that high level of acculturation is associated with better mental health, which can be achieved when abandoning the original ethnic identity and assimilating into the host culture. However, this study suggests that the most positive acculturation strategy for mental health is to maintain own cultural/ethnic solidarity as well as to adopt the host culture. Keywords: Ethnic Solidarity, English Fluency, Mental Health

PP26 S-296

FOOD CHOICE PATTERNS AMONG FRAIL OLDER ADULTS: THE ASSOCIATION BETWEEN SOCIAL NETWORK, DIET QUALITY AND FOOD CHOICE VALUE

Chang-O. KIM (Department of District Health Care Service, Gangbuk-gu Community Health Center, Korea)

Introduction : Social network may affect personal food systems by the value negotiating process because food choice decisions are made by not as individuals but often as groups. In this study, we aim to investigate the association between social network, diet quality and food choice value and suggests food choice patterns among community-dwelling frail older adults in South Korea. Method : A total 87 frail older adults were participated in this cross sectional study from National Home Healthcare Services in Gangbuk-gu, Seoul, South Korea. Social network, diet quality and food choice value were measured by Wenger's network typology, mean adequacy ratio (MAR, n=13) and Food Choice Questionnaire. All analyses were adjusted for

age, gender, education, income, and number of chronic diseases. Results : Participants with private restricted and local self-contained network type were more likely to be motivated by price (OR=3.93, p=.012) and health (OR=6.41, p=.005) in their food choice, respectively; while locally integrated type was less likely to be motivated by price (OR=0.34, p=.016) or health (OR=0.39, p=.025). Participants with family dependent type were less likely to be motivated by sensory appeal (OR=0.26, p=.043). Participants who think importance of health (β =5.34; p=.030) and natural content (β =5.03; p=.033) were associated with increased MAR; however, participants who tend to choose familiar food were associated with decreased MAR (β =-9.43; p=.006). Conclusion : This study is one of the first to suggest food choice patterns concordance in social network type. Efforts to improve diet quality by community-based interventions must carefully consider individuals' food choice value as well as social network type. Keywords : social network, diet quality, food choice value

PP26 S-297

CULTURAL ACTIVITIES WITH THE ELDERLY FROM THE CARTOLA CULTURAL CENTER - MANGUEIRA COMMUNITY- RIO DE JANEIRO- BRAZIL

Regina Nunes ANDRADE¹, Constance Silva BALLALAI² (1. Programa de Pos Graduacao em Psicologia Social, Universidade do Estado do Rio de Janeiro, Brazil; 2. Post-graduate Program in Social Psychology, Universidade do Estado do Rio de Janeiro, Brazil)

Introduction : The research carried out at the CARTOLA CULTURAL CENTER is the result of Partnerships between THE UNIVERSITY OF THE STATE OF RIO DE JANEIRO (UERJ) Brazil and the Post-Graduation in Social Psychology. This gerontology research has two goals: check how the elderly register in their memories their relation with the internal migration which they have lived and how they have kept their will to live. Method : The group is formed by the students of the ball room dance classes who want to create a positive image of growing old as "a period of life to be lived in a more mature and fruitful way" (DEBERT, 1999, p. 149) . The triggering sentence of the research for the collecting of data was "what I brought from the Northeast?" and through the interviews of histories of life it rescued: migration and aspects which motivated their moving, cultural identity, joy to live. Results : In most of the cases the subjects are the elderly who migrated from the Northeast of Brazil to the city of Rio de Janeiro thirty or fifty years ago. Our intention is to present our findings which point to a group of elderly who went through migration. Conclusion : They suffered the acculturation processes and adaptations to the new needy territory where they live, but also what keeping the joy to live means (joie de vivre), and their representation as the true guardians of the Brazilian culture. (YUDICE, 2004,p.161). Keywords : elderly, dance, cultural activities

PP26 S-298

WIDOWED AND DEPRESSIVE SYMPTOMS AMONG KOREAN ELDERS: THE ROLE OF SOCIAL TIES

Gyeong Suk JEON¹, Soong-Nang JANG² (1. Department of Nursing, Mokpo National University, Korea; 2. Red Cross College of Nursing, Chung-Ang University, Korea)

Introduction : This study examines the impact of social ties on the relationship between spousal loss/widowed through death and depressive symptoms among the older Korean population, as well as the moderators and mediators influencing this association. Method : Data were derived from the baseline survey of the Korean Longitudinal Study of Aging. The sample consisted of 1,953 men and

2,469 women aged >60 years who were married and had at least one child. The 10-item Center for Epidemiological Studies-Depression scale was the outcome measure. Multiple linear regression was used to evaluate the relationship between spousal loss/widowed and depressive symptoms. Results : Social ties accounted for 35.4% of the difference in depressive symptoms between married and widowed women but only 4.6% of it between married and widowed men. In widowers. The interaction of spousal loss/widowed and quality of relationships with children was significant only among men, and the interaction of this status and the cohabitation with married children was significant only among women. Conclusion : Korean widows who lacked social ties with children or friends were more likely to be depressed. Cohabitation with children may buffer mental distress for such women, and qualitatively good relationships with children may be important for the mental health of older Korean widowers. Keywords : Widowed, Depressive symptom, Social tie

PP26 S-299

HOLISTIC MODEL OF EMOTIONAL REGULATION PROGRAM DESIGN FOR THE ELDERLY & ACTION RESEARCH OF CARERS' PRAXIS COMMUNITY

Hsiu-Lan CHIN¹, Ming-Fen LI², Ying-Tsun HUNG³, Yu-Fen HSIAO⁴
(1. Department of Elderly Welfare & Social Work, Toko University, Taiwan; 2. Professor of Department of Adult & Continuing Education, NTNU, Taiwan; 3. Department of Senior Citizen Service Management, Ching Kuo Institute of Management and Health, Taiwan; 4. Department of Elderly Welfare & Social Work, Toko University, Taiwan)

Introduction : "Health Promotion" on health service for the elderly is the perspectives on "Health Economy". There are more and more research about the emotional regulation on cognitive declination and focus on holistic model program design which is the center of the organizational caring system. Method : The "carers' praxis community" is composed of the researcher and carers on organizational level, and work on emotional regulation program designed for the elderly through dynamic workshops of all the participants. Through holistic dialogue, observational research, program design and Self-Assessment Manikin, this study is an action research. Results : The research will last for 2 years and this paper is the first stage of it. Therefore, the contribution of this paper contains: (1) Form the "carers' praxis community" which can promote the value of the research on organizational practice; (2) Appeal to the public for much more attention to emotional regulation and release the mental pressure of old people; (3) Develop a series of emotional regulation programs according to the Wholeness Praxis Paradigm, and manifest the perspectives of "Health Economy"; (4) The design of emotional regulation programs includes three sets of the activities which related to mind, emotion and body levels. Conclusion : All the series of programs are designed by the participants from organizational social worker. This is the pilot study of carers' praxis community in Taiwan which can promote the value of the research on organizational practice. And the contribution of this research is obviously significant. Keywords : Carers' Praxis Community, Emotional Regulation, Holistic Model, Program Design

PP26 S-300

AN AUTO-ETHNOGRAPHIC STUDY OF A YOUNG WOMAN'S RELATIONAL EXPERIENCES OF OLDER PERSONS

Janine VAN AARDT (Department of Psychology North-West University South-Africa, North-West University South-Africa Potchefstroom Campus Reseach-Psychology, South Africa)

Introduction : People are embedded in social networks, including family, friends and the broader community. The aim of this study is to explore the relational experiences of a young woman and older persons in the different social networks in which she functions. Method : An auto-ethnographic research design was used, which is a self-narrative method focusing on the understanding of the self, others and the culture. The participant is a 22-year old female and her social networks can be described as multi-racial (Indian, White and Colored) and multi-lingual (Afrikaans, English and Hindi). Data were gathered by means of a personal journal as well as the Mmogo-methodTM. The journal was completed by means of open-ended questions reflecting the experiences of the younger woman's relationship with older persons and the Mmogo-methodTM is regarded as a visual data gathering method, consisting of clay, beads and straws, which are used to make visual constructions which are regarded as projections. Data were analysed by means of thematic analysis. Results : The findings revealed that the young woman's community networks consist of different social networks, varying in their levels of closeness and with different motivations for their involvement with one another, formed her understanding of relationships. In these diverse relational networks she developed respect for diversity irrespective of race and age. She developed sensitivity and adaptability towards older persons in various social and cultural contexts. Conclusion : In conclusion being exposed to diverse relational networks contributed to her ability to interact emphatically to people across different cultures. Keywords : Social Networks, Embedded, interact

PP26 S-301

THE RELATIONSHIP BETWEEN EGO-INTEGRITY AND FRIENDS SUPPORT ON ELDERLY'S DEATH ANXIETY : FOCUSING ON GENDER DIFFERENCES

Jin Jin PARK, Jeong Shin AN (Dept. of Child & Family Studies, Pusan National University, Korea)

Introduction : The purpose of this study was to examine the relationship between ego-integrity and friends support on elderly's death anxiety focusing on gender differences. Method : The subjects of the study were 345 elderly over 65 years of age in Korea. For data analysis, frequency, Cronbach's α , Pearson's correlation coefficients and multiple regression were used. Results : The results showed that the relation between ego-integrity and friends support on elderly's death anxiety were different by gender. In case of males, both receiving and providing friends support had influence on death anxiety of the elderly. However, in case of females, both receiving and providing friends support had indirect influence on death anxiety through ego-integrity. Conclusion : The result was discussed in terms of gender differences and the influence of friend support in educational programs for the elderly. Keywords : death anxiety, friends support, ego-integrity

PP26 S-302

CORRELATES OF HEALTH-RELATED QUALITY OF LIFE AMONG KOREAN IMMIGRANT ELDERS

Jong-Eun LEE¹, Miyong KIM², Hae-Ra HAN² (1. College of Nursing, Catholic University of Korea, Korea; 2. School of Nursing, Johns Hopkins University, USA)

Introduction : Health-related quality of life (HRQOL) is an important clinical outcome, particularly for individuals with chronic conditions such as hypertension (HTN). While some evidence indicates that social support may play a protective role in promoting HRQOL in the presence of adverse symptoms such as depression, QoL among KAs with HTN has rarely been studied. This study was aimed to identify

factors associated with HRQOL in hypertensive Korean American (KA) elderly (? 60 years of age) with a focus on their social support. Method : A total of 440 Korean elders with HTN (systolic blood pressure \geq 140 mm Hg and/or diastolic blood pressure \geq 90 mm Hg or on antihypertensive medication) participated in the study between February 2008-March 2009. Measurements included demographics, disease characteristics (years of HTN, antihypertensive medication, comorbidity, blood pressure), psychosocial variables (social support, depression), and HRQOL. Results : The hierarchical regression model for HRQOL explained 32.8% of the variance. Female gender ($\beta=.109$, $p=.036$), a greater number of comorbid conditions ($\beta=.183$, $p=.000$), lower social support ($\beta=-.240$, $p=.000$), and greater depressive symptoms ($\beta=.402$, $p=.000$) were associated with poorer HRQOL. Depression was the most potent correlate of HRQOL among elderly Korean Americans with HTN. Conclusion : Future intervention should consider managing depression as an essential component of comprehensive HTN care for this minority population. In addition, the results point to the need for research to further investigate the potential benefits of social support as a means of improving HRQOL in hypertensive patients. Keywords : Depression, Hypertension, Quality of life

PP26 S-303

IMPACT OF SPOUSAL HEALTH PROBLEMS ON MEN AND WOMEN'S SOCIAL INTEGRATION IN MID-LIFE

Jung-Hwa HA¹, Joohyun KIM², Gyounghae HAN² (1. Department of Social Welfare, Seoul National University, Korea; 2. SNU Institute on Aging, Seoul National University, Korea)

Introduction : Active social engagement is one of the key determinants of social and psychological well-being. However, stressful life events, such as spouse's serious health problems, can threaten one's ability to participate in social roles outside the family. In the current study, we examine (1) the effects of spousal health problems on midlife adults' social network size, interactions with friends and relatives, and formal social participation; and (2) the extent to which these effects differ by gender. Method : Analyses are based on data from Korean Baby Boomers' Panel Study, a probability sample of 4,668 adults aged 47-55. We used data from the baseline interview conducted in 2010. Results : The results showed that among men, having experienced spouse's serious health problem did not exert any significant influence on the size of one's social network. In terms of social interactions, those who experienced spousal health problems reported fewer interactions with relatives. On the other hand, among women, those who experienced spouse's serious health problem reported greater network size and greater formal social participation. Conclusion : The findings suggest that women are more likely to draw on their social network to cope with spousal health problem, whereas men may become more socially isolated when their spouse becomes sick. The findings encourage gender-tailored approach to maintaining and maximizing benefits from social engagement in the face of spouse's health problem in midlife. Keywords : health, social integration, gender

PP26 S-304

IN-HOME SENSOR DEVICES AND THE ELDERLY: THE POSSIBILITIES FOR MEETING THE NEEDS AND EXPECTATIONS OF SOCIAL WORKERS

Kumiko NONAKA¹, Takashi KOIKE¹, Tarou FUKAYA¹, Masami HASEBE¹, Reiko WATANABE², Shuichiro WATANABE³, Shouzoh UEKI⁴, Naoko ARAYAMA⁴, Hihohito YOSHIDA⁴, Tomoko KAMEI⁵, Masumi MATSUMOTO⁵, Chiaki TANAKA⁶, Takayuki HOSOI⁷, Yoshinori FUJIWARA⁸ (1. Tokyo Metropolitan Institute of

Gerontology, Japan; 2. St. Luke's College of Nursing, Japan; 3. Graduate School of Gerontology, J. F. Oberlin University, Japan; 4. Faculty of Medical Science & Welfare, Tohoku Bunka Gakuen University, Japan; 5. Department of Architecture and Building Engineering A, Tokyo Metropolitan University, Japan; 6. Division of Integrated Sciences, J. F. Oberlin University, Japan; 7. Department of Clinical Research and Development, National Center for Geriatrics and Gerontology, Japan; 8. Tokyo Metropolitan Institute of Gerontology, Tokyo Metropolitan Institute of Gerontology, Japan)

Introduction : Installing sensor devices (e.g., living room, toilet, and bed room) are expected to provide long-term care professionals with information about elderly clients' daily life. The devices are useful in monitoring and detecting deterioration of health conditions in elderly living alone. However, these devices are underutilized by social workers involved in health management of community dwelling independent elderly. This research explored how sensor devices met the needs and expectations of social workers. We proposed effective ways for social workers to incorporate these devices into their care systems, leading to the detection of early symptoms of deterioration; thus helping to maintain independent living at home. Method : We recruited 20 social workers responsible for monitoring health conditions and allocation of in-home long-term care services for 36 elderly clients living alone. Semi-structured, in-depth interviews were conducted in 2011 and 2012. Qualitative data from transcribed interviews was analyzed, using a grounded-theory-approach. Results : Professionals tended to monitor their clients' health conditions based on reports from in-home long-term care service providers, making it harder for them to assess health conditions of those with higher IADL. Expectations for sensor devices varied based on clients' health conditions and levels of dementia. For example, frequency of going-out was considered useful to monitor health conditions of the elderly with higher IADL, while levels of activity at home were considered useful when monitoring elderly with severe health problems. Conclusion : The findings suggested that sensor devices can provide social workers with specific information relating to their clients' health conditions. Keywords : monitoring sensor, elderly living alone, in-home long-term care

PP26 S-306

JOB STRESS AND SATISFACTION OF ADMINISTRATORS OF VISITING NURSING STATIONS IN JAPAN

Midori NISHIO (Health Sciences, Kyushu University, Japan)

Introduction : The purpose of this study is to determine the job stress and satisfaction of administrators of visiting nursing stations in Japan. The roles of the visiting nurses have been more crucial, since the policy of medical system was changed to promote home medical care for patients who have to be discharged from hospitals. The tasks of the visiting nurses include providing care for patients at home, assessment of the patient conditions to judge the needs to change the care plans. It is clear that the visiting nurses have been highly stressed. It is required to clarify the actual status and problems of the administrators, since which will make it clearer that the satisfaction of nurses for their jobs correlate with the satisfaction of the patients who are cared by the nurses. Method : Quantitative research. Results : The results of the Nursing Job Stress showed that the stress of the administrators was not higher than the staff nurses (0.08) for the sub scale of "Stressor associated with facing with patient's death". The total scores for "the job satisfaction" showed the satisfaction of staff nurses was significantly higher than the administrators (0.05). Conclusion : In visiting nursing stations, administrators are expected to manage the business affairs. As the roles of visiting nursing station will be larger

in the future, it is required to address the business affairs so that the administrators feel satisfied with their jobs, as well as their staff nurses, in order to provide high quality services. Keywords : visiting nursing stations. administrators. job stress.satisfaction

PP26 S-307

ASSOCIATION OF SOCIAL SUPPORT WITH DEPRESSIVE STATE IN JAPANESE ELDERLY: JAGES PROJECT

Misuzu FUJITA¹, Kayo SUZUKI², Chiyo MURATA³, Noriko CABLE⁴, Katsunori KONDO², Akira HATA¹ (1. Department of Public Health, Chiba University Graduate School of Medicine, Japan; 2. Center for Well-being and Society, Nihon Fukushi University, Japan; 3. Department of Social Science, National Center for Geriatrics and Gerontology, Japan; 4. Research Department of Epidemiology and Public Health, University College London, United Kingdom)

Introduction : Little is known what types of support would protect individuals, especially elderly people, from depression in a non-western country. Our aim is to explore associations between types, direction, and source of social support and depressive state, using an elderly sample in Japan. Method : The subjects of this cross-sectional study were 57,818 elderly Japanese from the Japan Gerontological Evaluation Study (JAGES) project, targeting independently living elderly in selected municipalities. Using multinomial logistic regression, we examined the associations between social support by types (emotional or instrumental), direction (reception and provision) and source (spouse, children living together, children or relatives living apart, neighbors, friends, other people), and 3 levels of depressive states (none, depressive, depressed) indicated by the short version of the Geriatric Depression Scale (GDS-15). All effects were adjusted for age, marital status, income, living alone status, and health factors. Results : Emotional support was the most protective from depressed state when received from a partner (OR=0.56, 95%CI=0.47-0.67 in men and OR=0.65, 95%CI=0.54-0.79 in women) or provided to friends (OR=0.56, 95%CI=0.46-0.68 in men and OR=0.53, 95%CI=0.45-0.63 in women). Lack of instrumental support from a partner was associated with depressive state (OR=0.55, 95%CI=0.44-0.69 in men and OR=0.39, 95%CI=0.33-0.47 in women). In addition, providing instrumental support to children or relatives living apart was beneficial to depressed state (OR=0.73, 95%CI=0.61-0.88 in men and OR=0.80, 95%CI=0.69-0.93 in women). Conclusion : Receiving emotional and instrumental support from a partner, as well as providing emotional and instrumental support to non-family individuals, appeared to be protective from depressive state in Japanese elderly. Keywords : social support depression

PP26 S-308

DETERMINATION OF BARRIERS IN SOCIALIZATION OF ELDERLY PEOPLE WITH CHRONIC DISEASES

Nalan AKBAYRAK, Ayla DEMIRTAS (Internal Medicine Nursing, Gulhane Military Academy, Turkey)

Introduction : Health conditions effect the aspect for the life and social compliance of elderly people. The difficulties of elderly patients with chronic diseases in socialization should be considered. The aim of this research is the determination of these barriers. Method : A qualitative and phenomenological design was used. The study was performed with 15 patients over 65 years old with at least a chronic disease between June 1st and September 30th, 2012 at a Research and Training Hospital. Semi-structured interview form was used and in-depth interviews were audio taped. The duration of interviews ranged from 30 to 40 minutes. All interview reports are reviewed multiple

times to analyze the data with the Colaizzi method of analysis. Results: This study is conducted with 7 female and 8 male participants between 65 and 79 years old. Category.1: Insufficient time to socialize. Subtheme.1.1, Wasting all the time for the illness and needs of the illness, Subtheme.1.2 Negative effect of the change in the progress of the illness in an unexpected time. Category.2: Lack of personal energy to socialize. Subtheme.2.1, Lack of energy for personal and household hygiene Subtheme. 2.2, Reduction of energy due to emotional condition. Category.3: Poverty. Subtheme.3.1, Increase in expenses with aging and chronic illness, Subtheme.3.2, Lack of money for the needs of socialization. Conclusion : It is observed that the elderly people with chronic diseases can not socialize and live alone but do not feel the need to socialize. Nurses should support elderly people in socialization with the respect to individuality. Keywords : Socialization, elderly people,Chronic disease

PP26 S-309

WELL-BEING AND SAFETY OF THE ELDERLY LIVING AT HOME, A SURVEY INITIATED BY RESPECT SENIORS

Nicolas BERG¹, Dominique LANGHENDRIES², Laurent NISEN³, Marie-Therese CASMAN³ (1. Geriatric, CHR Citadelle Liege and Respect Seniors, Belgium; 2. Respect Seniors, Walloon Agency to Combat Elder Abuse, Belgium; 3. Panel Demographie Familiale, Universite de Liege, Belgium)

Introduction : "Respect Seniors", the Walloon Agency to Combat Elder Abuse, has initiated a survey the goal of which is to estimate the prevalence of abuse towards the elderly (aged 70 and up) in Wallonia, with the collaboration of the University of Liege. Method : We defined abuse as "a repetitive or isolated act, or an absence of actions within a relationship resulting in negative consequences for the victim". Seven types of abuse have been covered: neglect, psychological, physical, sexual, financial, civic and medical abuses. 766 persons were interviewed, face to face, to answer the questionnaire. Results : 28.19% of those surveyed have experienced at least one type of abuse. Gender, level of education and income have no clearly identifiable impact. Those who have no children are most often the victims of psychological abuse. A factor against neglect and physical and sexual abuse appears to be being married or living with a partner. The main protection factor is social integration. On the opposite, a bad health status is a factor of risk. The people to whom the victims confide in are family members (46.76%), friends (25.93%), doctors (10.19%) and the police (8.80%). However, 32% have not reported the abuse to anyone. Conclusion : The importance of a social network and the health as factors of protection. These two points could lead to create policies giving a specific attention to potential victims. A permeability between the different types of abuse exists: 44% of abuse victims report at least two violations within different domains (for example physical and psychological). Keywords : Elder abuse, Health, Social network

PP26 S-310

THE STEREOTYPICAL BELIEFS ON THE OLD WORKERS IN KOREA

Seon Hee MO, Dong Seon KIM (Social Welfare Department, Kongju National University, Korea)

Introduction : It is widespread in Korea to make old workers first victims of restructuring and set age limit in their recruitment. As age discrimination in the workplace is related with stereotypical beliefs on old workers, this study was to examine the extent of stereotypical beliefs on Korean old workers and to find out influential variables affecting stereotypical beliefs. Method : 300 employees in middle and small companies were interviewed by telephone about stereotypical

beliefs on old workers. The scale of stereotypical beliefs comprises 21 items derived from the literatures and interviews with the labor experts. Results : Mean value of stereotypical beliefs was 2.64 of 5 points. The factor analysis results show that stereotypical beliefs are composed of 3 factors: sociability(2.83), competence(2.84) and fidelity(2.15). In multiple regression, company's hierarchy, the old workers' job performance, industry types, the level of age discrimination, and individual variables such as job position, relations with old workers are significantly related to the overall stereotypical beliefs on the old workers. The strongest predictor is company's hierarchy(.25), the old workers' job performance(-.24) followed by the level of age discrimination(.21). Conclusion : In conclusion, it is suggested to improve old workers' job performance, to adopt age-free organizations, to discard discriminatory policies and to encourage contacts with different age groups in the workplace for lowering or eliminating negative stereotypical beliefs on the old workers. Keywords : stereotypical beliefs on old workers, age discrimination, Korean old workers

PP26 S-311

HEALTH AND SOCIAL NETWORK CHANGES: A LONGITUDINAL PERSPECTIVE

Sojung PARK¹, Bo Rin KIM² (1. School of Social Work, University of Michigan, USA; 2. School of Public Health, University of Michigan, USA)

Introduction : Social relationship changes as people age and the negative impact of isolated social network on health has been established. However, how health conditions influence changes in social network is fairly under researched in general. This study aims to investigate the effects of health conditions on changes in social network among Korean older adults aged 65 and above. As a first longitudinal research on social network typology, we first examined the pattern of changes in the social network and then examined how physical and mental health conditions affect the changes in the network types. Method : Data were from the 2006 and 2008 waves of the Korean Longitudinal Study of Aging (KLoSA; N = 3501). Latent Class Analytical approach was employed to identify network types from five indicators of network structure such as marital status, social participation, family size, frequency of contact with children, frequency of contact with friends. Multinomial logistic regression models were used to determine the extent to which changes in health status affect the transitions among the network types. Results : Four network change types were derived including Remain Restricted, Remain Non_Restricted, Become Non_Restricted, and Become Restricted. Regression findings show that older adults with worsening changes in functional limitation, self rated health, cognitive health are more likely to remain restricted or become restricted in their social relations. Conclusion : Our study contributes to the extremely limited body of literature on longitudinal network typology, and on the dynamic association between health and social networks among older adults. Keywords : Social Networks, Health, Changes

PP26 S-312

STUDY ON THE FACTORS TO SUPPORT DAILY LIFE OF ELDERLY PEOPLE LIVING ALONE AT HOME SEEN FROM THE CHANGE OF THE INDIVIDUAL ELDERLY IN SOCIAL SUPPORT PROCESS

Soyoun PARK (Graduate Department of Social Welfare, Graduate Schools of Japan College of Social Work, Japan)

Introduction : The purpose of this study is to describe the factors which affect the support processes, by analyzing how elderly people

living alone at home think about, form and maintain their relations with the social support network and support processes. The social support network includes families and relatives of these elderly and non-blood related people such as friends, neighbors and professional workers. Method : I selected the 30 subjects living in Mizumaki town, Onga County, Fukuoka Prefecture, Japan, by using the snow-fall sampling. The semi-structured interviews were conducted from August to October in 2012. The interviewed contents were analyzed based on the modified grounded theory approach (M-GTA). Results : 1. The process that the anxiety about their daily life led the elderly living alone at home to maintain their relations with the social support network was described. 2. The self-support ability of these elderly people who want to remain autonomous evidently works between the support process and the factors (mutual support, public support) to support its process. Conclusion : The results suggested that a multi-layered support plan which combines self support, mutual support and public support is important in a daily life support service for elderly people living alone at home in the community. In order to create a life support model based on this study in future, we need to describe a change of support process accompanied by the time series change such as the decline of movement ability of the elderly and the influence among the self support, mutual and public support. Keywords : elderly people living alone at home, social support network, community care system

PP26 S-313

COMMUNITY MAPPING USING GIS OF MOBILE AS INTERGENERATIONAL APPROACH

Sungsook PARK (Intergenerational Practice Project Team, Dongbaek Co., LTD, Korea)

Introduction : The risk factors of environmental access tend to reduce natural communication or networking neighborhood among the elderly. Our goal is to figure out the environmental risk factors for the elderly. Method : We set up Mokdong safe community network council including senior groups. The council takes the action on the environmental risk or interview of seniors targeting on accident or safety issue. The first goal is to try community mapping using GIS of mobile to figure out dangerous areas for them. The younger generations make teams with seniors to walk around the targeting area to find dangerous spots using GIS of Mobile. The seniors communicate with each team how dangerous its spots are from their perspective. Results : The community mapping using GIS of mobile is developed to figure out dangerous areas for the risk groups. Seniors are able to bring their problems and solutions and deal with them using technology through intergenerational approach. They submit the result to local government to ask to get them repaired. It helps to decrease in accident rate among seniors. The younger generations also learn the aging issues or accident prevention information from the perspective of the seniors. Conclusion : This project is to figure out the environmental risk factors for the elderly. It results in developing safe community mapping information using GIS of mobile through intergenerational approach matching senior group with younger generation. It helps for younger generation to realize the aging issue or environmental risk from the perspective of seniors through the process of the all activities. Keywords : safe community for active aging, intergenerational practice, community development

PP26 S-314

A LIFE REVIEW PROGRAM USING GUIDED AUTOBIOGRAPHY TO PROMOTE ACTIVE AGING IN TAIWAN

Tsuann KUO (Medical Sociology and Social Work, Chung Shan

Medical University, Taiwan)

Introduction : As the aging rate in Taiwan tops the world's fastest, community-based centers are coming up with programs to promote active aging. Programs based on life reviews were shown to improve emotional well-being, self efficacy and life satisfaction. Thus, a series of life review topics were organized by trained volunteers and social workers to lead the elders in making their own life story books. **Method :** A ten-week structured life review program was created based on Birren's Guided Autobiographic framework. A total of 204 elderly spread over 15 community-based senior centers over a two-year period participated in the program. The pre- and post- tests were conducted to measure depressive symptoms, self-efficacy, and life satisfaction before and after the program. **Results :** The elderly were multi-lingual, with 78 years old on average, and the majority being female 80% and having a level of an elementary school education (59%). At the end of the ten weeks, every participant made a life story book on their own and each told stories about their lives. Both the life satisfaction and depression scores improved, from 18.84 to 19.31 (3%) and 6.14 to 5.78 (6%, negatively reversed), respectively. **Conclusion :** This study showed that a life review program improved emotional well-being and self efficacy for elderly participating in community-based center. Based on their life experiences, the elderly made life books that served as a treasure for their families. The implications for such a program can be drawn to promote active aging and psycho-social well-being in the future. **Keywords :** Life Review, Active Aging, Guided Autobiography

PP26 S-315

CHILDLESSNESS AND SUBJECTIVE WELL-BEING IN CHINESE SPOUSAL CAREGIVERS IN WIDOWHOOD

Sheung Tak CHENG, Wing Lam Rosanna LAU (*Department of Psychological Studies, Hong Kong Institute of Education, Hong Kong*)

Introduction : This study examined the effect of childlessness on psychological well-being in widowed caregivers taking into account the influences of social network variables. **Method :** 73 Chinese widowed caregivers (mean age=74 years) who were community-dwelling formed the sample of this study. Sixteen percent (n=44) were childless. Social network variables, instrumental activities of daily living, chronic illnesses, depressive symptoms, life satisfaction, positive affect, and negative affect were assessed. **Results :** Childlessness was significantly associated with all outcomes of psychological well-being even after controlling for network size. After positive and negative exchanges were taken into account, the effect of childlessness on depression and life satisfaction became nonsignificant but remained significant on positive and negative affect. Furthermore, the effects of childlessness on depression and life satisfaction were significantly stronger in women than in men. Childlessness also had a stronger association with depression in those with functional impairments. **Conclusion :** Findings support the importance of children, and supportive exchanges with them, for the subjective well-being of Chinese widowed caregivers. Being female and having physical dependencies might amplify the effects of childlessness. **Keywords :** Social network, Well-being, Caregivers

PP26 S-316

EFFECT OF SOCIAL NETWORK ON BODY MASS INDEX AMONG THE ELDERLY

Won Joon LEE (*Department of Preventive Medicine, Yonsei University College of Medicine, Korea*)

Introduction : It is known that obesity appears to spread through social ties. The association between other variables related to social network

and obesity are unclear. This study aimed to identify density or interaction degree of communication correlated with obesity in the elderly. **Method :** This cross-sectional study analyzed data from 660 Koreans (275 men, 385 women) aged 60 years or older, who participated in Korean Social Life, Health and Aging Project (KSHAP) in 2011. Communication density is the number of connections in the network reported a fraction of the total links possible, and interaction degree of communication is average frequency (days per year) of communication between network members. The association between density or interaction degree of communication and body mass index (BMI, kg/m²) was investigated by multiple linear regression analysis. **Results :** BMI decreased according to tertile or density of interaction degree of communication both men and women (p for trend<0.05). After adjusted for potential confounders, in men, lower tertile of communication density was associated with higher BMI (regression coefficient $\beta=1.049$, $p=0.041$), but interaction degree was not significantly associated. By contrast, in women, communication density was not significantly associated, but lower tertile of Interaction degree was associated with higher BMI ($\beta=0.896$, $p=0.043$). **Conclusion :** Our study suggests that there is a gender difference in the relationship between density or interaction degree of communication and obesity in the elderly. **Keywords :** Social networks, Body mass index, Aged

PP26 S-317

THE RESTRUCTURING OF OLDER HUSBANDS' SOCIAL NETWORKS AFTER TRANSITION TO SPOUSAL CAREGIVING IN SOUTH KOREA

Wonjee CHO¹, Denise C. LEWIS² (*1. Institute on Aging, Seoul National University, Korea; 2. Department of Human Development and Family Science, University of Georgia, USA*)

Introduction : The rapidly growing older population in South Korea has raised concerns about eldercare. Older husbands also are increasingly engaging in eldercare. For husband caregivers, caregiver role acquisition has been considered as a negative life event restricting their social life. Little is known about older husband caregivers' experience of adjusting to the restricted personal/social life and of re-arranging social networks. **Method :** To explore how social networks were restricted and arranged in spousal caregiving, in-depth interviews were conducted with 23 Korean men aged 60 and over who, as primary caregivers, have taken care of their wives with illnesses and/or disabilities. Phenomenological data analysis was used to derive essential themes, related to the restricting of their social networks after the transition to spousal caregiving in South Korea, from their accounts of lived experience in spousal caregiving. **Results :** This study found that becoming a spousal caregiving primarily caused time and geographic restrictions in the caregiving life. It changed husband caregivers' lifestyle in personal, social life. It meant husbands had to give up or reduce their previous activities. In their new life as a husband caregiver, former networks (friends, relatives, neighbors, & religion-related people) shrank due to difficulties associated with continuing engagement in outside activities, reluctance to embrace a caregiving identity, and decreasing interactions with previous acquaintances. However, new networks (formal care, medical professionals, social welfare benefits, other caregivers/their care-recipients, & community) emerged as social resources for husband caregivers and as significant relationships in caregiving. **Conclusion :** The caregiver role reorganized older husbands' social networks in the caregiving situation. **Keywords :** older husband caregiver, spousal caregiving, social network

PP26 S-318

COMMUNITY ORGANIZATION FOR ELDERLY PEOPLE WITH DEPRESSIVE SYMPTOMS

Yumi OSHITA (*Health and Welfare, Prefectural University of Hiroshima, Japan*)

Introduction : The purpose of this study was to construct a theoretical and therapeutic framework for community organization to improve adaptation levels of elderly people. **Method :** We constructed a community mental health theory that can explain the dynamics of the correlated change processes between depressive symptoms of elderly people and interpersonal relationships within a community. We systemized a therapeutic framework based on community mental health theory. The therapeutic intervention skills comprise the Calgary School circular questions and the skills of solution-focused brief psychotherapy to transform a maladaptive transactional process within a community. Moreover, we constructed a method of measuring the effects of the interventions with this theory. Case studies of maladaptive elderly people exemplified the intervention methodology. The effectiveness of the interventions was measured with the new measurement tool. **Results :** Our case studies proved that this therapeutic framework can assess and transform the dynamics between pathological transactions within a community and the adaptation level of elderly people. **Conclusion :** This new intervention methodology based on community mental health theory is an effective method for solving the adaptation problems of elderly people. **Keywords :** community organization, improve adaptation levels, depressive symptoms

PP26 S-319

SOCIAL NETWORK TYPE OF ELDERLY PEOPLE WITH DEMENTIA AND QUALITY OF LIFE

Yun Jo BAE¹, Sungkook LEE² (*1. Kyungpook National University, Department of Public Health, Korea; 2. Kyungpook National University, Department of Public Health, Kyungpook National University School of Medicine, Korea*)

Introduction : The aim of this study is to classify the social network types among elderly people with dementia, and to examine the relationship of network type to quality of life. This is to identify influence of social network on quality of life of elderly people with dementia. **Method :** The data of 222 elderly people with dementia used in this study were collected from a health center and elderly people with dementia living in the community in Daegu. The interview was conducted from July 17 to August 31 in 2012 using a structured questionnaire. And network types were derived by Hierarchical cluster analysis, based upon four differentiating criteria: composition, size, social club attendance, frequency of contact. **Results :** Three network types are classified: (1) active independent (2) inactive dependent (3) inactive restricted networks. Respondents in the different network types are found to have different degrees of quality of life. Respondents active independent networks are reported to have the highest quality of life, while those with inactive restricted network are the lowest. **Conclusion :** The results of the study suggest that the classification of network types allows consideration of the interpersonal environments of elderly people with dementia. The relative effects on quality of life for elderly people with dementia, evident in the current analysis, are the case in point. Therefore Social service programs should focus on different groups based on social network type. **Keywords :** Social network typology, Elderly people with dementia, Quality of life

PP26 S-320

EFFECTS OF A WATCH ORGANIZATION TRAINING

PROGRAM

Seiko MASUDA, Chieko TSUMURA (*Faculty of Nursing and Rehabilitation, Konan Women's University, Japan*)

Introduction : When elderly people fall into a critical state, the situation where the circumference cannot be asked for help has social-problem-ized. While relation of people between the neighborhoods dilutes, it watches and can set in an organization -- it is necessary to watch and to examine the state of activity. **Method :** Training, 2005 21 And fiscal year 22 Of the fiscal year 2 Watch over the years, members of the Organization 42 Name (Watch volunteer Commissioners,) To experience the dramatic relief and made based on group work discussion afterwards. Record the remarks made in the group work mathematical system for Text Mining Studio4.1 (mathematical system) by analysis. Confirmed training effect questionnaire and comments after the training. **Results :** The inside of the same site of a questionnaire to 91.3% of the collective housing, and the same neighborhood--watching--it was possible and 'a greeting and voice, or Mounting'(56.2%) was mainly performed. In the comparison in the Heisei 21 fiscal year and the Heisei 22 fiscal year a positive utterance, such as 'watching, and enabling it to consult with the naysayer'by/voice or Mounting etc. when a candidate is required ', was seen. **Conclusion :** In the training using dramatic relief, box of an organization member it can watch and can learn actively and positively. It was shown that it is a program which can understand the importance which is watched and an organization member watches from the contents of an utterance of group work and an after-training questionnaire. **Keywords :** Watch, Organization training program

PP26 S-321

THE IMPACT OF ELDER ABUSE ON NEGATIVE ATTITUDES TOWARD BEING OLD OF CARE-GIVERS

Misook CHO (*Department of Social Welfare, Sahmyook University, Korea*)

Introduction : Studies show that by 2019, about 14 percent of the population will be seniors aged 65 and over in South Korea. The increase of the aged population brings a primary interest in the elderly abuse. Until now, the major issues of criminology are concentrated in adolescent and woman related crimes. Therefore, strong interests in aged abuse are lacking. Especially education for ageism or rather the lack of it, is the main reason why elder abuse gets passed over. Ageism adversely affects older people and restricts the roles and alternatives available to them. So, the government should be preparing institutional support and intervention for preventing further aged mistreatment. **Method :** In this article, First, We tried to define the elderly abuse based upon the Korean traditional family culture. Second, We analyzed types of mistreatment for theoretical foundation of "Johnson's Abuse Indicator". Third, We explored various factors of the Impact of Elder Abuse on negative attitudes toward being old on Care-givers abasement. **Results :** It is not older people, but, rather the younger aged groups who determine the status and position of older people in a society. The young and middle-aged not only determine the future, but also their own treatment as they age. **Conclusion :** Finally, we attempted to analyze the present condition of the aged mistreatment cases in this piece and sought to plan to correct the aged abuse issues by focusing on the current criminal policy. Above all, in order to handle the aged abuse issue, confidence in the judicial system by the aged, must be enhanced. We also find that systemic or institutional grids are necessary for remedying damaged the aged and they should have their legal human rights protected. For the protection of minority rights, the restoration of communication channels modern Korea society is not well equipped to handle this crisis is needed and respect

for the aged should be of greater concern. Keywords : Elder Abuse, Ageism, Human rights of Older Person.

PP26 S-322

ELDER ABUSE AND QUALITY OF LIFE

Bo Sun KOH (*Department of Social Welfare, Jeju International University, Korea*)

Introduction : The purpose of this research was to test causal relationships among family function, social support, mental health, and subjective quality of life for the abused elderly and non-abused elderly. Method : A structured questionnaire was used to interview a sample of 200 abused elderly and 200 non-abused elderly over 65 years old, who live in Jeju, Korea, 2008. Independent variables consisted of family function(Kim, Y.S., 2001), social support(Koh, B.S., 2004), and mental health(KGHQ-20; Shin, S.I., 2001). Dependent variable was subjective quality of life(Greenley, et al., 1997). Statistics analyses included t-test, Pearson's Product Moment Correlation, Hierarchical regression, and Path analysis. SPSS for the WIN 12.0 program was used for these analysis. Results : Family function, social support, mental health had significant and positive effects on the subjective quality of life in both the abused elderly and non-abused elderly. The strongest predictor of subjective quality of life for the abused elderly was family function, otherwise mental health was the greatest predictor of subjective quality of life in the non-abused elderly. Mental health appeared to be important intervening variable in the subjective quality of life in both the abused elderly and non-abused elderly(H3). Conclusion : Quality of life is a recognition of self-value in life. The victim has loss of self-value and significance of existence in their life. Elder abuse is a complex problem with multiple risks and causes. In particular, family environment is important context to solve the elder abuse problem. Elder abuse protection system has to cooperate multi-dimensional efforts including the victim and assaulter, family, and community. Keywords : Quality of life, Elder abuse, Family function, Social support, Mental health

PP26 S-323

RESILIENCY AND VULNERABILITY TO ELDER ABUSE ACROSS ETHNICITY AND CULTURES

Jonathan APPEL¹, Dohee KIM-APPEL² (*1. Behavioral and Social Sciences, Tiffin University, USA; 2. Art Therapy and Counseling, Ursuline College, USA*)

Introduction : With the explosion of a global aging population, the topic of elderly abuse warrants great attention. Participants will explore strengths and limitations of a systems approach for working conjointly with aging families within the human service professions. Participants will receive information and research to identify high-risk families across ethnic and cultural backgrounds, assess the current country specific protection laws, and explore intervention, prevention strategies, family configurations, and service utilization. Method : Review of pertinent literature including research and appropriate legal statutes and interventions strategies. Theories of Abuse and Neglect will be explored. Results : Existing research in the elder abuse and aging literature will be addressed--as well as mention of gaps in the literature and research. Conclusion : Elder Abuse is a highly complex and multifaceted phenomenon. This issue is even more complex in a global context. A multidimensional and integrated and culture specific approach to address elder abuse world-wide is urgently needed. Keywords : Elder Abuse, Aging Legal

PP26 S-324

ELDER ABUSE IN RESIDENTIAL AGED CARE:

PERCEPTIONS, PRACTICE AND POLICY

Josephine WOLL, Catherine HALL, Barbara PARKER (*School of Nursing and Midwifery, University of South Australia, Australia*)

Introduction : In Australia and internationally, there is a paucity of research about elder abuse specifically within Residential Aged Care Facility's (RACF's) and it remains a hidden problem. To date government reports and media stories have provided the only estimate of the prevalence of elder abuse within RACF's. In 2007, the Federal Government implemented a number of regulatory initiatives to address issues highlighted by a small number of highly publicised cases in 2006. Minimal evidence was found regarding a reduction in the reported incidents of elder abuse within RACF's since the introduction of these initiatives. Method : The aim of this research is to examine elder abuse specifically within RACF's and to determine from the perspective of the residents, family and health care workers what is understood by the term elder abuse. The research also examines current work practices and organisational policies to gain an understanding of how violations are approached and decisions for reporting are made. Results : Utilising an action research approach in consultation and collaboration with health care workers, current care practices within RACF's are reviewed in association with research findings. Preliminary findings from stage 2 will be presented including observation, interviews, focus groups and questionnaire data. Conclusion : The findings from this study add to current knowledge of elder abuse by developing a broad perspective using comprehensive data on the perceptions and causes of elder abuse within RACF's. This study will lead to a review of current care practices within RACF's and could lead to policy and practice changes and further research. Keywords : Aged Care, Elder Abuse

PP26 S-325

ABUSE AND VIOLENCE AGAINST COMMUNITY-DWELLING OLDER WOMEN: A MULTI-NATIONAL EUROPEAN STUDY

Liesbeth DE DONDER¹, Minna-Liisa LUOMA², Gert LANG³, Jose FERREIRA ALVES⁴, Iiona TAMUTIENE⁵, Bridget PENHALE⁶, Dominique VERTE¹ (*1. Adult Educational Sciences, Vrije Universiteit Brussel, Belgium; 2. Department of Living Conditions, Health and Wellbeing, National Institute for Welfare and Health (THL), Finland, Finland; 3. Research Institute of the Red Cross, Austria, Austria; 4. Department of Psychology (IEP), University of Minho, Portugal; 5. Sociology Department, Vytautas, Magnus University, Lithuania; 6. Centre for Health and Social Care Studies & Service Development, School of Nursing and Midwifery University of East Anglia, United Kingdom*)

Introduction : This contribution presents the findings of an extensive multi-national survey of abuse of older women in five European countries that took place from 2009-2011. Combating elder abuse requires an integral understanding of those patterns and forces that underlie it. Therefore, this contribution examines the social or ecological risk factors at different levels of severity of abuse against older women. Method : Data from 2,880 older women is randomly collected in five European countries (Austria, Belgium, Finland, Lithuania and Portugal) using a standardized questionnaire. Results : Results indicate that overall 30.1 % older women had at least one experience of abuse in the past year. A typology of severity of abuse has been created which offers a nuanced picture of the issue, indicating that 6.5 % older women were victim of very severe abuse. Moreover, the presentation offers specific numbers for the prevalence of different types of abuse (physical, psychological, sexual, financial, violation of personal rights and neglect) in the different participating countries and

offers additional insights by presenting results about the main risk factors for the different levels of abuse. Conclusion : The findings demonstrate that a single emphasis on personal indicators is too simple: abuse and violence are multi-faceted and are embedded in environmental as well as cultural levels and contexts. Recommendations for policy and practice to reduce abuse among older women, and suggestions for further research will be offered. Keywords : elder abuse, older women

PP26 S-326

THE PREVALENCE AND CHARACTERISTICS OF SOCIAL ISOLATION

Mariko NISHI, Taro FUKAYA, Takashi KOIKE, Hiroyuki SUZUKI, Kumiko NONAKA, Hiroshi MURAYAMA, Erika KOBAYASHI, Shouji SHINKAI, Yoshinori FUJIWARA (*Research Team for Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology, Japan*)

Introduction : Purpose of this study was to determine the prevalence and characteristics of social isolation among community-dwelling elderly (over 65) who live alone and who live with others. Method : A survey was conducted in Wako-city, Saitama-prefecture in 2012. Data were obtained from 8,304 elderly (response rate 74.3%). Frequencies of contacts with other people (non-resident children, relatives, friends, and neighbors) were used to define the state of social isolation; contact less than 2-3 times a month defined as "isolated" and contact more than once a week defined as "non-isolated". Results : The major findings were as follows. 1) The prevalence of "isolated" were 23.0% in elderly living alone and 30.0% in elderly living with others, and was higher in men than in women with either household composition. 2) Within elderly living with others, the prevalence of "isolated" increased as 5-year age-group raised. On the contrary, prevalence reduced as 5-year age-group raised within elderly living alone. 3) Compared with "non-isolated" group, "isolated" group tend to have low/poor state in many aspects (such as one's estate, mental health status, evaluation toward one's neighborhood) for both household composition. 4) Some exceptions were seen. For example, the result of physical health status and anxiety about future differed between household composition: low/poor state in "isolated" group in those living with others, and differences not salient between isolated-state in those living alone. Conclusion : The prevalence and characteristics of socially isolated elderly were not completely consistent between household composition. These findings would be useful when considering an efficient way of supporting isolated elderly. Keywords : social isolation, prevalence, characteristics , community-dwelling elderly , health

PP26 S-326

ADAPTING A QUEBEC (FRENCH CANADA) PRACTICE GUIDE IN ELDER ABUSE(EN MAINS, IN HAND) TO THE WALLOON (FRENCH BELGIUM) CONTEXT

Marie BEAULIEU¹, Nicolas BERG², Dominique LANGHENDRIES³, Melanie OUDEWATER⁴, Louise BELZILE⁵ (*1. Gerontology, University of Sherbrooke, Canada; 2. Geriatric, Hopital la Citadelle, Belgium; 3. Direction, Respect Seniors, Belgium; 4. Clinical supervision, Respect Seniors, Belgium; 5. Gerontologie, University of Sherbrooke, Canada*)

Introduction : There are only a few validated tools regarding follow-up of cases in elder abuse. En Mains was developed in Quebec (French Canada) with the concurrence of practitioners. It presents 3 scenarios of intervention: suspension of follow-up, accompaniment and formal protective intervention. In 2011, Respect Senior (RS) (The Walloon

agency - Belgium - responsible of intervention in cases of elder abuse) decided to review their practice. A research action of acceptability and adaptation of the En Mains toll was initiated. This poster aims to describe the research action process and the modified En Mains tool as a result of 1,5 years of work. Method : Data was collected in 3 steps with all the practitioners and managers of RS. 1) An acceptability questionnaire ; 2) A focus group to understand the context of practice and the needs of adaptation; 3) A 18 month process to adapt, implement and monitor the changes in order to ascertain that the Walloon version of En Mains suits the needs of a best practice. Results: The acceptability questionnaire revealed a high level of acceptability with minor changes proposed regarding legislation, social policies and language. The scenario of "formal protective interventions" was the less acceptable. The adaptation process permitted to include the revised 3 scenarios in a computerised intake and follow-up database. Conclusion : En Mains is now integrated to the Walloon practice. It takes several months and the contribution of all practitioners to succeed in such an implementation. Keywords : elder abuse, follow-up, adaptation of tools to different context.

PP26 S-327

WORLD ELDER ABUSE AWARENESS DAY: BUILDING ON ITS SUCCESS TO ADDRESS OTHER ACTIONS IDENTIFIED IN MIPAA TO COMBAT ELDER ABUSE

Gloria GUTMAN¹, Yongjie YON² (*1. Gerontology Research Centre, Simon Fraser University, Canada; 2. Davis School of Gerontology, University of Southern California, USA*)

Introduction : In 2002, prevention of elder abuse, neglect and violence against older persons was recognized as a critical issue in the United Nations' Madrid International Plan of Action on Ageing (MIPAA). Among actions identified in MIPAA to eliminate these were sensitizing professionals and educating the general public concerning their characteristics and causes, since they are often hidden problems, reported by only an estimated one in five victims; furthermore many victims are unaware of available support services in their community. Method : In 2006, the International Network for the Prevention of Elder Abuse (INPEA), with the support of global organizations, including the International Association of Gerontology and Geriatrics, launched World Elder Abuse Awareness Day (WEAAD). INPEA also developed tool kits to help local organizations raise awareness and direct victims and their families to available resources in their community. Results : Since 2006, WEAAD has been embraced by NGOs, government agencies, health and social care providers, law enforcement professionals and others and has been celebrated in every region of the world. In 2011, the United Nations officially designated June 15th as WEAAD. Conclusion : In the short time since its inception WEAAD has played a significant role in raising awareness of elder abuse. INPEA seeks to build on the momentum generated by WEAAD to assist national governments and local organizations to implement other actions identified in MIPAA. The goal of this presentation is to review the history of WEAAD, discuss why it has been successful and explore new directions that could be taken. Keywords : Elder Abuse and Neglect, Madrid International Plan of Action on Ageing

PP26 S-328

ELDERLY ABUSE AT HOME AND THE HEALTH PROFESSIONALS - A REFLEXION

Zaida Aguiar Sa AZEREDO, Beatriz Azeredo TOMAZ (*UNIFAI, Portugal*)

Introduction : The proportion of elderly is increasing fast while family

structure is changing. Also, the prevalence of chronic diseases is increasing. Among them mental disorders becomes a society problem. Elderly abuse is another social and health problem which arise in Portugal. Method : The authors (Family Doctor and Psychologist) taking into account literature review and their own experience in practice and the elderly reports, analyse causes/ circumstances such as: type of elderly diseases, fatigue/ burn-out of carers, environment and its relation to elderly abuse. Also they think about the health professional role on elderly abuse. Results : The Authors understand that the elderly abuse sometimes is a consequence among two victims (the old person and the carer 9. Sometimes the person who is responsible for the injuries is also a victim of fatigue, loneliness and burn-out. People with Dementia, is more in danger to suffer violence than others. Conclusion : The Authors think elderly abuse is a worry thing, but to prevent it it is important to analyse what is behind the event, and to understand family dynamic. The health professional have an important role not only to identify victims, but to prevent the violence and to help other professional during the follow-up. Keywords : elderly abuse, social environment

PP26 S-329

DO BRAZILIAN OLDER PEOPLE VOTE?

Angelo Jose G. BOS, Cletiane Dias RODRIGUES (*Institute of Geriatrics and Gerontology, Pontifical Catholic University of Rio Grande do Sul, Brazil*)

Introduction : Civic participation of the elderly is considered by the World Health Organization one of the most important social contributions this season of life. Method : We interviewed 7315 older gauchos randomly identified and interviewed in their homes in 59 cities in the State of Rio Grande do Sul. The research was. The study was part of a comprehensive assessment inspired by the Guide for Aging Friendly Cities of the WHO aiming to describe a new profile of older gauchos, Among the questions we asked the participation of older people in the last election. Results : The result was that 91% of aged 60 to 69 years, required to vote, attended in the last election. This percentage is higher than the 85% of voters in the presidential election of 2010, according to data from the TSE. Among seniors aged 70 to 79 years, despite being exempt from voting, the majority (55%) fulfilled their civic right. The percentage of voters aged between 80 and 89 years remains significant, with 32%. What is most striking in the survey is the number of voters age 90 or older: while facing the weight of his years spent, 16% made a point of letting their votes at the ballot box in 2010. Conclusion : So we can say that the elderly represent a range of population increasingly active in society and the politicians of our country should be aware of this age often so neglected. Keywords : Civic participation, Social right, Active aging

PP26 S-330

STRUCTURAL MODEL OF THE ELDERLY'S INTENT OF ADVANCE DIRECTIVES REGARDING THE DISCONTINUATION OF MEANINGLESS LIFE-SUSTAINING TREATMENT

Mihee Mi LEE (*Internal Medicine OPD, Hallym Kangnam Nursing Dept., Korea*)

Introduction : The purpose of this study is to develop and verify an explanatory model of the elderly's intent of advance directives regarding the discontinuation of meaningless life-sustaining treatment. Method : Data were collected from March 14 to April 2, 2011 through face-to-face interviews by using a structured questionnaire from a convenience sample of older adults. The descriptive and correlation statistics were analyzed using SPSS/WIN 18.0, and the proposed

model was tested and modified using structural equation modeling in AMOS 18.0. Results : The results demonstrated that the intention of advance directives was directly influenced by family and peer support, attitude toward the discontinuation of meaningless life-sustaining treatment, and the efficacy of advance directives. In addition, the intention of advance directives was indirectly influenced by family and peer support and end-of-life preparation. Attitude toward the discontinuation of meaningless life-sustaining treatment was directly influenced by end-of-life preparation and family and peer support. The efficacy of advance directives was directly influenced by end-of-life preparation and family and peer support. All of the latent variables explained 47% of the variance in the intention of advance directives. Conclusion : The results of this study suggest that in order to improve the elderly's intent of advance directives regarding the discontinuation of meaningless life-sustaining treatment, nursing interventions should focus on enhancing their attitude toward the discontinuation of meaningless life-sustaining treatment and the efficacy of advance directives. Keywords : elderly, discontinuation of meaningless life-sustaining

PP26 S-331

A STUDY OF REGIONAL SUPPORTING THE ELDERLY WITH DEMENTIA

Minyoung JANG (*Social Welfare, Meijigakuin University, Japan*)

Introduction : Regarding the revision of the long-term care insurance law in 2005, "Preservation of Dignity" for the elderly is mentioned, various supports have been devised to ensure the human rights. Within the overall elderly population, those with dementia have a higher likelihood of being the victims of human rights abuses due to the specific nature of the symptoms of their infirmities. The government established "Comprehensive Regional Support Centers(CRSC)." These centers function as regional consulting offices to ensure the dignity of individuals. This study aims to validate these CRSCs, to evaluate how effectively they support the elderly with dementia and their families, and to identify whether they are able to guarantee human rights of those suffering from dementia. Method : In this study empirical research was conducted based on the defined objectives. A survey was (1) distributed to the CRSC of 17 prefectures in eastern Japan. (2) The recovery rate for valid survey responses was 20.0%, for a total of 409 responses. (3) The survey period was from January through March, 2012. Results : The survey results were analyzed using text mining and typological identification: "Sponsored Training Course Support", "introduction to adult guardianship", abuse awareness", "building networks for abuse prevention", and "education of community residents". Conclusion : The problems with elderly suffering from dementia, such as social isolation resulting from disruption of service, deterioration of mental health are evident. In comparison with other activities the support activities focusing on regional networks and awareness promotion were limited in scope. In the future these areas must continue to be improved and strengthened. Keywords : dementia, regional support, dignity

PP26 S-332

AGEING DISCOURSES IN THAI SOCIETY: MEANING AND SOCIAL PRACTICE

Nitikul THONGNUAM (*Medical Service, Geriatric Institute, Thailand*)

Introduction : Nowadays the increasing proportion and quantity amount of ageing people in Thailand become to "ageing society". Most of people understand that ageing relate with year of age and the changing of body and mind. Exactly the meaning. Method : The

process exploring of meaning by using documentary review about the ageing policy, content analysis, discourse analysis and social practice that reveal the construction of ageing meaning and social practice. Results : The finding shows that the diversity and fluidity meaning of ageing in Thailand are constructed on hegemony of direction of social development. The ageing policies in the past show the meaning of subjective value in experience and knowledge. The meaning related to the sociocultural changing context from the socialist policy that the ageing became the economic dependent body. The marginal should be supported by social welfare. The strength hegemony of western medicine show the ageing meaning into ageing process. The media discourse meanings are responded to the consumerism and constructed the ageing meaning become through the benefit commodity in alternative health service. The post modernism ageing are represented to be social unwanted person and decrease their social value and role. Conclusion : This study suggest that to understanding in thinking behind set of meaning of ageing language practice is important for ageing which can be released power of discourse that embodied through self and identity of ageing and show that the resistant meaning and resistant discourse constructed that reflex the ageing power. Keywords : Ageing, Discourses, Society

PP26 S-333

PROSPECT THEORY AND FAMILY APPROACHES TO END-OF-LIFE DECISIONS WITH AND ON BEHALF OF NURSING HOME RESIDENTS

Mercedes BERN-KLUG (*School of Social Work & Aging Studies Program, The University of Iowa, USA*)

Method : Qualitative interviews with 20 family members of persons with cancer living in a nursing home (NH) were conducted to learn how family members approach decision-making with and on behalf of a NH resident. Results : Older adults who have battled cancer in the past and are living with a cancer diagnosis in a nursing home setting were reported to have expressed clear wishes to not have their dying prolonged. Conclusion : One of the key findings of the study underscores the importance of framing. In term of this study, 'what is the opposite of perfect health?' Many families in this study alluded to the belief that they and their loved one believed there was a fate worse than death, worth attempting to avoid by accepting death. Would the same results hold true if the NH resident was interviewed? Keywords : advance directive, dying, palliative care

PP26 S-334

DISEASE AWARENESS PROCESS IN PRIMARY FAMILY CAREGIVER OF DEMENTED ELDERLY

Mi Ra SUNG (*General. PhD, Professor, Seoul Metropolitan Center For Dementia. Kyung-in Women's College, Korea*)

Introduction : This study was carried out to develop the entity concept through analyzing and explaining the disease awareness process of the primary caregivers who take care of the elderly with dementia. Method: The period of research was from June, 2010 to November, 2011. The data was collected until it reached at the saturated condition that the new characteristics and categories are no further discovered. In addition, the data was continuously analyzed by using the comparative method and the contents reviewed by researcher were recorded in notes and analyzed by using memo and figures. Results : The key category regarding the disease awareness process of the primary caregivers of the elderly with dementia was 'to struggle with difficulties of relation'. The disease awareness processes were 'to be doubtful', 'to recognize situation', 'to find methods' and 'to accept'. In addition, the provider's types of accepting dementia were 'obsessing

past type', 'pessimistic type', 'active realistic type' and 'conforming type'. Conclusion : Through this study, it was concluded that there were so many cases that the primary caregivers of the elderly with dementia accepted this disease only after the disease condition had worsen due to the lack of recognition for dementia. Owing to this belated recognition, the primary caregivers felt fear for supporting the elderly with dementia and exhausted with the negative prognosis for disease. Also it gave family with burden for supporting. Therefore, solutions are necessary to recognize and handle this disease at the initiatory stage by analyzing the disease awareness process of the primary caregivers. Keywords : Dementia. Primary family Caregiver. Disease Awareness Process

PP26 S-335

VALIDATING AND VERIFYING A 'SEEKING PURPOSE IN LIFE' MODEL FOR OLDER PEOPLE: INTERACTIVE MOTIVATION AND EFFICACY

Nahoko KUSAKA, Nobuyuki UEDA, Eriko MIYAKE (*Faculty of Contemporary Social Studies, Doshisha Women's College of Liberal Arts, Japan*)

Introduction : This study aims to develop a new psychometric instrument for researching 'seeking purpose in life' models for older people. Initially we surveyed 135 university students using a 63-item, four-point Likert-type scale (Seeking Purpose in Life Inventory: SPLI) measuring two major domains - the motivation and efficacy relating to orientation to life purpose and to personal goals. Method : Through factor analysis of the 63 items, four subscales of 27 items were shortlisted and 49 older people then surveyed. We measured their 'sense of purpose in life' as 'tenacious and flexible purpose adjustment' (G_Will), 'trust' as 'trust-related hope' (G_Hope), 'autonomy in motivated practical goals' (P_Autonomy), and self-efficacy perceived controllability in 'pursuit of practical goals' (P_SE). We also tested using the following instruments: Psychological well-being (PWB, Plaut et al., 1989), the State Hope Scale (SHS, Snyder et al, 1996), Self-Efficacy (SE, Shere et al., 1982), and Tenacious goal pursuit (TGP, Brandtstadter J, Renner G., 1990). Results : In the older subjects the Cronbach's alpha coefficients for each SPLI subscale were above 0.7, and internal consistency was confirmed. Our "G_Will" data showed significant positive correlation with PWB, SHS, and SE. Likewise "G_Hope" correlated with SHS, TGP, and SE. Also "P_SE" correlated with SHS and SE, and, for "P_autonomy", the "integrative motivation" index correlated with PWB, SHS, TGP, and SE. Conclusion : Our study validates SPLI for older people. Our conference report will detail our factor analysis, consistencies relating to pursuit of purpose in life, and correlations between autonomy, trust, and subjective well-being. Keywords : Purpose in life, Motivation, Self-efficacy

PP26 S-336

RESPECT FOR THE ELDERLY: THEORETICAL APPROACH

Anton A. SMOL'KIN (*Faculty of Philosophy and Sociology, The Russian Presidential Academy of National Economy & Public Administration, Russia*)

Introduction : Everyday practices of respect for old age are understudied and severely undertheorised in sociology. Respect is the form of recognition expressed in a set of actions, corresponding to the status of the object of respect. Method : Stephen Darwall, following Kant, suggests distinguishing between "recognition respect" (according appropriate value to that fact that the object of respect is a human) and "appraisal respect" addressed to people with particular characteristics. Results : However, forms of respect for an anonymous

representative of a certain social group cannot be reduced to the first type (which does not provide for differences in respect to different people) nor to the second one (as in the context of a personal acquaintance we cannot distinguish between the attitude towards a particular person and the attitude towards them as a representative of a social group). For cases when recognition respect is insufficient, I suggest to use two kinds of respect to the anonymous representative of a social group based on Darwall's ideas. They are "compensation recognition respect" (addressed to children, the disabled, etc.: that is, to groups which are considered to need support in a certain context) and "culturally specific appraisal respect" (addressed to representatives of groups "deserving" additional respect, e.g. war veterans, representatives of "heroic"/socially significant professions, to "ancestors", etc.- in other words, groups to whom we are morally indebted). Conclusion : Elderly people are a unique group that sits in both types of this classification, being regarded both as an object of potential care and as an object of gratitude. Keywords : respect, attitudes to the elderly, secondary groups

PP26 S-337

AGEISM

Audrey GUY (*Business, Governance and Law, University of Canberra, Australia*)

Introduction : Ageism is the third 'ism' and parallels and differs from sexism and racism. Method : Members of all three groups are regarded as less capable, second class citizens. Conferences on ageing are usually run by younger people, speakers are largely from the same cohort, as is the audience. The views of older people, no matter how well qualified, are not heard. Ageism does not evoke shame in the community. Ageism rescinds opportunities and freedoms gained in adulthood and takes people back to a more dependant state. Past lives and achievements seem to be replaced by an assumption that the person is merely an older person with no abilities or valuable ideas, possibly displaying senility. Wrinkles and grey hair are the external symptoms of a new universal personality and signify a second class citizen with limited capability. Results : As populations' age and older people are seen merely as a financial burden on their countries, ageist attitudes will ensure that this is fulfilled. The talents, ideas, skills, knowledge and wisdom which this increasing section of the population has to offer, which are necessary for the well-being of each country, are being lost. No country can run efficiently on the contributions of a reducing proportion of its citizens. Conclusion : The internet is one area which is ageism free and use of it should be encouraged to combat ageist negativity. In a world beset by problems, casting older people, with their abundant knowledge and wisdom, on the scrap heap of humanity through ageism merely increases the problems. Keywords: Ageism, Ageing, Internet

PP26 S-338

CULTURAL PERSPECTIVES ON THE AGING SEMANTIC DIFFERENTIAL: ATTITUDES TOWARDS OLDER ADULTS AMONG COLLEGE STUDENTS IN CHINA

Jing TAN¹, Ernest GONZALES², Lisa A. MARCHIONDO³, Huajuan CHEN⁴, Yi WANG⁵ (*1. Social Work, Bridgewater State University, USA; 2. Social Work, Washington Univeristy, USA; 3. Psychology, Wayne State University, USA; 4. Social Work, Washington University in St. Louis, USA; 5. Social Work, Washington University, USA*)

Introduction : The Aging Semantic Differential (ASD, Rosencranz & McNevin, 1969) is the most widely utilized instrument to measure attitudes towards older adults within the United States. Our objective was to translate it to Mandarin Chinese and to examine its validity.

Method : Self-administrated anonymous paper-based questionnaires were distributed to a convenience sample (N = 380) of college students in Shanghai, China. The structure of the data was analyzed using exploratory factor analysis (EFA) with maximum likelihood extraction and oblimin rotation. We then used confirmatory factor analyses (CFA) to confirm the resulting latent variables and compare them to Rosencranz's factors. Results : EFA revealed three meaningful ASD factors in China: (1) personality and mental health, (2) societal participation (social, financial, occupational), and (3) physical health. In a CFA, all items significantly loaded onto their hypothesized factors, and goodness of fit statistics revealed good fit. While Rosencranz's "personal acceptability" category overlapped well with our first factor, the items from his "instrumental-ineffective" and "autonomous-dependent" categories were divided primarily between our last two factors. A second CFA was conducted using Rosencranz's three factors. Comparison of the two CFAs revealed that our model fit the ASD data in China significantly better ($\chi^2_{df=87} = 577.2, p < .001$). Conclusion : It is possible to use the ASD to assess young adults' attitudes in China. This finding poses implications for other cross-national comparisons of ageism, as well as interventions. Keywords : Ageism, factor analysis, China

PP26 S-339

MALLEABILITY OF AGEING SELF-PERCEPTIONS: EFFECTS OF EXPERIMENTALLY INDUCED AGEING PHENOMENOLOGY ON DIFFERENT INDICATORS OF SUBJECTIVE AGEING

Martina MICHE, Hans-Werner WAHL (*Dept. of Psychological Aging Research, Heidelberg University, Germany*)

Introduction : Previous research has found support for what has been coined "labeling theory", suggesting that negative age stereotypes may undermine older adults' self-perceptions of ageing. In these studies, one-item subjective age measures were used as a proxy of ageing self-perceptions. The aim of this study was to test whether the effect of age stereotypes varies, when a wider range of indicators of subjective ageing as in previous work is considered. Method : Forty-four older adults between the ages of 60-70 years were randomly assigned to two age-stereotype conditions or a control group. After completing a speed-accuracy trade-off task measuring attention and concentration, participants received either positive or negative feedback comparing their performance to that of younger adults in order to activate a negative or positive age stereotype. No feedback was given in the control group. Four dimensions of subjective age (felt age, look age, do age, and interest age) were measured before and after stereotype activation. Between-group comparisons were conducted on additional indicators of ageing self-perceptions. Results : Participants who received negative feedback about their test performances reported older subjective "do ages" at post-test compared to participants in the positive age-stereotype condition. No effect was found for felt age, look age, interest age, and other, alternative measures of subjective age. Conclusion : Using different measures of ageing self-perceptions may be important for understanding the differential effect of age stereotype activation. Older adults seem to integrate self-relevant, age-stereotypical information into the momentary and less conscious indicators of ageing self-perceptions. Keywords : Age Stereotypes, Ageing Self-Perceptions, Subjective Age, Social Comparison

PP26 S-340

VALIDATION OF THE KOREAN VERSION SLEEP HABITS QUESTIONNAIRE IN OLDER KOREANS WITH CHRONIC ILLNESSES

Hye-A YEOM¹, Carol BALDWIN², Su-Jeong KIM¹ (*1. The Catholic*

University of Korea College of Nursing, The Catholic University of Korea College of Nursing, Korea; 2. Arizona State University College of Nursing and Health Innovation, Arizona State University College of Nursing and Health Innovation, USA)

Introduction : The purpose of this study was to examine the psychometric properties of the Korean Version of the Sleep Habit Questionnaire (KSHQ) designed to measure individuals' sleep pattern and quality in a group of older Koreans with chronic illnesses. **Method:** The development of the KSHQ was guided by Brislin's translation model. The KSHQ was administered to a sample of 290 older Koreans with multiple chronic illnesses. Participants were a convenience sample recruited from senior centers and outpatient clinics of a university hospital in Seoul, Korea. Participants completed the KSHQ, measures of fatigue and pain, and provided demographic information. Translation, back-translation, and cross-language validation of the Sleep Habit Questionnaire were conducted to ensure linguistic and cultural equivalency of the KSHQ. **Results :** The Korean version Sleep Habit Questionnaire showed cultural and content equivalency. The internal consistency of the KSHQ was high with Cronbach's alpha of .77. There was evidence of concurrent validity of the KSHQ based on its high correlation with theoretically relevant variable of fatigue ($r=.40$, $p = .000$). Sleep quality was significantly correlated with sleep hours ($r=.23$ $p = .000$). There was no significant correlation between KSHQ and pain. **Conclusion :** The KSHQ is a reliable and valid measure to assess sleep pattern and quality in older Koreans with chronic illnesses. **Keywords :** Fatigue, Sleep Habits

PP26 S-341

A KNOWLEDGE TRANSFER INITIATIVE PROMOTING DIGITAL SOCIAL POCKET TOOLS FOR HEALTHY AGING

Lynn MCDONALD¹, Elsa MARZIALI², Lawrence KRYZANOWSKI³, John RIETSCHLIN⁴, Madelyn IRIS⁵, Gail WIDEMAN⁶, Peter DONAHUE⁷, Gloria GUTMAN⁸, Marie BEAULIEU⁹, Ariela LOWENSTEIN¹⁰, Corey MACKENZIE¹¹, Ronald BAECKER¹², Esme FULLER-THOMSON¹³, Karen KOBAYASHI¹⁴, Sander HITZIG¹, Tal SPALTER¹ (1. Social Work, University of Toronto, Canada; 2. Kunin-Lunenfeld Applied Research Unit, Baycrest Centre for Geriatric Care, Canada; 3. Finance, Concordia University, Canada; 4. Policy Research Directorate, Social Research Division, Human Resources and Skills Development Canada, Canada; 5. Council for Jewish Elderly, Leonard Schanfield Research Institute, USA; 6. School of Social Work, Memorial University of Newfoundland, Canada; 7. School of Social Work, Renison University College, Canada; 8. Gerontology Research Centre, Simon Fraser University, Canada; 9. Service Social, Université de Sherbrooke, Canada; 10. Faculty of Welfare and Health Sciences, University of Haifa, Israel; 11. Psychology, University of Manitoba, Canada; 12. Computer Science, University of Toronto, Canada; 13. Factor-Inwentash Faculty of Social Work, University of Toronto, Canada; 14. Sociology, University of Victoria, Canada)

Introduction : To help promote better health and well-being for aging populations and their caregivers, the National Institute for the Care of the Elderly (NICE; www.nicenet.ca) has translated their evidence-based pocket tools (PTs) into digital formats. A challenge, however, is to identify appropriate strategies to promote the PTs to relevant stakeholders (e.g., seniors and caregivers in the community, healthcare professionals, policymakers, etc.). **Method :** Using the Conceptual Model of Knowledge Exchange (Meagher et al, 2008) as a guiding framework, a multi-phase KT initiative is being implemented to promote, sustain, and evaluate the PTs. The first phase involves promotion of the PTs through academic (i.e., conference presentations)

and non-academic channels (i.e., social media, media campaign). The subsequent phases will be: 1) assess stakeholders' current knowledge and use of PTs ($n = 800$); 2) assess the impact of tool acquisition on practice and behaviors (digital vs. paper; $n = 200$); and 3) identify strategies to facilitate PT acquisition ($n = 40$). **Results :** Given that the paper-versions of the PTs have mainly been distributed within Ontario Canada (approx. 70%), identifying strategies for implementing the digital PTs may serve to widen their accessibility to a broader audience. A key outcome includes monitoring the association of dissemination activities with monthly traffic reports from the website hosting the PTs. **Conclusion :** Given the lack of knowledge related to KT in the health field, the described initiative serves as a theory driven model that offers healthcare professionals working with aging populations with practical approaches for assessing the impact of their own digital KT initiatives. **Keywords :** Knowledge Mobilization, Promoting model, Digital Pocket Tools

PP26 S-342

MOOD STATE OF KOREAN AMERICAN AND KOREAN ELDERLY

Sang Hoon CHOI¹, Sun Hee SONG², Eun Ja YEUN³ (1. Hoseo Graduate School of Venture, Hoseo University, Korea; 2. College of Liberal Education, Hoseo University, Korea; 3. Department of Nursing, Konkuk University, Korea)

Introduction : The acculturation process is multidimensional, including physical, psychological, financial, spiritual, social, language, and family adjustment(1). This process can be very stressful for immigrant elders(1, 2). The negative effects of acculturation on psychosocial health have been reported by previous studies. Today's Korean American elderly are predominantly first-generation immigrants who face stern challenges of acculturation(3). This study aimed to investigate and compare the mood state of Korean American and Korean elderly. **Method :** This study included 105 elderly (43 Korean American, 62 Korean). Korean version of Profile of Mood State Brief form (K-POMS-B) was used to measure the mood state of participants. A questionnaire survey was carried out in the United States and Korean. Collected data were analyzed on SPSS WIN 16.0 program. **Results :** The average age of Korean American was 71.23 ± 4.65 and Korean was 72.57 ± 5.99 . For Korean American elderly, the mean scores of subscales of K-POMS-B as follows; tension 8.52 ± 3.54 , depression 8.44 ± 3.47 ; anger 8.76 ± 3.67 , vigor 13.80 ± 7.80 , fatigue 8.92 ± 4.04 , and confusion 8.80 ± 2.55 . For Korean elderly, tension 4.96 ± 3.90 , depression 4.43 ± 3.97 ; anger 4.56 ± 3.21 , vigor 6.07 ± 3.42 , fatigue 5.60 ± 3.99 , and confusion 7.22 ± 2.65 . The mean scores of TMD were 29.72 ± 16.29 for Korean American elderly and 20.71 ± 16.40 for Korean elderly. There were statistical differences in all six subscales of K-POMS-B and TMD between two groups. **Conclusion :** Korean American elderly significantly more tense, depressed, angered, tired, and confused and less energetic than Korean elderly. Exploration of strategies to improve mood state for Korean American would be necessary in order to decrease incidence of negative mood and mood disturbance. **Keywords :** Asian American, Affect, Cross-cultural comparison,

PP26 S-343

PRESENTATION OF AN INNOVATIVE SOLUTION TO EVALUATE AND REEDUCATE THE BALANCE IN ORDER TO PREVENTE THE ELDERLIES' FALLS,IN SEINE ET MARNE, FRANCE

Alain SOLIVERES¹, Pierre LUTZLER², Oilivier DRUNAT³, Odile BAUGE-FARALDI⁴ (1. ASSOCIATION, AGETIS, France; 2. Geriatric, Hospital - Embrun, France; 3. Geriatric, AP HP, France;

4. Geriatric, Hospital - Compiègne, France)

Introduction : One person out of five who falls after 65 years old because of balance disorders dies in the year which follows its fall (it represents 9 000 deaths a year) (HAS on 2007). After reaching 65 years old, approximately one person on three falls at least once in the year. In this context and for a better follow up of equilibrium's disorders, I opted with my colleagues for the innovative solution BioRescue. **Method :** The equipment includes the use of an extra slim platform which integrates 1600 pressure sensors, a computer equipped with the software SyCoMoRe and a wide screen. Starting point We analyze foot-mark, the hexa-sequential analysis and the limits of balance on the platform. An assessment is then realized and the display of the results allows us to establish goals for the reeducation with BioRescue which set the parameters for the exercises. The patient works his balance and will slowly reach the limits which he couldn't have during the initial test. After receiving visual and audible biofeedback from a few sessions, the improvement of the postural control can be reached. **Results :** The biofeedback increases the patient's performances because of the information feedback and to the entertaining nature of the exercises. Patients are completely involved in their reeducation which represents an important factor of success. **Conclusion :** It increases the self-esteem, the motivation and the elderly's implication on the task. **Keywords :** elderly's falls biofeedback motivation

PP26 S-344

THE EFFECT OF THE SATISFACTION WITH MEALS ON WHEELS SERVICE ON SENIOR CITIZENS' LIFE QUALITY IN A RURAL AREA IN KOREA

Chang Gi KIM (*Social Welfare, Korea National University of Transportation, Korea*)

Introduction : Senior citizens' life quality is affected by a range of factors including, physical health, psychological well-being, social relationships, economic sources and even religious participation. Life quality can be also related to older people's nutrition. The purpose of this study was to examine the effect of the satisfaction with meals on wheels service on the life quality of senior citizens in a rural area in Korea. **Method :** A quantitative approach was employed to examine older people's satisfaction with meals on wheels service. There were 254 respondents who were senior citizens in a rural area in Chungcheongbuk-do. To measure the respondents' perception of meals on wheels service, 26 survey questionnaires were used from Lee Sun-mi (2011). To measure life quality, WHOQOL-BREF, developed by WHO, was used. Data were analyzed using frequency analysis, description statistics analysis and multiple regression analysis. **Results :** The findings of the study show that older people's satisfaction with meals on wheels service had a positive effect on life quality. To improve senior citizens' nutrition and their life satisfaction level, meals on wheels service should be developed based on older people's preference, desire, and their health condition. **Conclusion :** This study indicates that meals on wheels service requires social support and education for social service staff. **Keywords :** Meals on Wheels, Korea, life quality

PP26 S-346

IMBALANCED REGIONAL DISTRIBUTION OF NURSES IN SENIOR CARE FACILITIES

Donghwan KIM¹, Hanju LEE² 1. *Healthcare Policy Research Department, Health Insurance Review and Assessment Service, Korea;* 2. *Department of Nursing, Sangmyung University, Korea*

Introduction : The rapidly aging population has necessitated an increase in the quality and quantity of senior care facilities. Consequently, the number of care facilities is rapidly increasing, but there is a shortage of nurses at specific regions, owing to nurses' preferences for particular regions and the level of medical institutions. So, this study attempts to determine the factors that influence the ratio of nurses at senior care facilities. **Method :** Data were obtained from the health insurance reimbursement records of 377 senior care facilities for claims of the Health Insurance Review and Assessment Service between January 1, 2008, and December 31, 2010. Data were analyzed using one-way panel regression. The dependent variable was the ratio of nurses. The independent variables were case-mix index, regional hospital bed supply, and the interaction between these two variables. The analysis also included the number of patients per bed, proportion of patients over 65 and 80 years of age, number of doctors per bed, number of beds, utilization of beds, and established subject. **Results :** Positive relationships were found between the nurse ratio and the care-mix index and density of general hospitals in metropolitan. This ratio was lower in medium-sized cities where the density of senior care facilities was high. Regions with a large number of general hospitals and senior care facilities had higher nurse ratios. **Conclusion :** In conclusion, it is easy to hire nurses in big cities where a large number of general hospitals are concentrated. A regional imbalance was observed in human resources available for senior care facilities. **Keywords :** nurse ratio, senior care facility

PP26 S-347

DOES COMPUTER AND INTERNET-TRAINING INTERVENTION AFFECT LONELINESS, DEPRESSION, AND LIFE SATISFACTION?: A META-ANALYSIS

Mona CHOI¹, Dukyoo JUNG² 1. *School of Nursing, Yonsei University, Korea;* 2. *Division of Nursing, College of Health Sciences, Ewha Womans University, Korea*

Introduction : This study conducts a meta-analysis to examine the effectiveness of computer and Internet-training interventions intended to reduce loneliness, depression, and life satisfaction in older adults. **Method :** Searches were performed to retrieve studies that had been published in peer-reviewed journals from January 2001 to July 2012 and written in English from PubMed, CINAHL, Scopus, and PsycINFO. We used combinations of the keywords for population, intervention, and psychosocial problems. A meta-analysis was employed to summarize the findings of studies on computer and Internet interventions for older adults. An overall mean weighted effect size for each outcome was calculated, and Q statistics were used to test heterogeneity of variance in effect sizes. **Results :** As the Q statistics revealed heterogeneity, random effects models were chosen for the meta-analysis. Overall mean weighted effect size for loneliness from five studies was statistically significant for decreased loneliness ($Z = 2.085, p = 0.037$). However, the overall mean weighted effect sizes for depression from five studies ($Z = 1.190, p = 0.234$) and life satisfaction from 2 studies ($Z = 0.852, p = 0.394$) was not statistically significant. **Conclusion :** These results suggest that computer and Internet-training intervention were effective in managing loneliness among older adults. Therefore, further computer-mediated social support should be considered to help manage loneliness in this population. As a number of studies of computer and Internet-training intervention for older adults are very limited, future research is required to investigate whether this kind of interventions has effects on depression and satisfaction with life as well. **Keywords :** meta-analysis, psychological outcomes, computers

PP26 S-348

COMPARISON OF ENVIRONMENTAL DETERMINANTS OF SELF-PERCEIVED HEALTH SYMPTOMS BETWEEN SENIORS AGED 60 YEARS OR OLDER IN URBAN (CHEON-AN) AND RURAL (ASAN) AREAS OF SOUTH KOREA

Ara JUNG¹, Dongmin YUN¹, Yoonhyung CHOI², Yongbae KIM³, Kiyong LEE⁴, Hongsu KIM⁴, Yoonchul HONG², Sungroul KIM¹
1. Environmental Health Science, SoonChunHyang University, Korea; 2. Preventive Medicine, Seoul National University, Korea; 3. Preventive Medicine, SoonChunHyang University, Korea; 4. Public Health, Seoul National University, Korea)

Introduction : The population aged 60 years and older in South Korea is increasing. Evidence-based risk management strategies should be employed to tackle aging population's health problems. This study aims to evaluate the association of self-perceived health symptoms with exposure to environmental risk factors among seniors aged 60 years and older in urban and rural areas of South Korea. **Method :** The participants of this study were randomly recruited from urban (Cheon-An, N = 200) and rural (Asan, N = 276) areas. Logistic regression analysis was used to assess the association of exposure to potential environmental risk factors (pesticide, mosquito repellents, petroleum, or other chemicals) with the reported self-perceived health symptoms. **Results :** In the rural area, 76.4% of participants reported that they had at least 10 years of farming experience. The percentage of male or female participants who used mosquito repellents was 2.4 or 1.9 times higher, respectively, in rural areas than that in the urban areas ($p < 0.001$). The adjusted odds ratio (OR) for self-perceived health symptoms of palpitation, numbness, depression, and headache was higher in women who had long-term farming experience (10 years or longer) than that in those with little (3 years or fewer) or no farming experience. **Conclusion :** Our study showed that a difference in the frequency of exposure to the potential environmental risk factors was positively associated with the difference in the prevalence of the self-perceived health symptoms between the two areas. Such positive associations were greater among women than in men. **Keywords :** aging population, environmental risk factors, self-perceived health symptoms

PP26 S-349

SOCIAL PROTECTION AND CULTURES: ENHANCING YOUNG PEOPLES' RESPONSIVENESS IN CARING OLDER PERSONS

Obot David (Chairman, Board of Directors, Uganda Reach the Aged Association (URAA), Uganda)

Introduction : Culture is dynamic and is best for promoting social protection of older persons (Ops). Cultural expressions of passion, love, care and empathy are easily communicated among persons of similar background. Cultural expressions are in words, speeches and actions learnt from the early years of life. Older persons are custodians and transmitters of cultural knowledge and practices. **Method :** Method used was case study of the Uganda Reach the Aged Association (URAA) members in Uganda. **Results :** Unfortunately urbanization prompted by quest to find economic opportunities in urban areas always see young people detached from older persons from whom they can significantly learn cultural practices relevant to social protection. Similarly, displacements through wars, conflicts or large scale investments contribute to disintegration of families, households and communities. In most cases older persons remain closest to the areas they call traditional homes while young people move further and end up in areas distant from older persons. **Conclusion :** It is the mandate of the government to ensure cultural policies integrate social protection principles and promote practices that are integral in cultural

learning and behavior modeling appropriate to encourage young people to appreciate and extend care and protection of older persons in whatever culture there is and wherever older persons live. Such will enhance social support and security of older persons. **Keywords :** culture, care, protection

PP26 S-350

HEALTH-RELATED CHARACTERISTICS OF ELDERLY PARTICIPATE IN INFORMATIZATION EDUCATION

Woo Sik JUNG¹, Eunhye KIM¹, Min Hyun SUK², Hyung Gon KANG³ (1. Dept. of Health Administration, Social Welfare & Health Information, CHA University, Korea; 2. Dept. of Nursing, CHA University, Korea; 3. Dept. of Preventive Medicine, School of Medicine, CHA University, Korea)

Introduction : Improving the quality of life of elderly population is an important issue. Informatization education for the elderly has been operating in most social welfare and community centers. The purpose of this study was to investigate health-related characteristics of the elderly who participated in informatization education program, and provide basic data to develop programs for health care in elderly. **Method :** The data were collected 563 elder persons over 55 years of age from Seoul and Gyeonggi provinces. They were participating in informatization education program of social welfare and community center. The data were collected by a structured questionnaire. **Results :** Fifty-one percent were female, and 51.1% were under the age of 65. The education level was higher than that of the general elderly population in South Korea: high school graduates (27.9%) and college graduates (45.7%). Forty-eight percent responded that perceived health status was good, and 30.8% were average. Chronic diseases were present in 77.7%. Preservation and promotion health activities were exercise (74.4%), health screening (45.5%), smoking cessation (42.5%), taking health supplements (33.4%), regular diet and nutrition management (28.6%), and mental health management (20.1%). Measures for acquisition health-related information were mass media (46.9%), health care providers (40.3%), internet searchin The g (20.3%), and health education (19.9%). **Conclusion :** The percentages of health promotion activities other than exercise were very low. Despite wide propagation of internet, the elderly people commonly gets health-related information through the traditional route such as mass media and health care providers, suggesting necessity for educational program of internet to the elderly. **Keywords :** Elderly people, Health Information, Informatization Education

PP26 S-351

THE EFFECTS OF HYPERTENSION MANAGEMENT PROGRAM AMONG RURAL OLDER ADULTS IN SOUTH KOREA

Dong-soo SHIN¹, Jin Sun KIM² (1. Division of Nursing, Hallym University, Korea; 2. Dangrim, Community Health Post, Korea)

Introduction : This study aimed to examine the effectiveness of hypertension self-management program via empowering rural older adults in South Korea. **Method :** Older adults with hypertension recruited from three primary health care posts in small farming area. Empowered group (n=41) received 8 weekly sessions for 12 weeks and monthly community meeting and weekly telephone call for a year. Control group (n=46) received conventional hypertension care from the primary health care posts. The effectiveness was evaluated by systolic blood pressure, blood pressure control rates, cholesterol levels, renal functions (physical indicators), self-care and medication adherence levels (lifestyle modification indicators) and self-efficacy and social support levels (psychosocial indicators). Data were

analyzed by t-test and Chi-square for confirm homogeneity between empowered and control group. Then, repeated measure ANOVA and Chi-square test were applied to identify group differences. Results : Levels of cholesterol, self-care, self-efficacy and social supports were significantly improved than those of control group. Renal function in empowered group was decreased after 6 month which was farming seasons, but recovered on 12 month in agricultural-free seasons. Changes of blood pressure control rates were not significant. However, those increased in empowered group while those of control group decreased. Only medication adherence levels was not changed both empowered and control groups. Conclusion : The health education program for increasing self-managements was effective in hypertension control. The importance of supporting rural older adults with hypertension during farming seasons was confirmed. Assessing medication adherences need further investigation among rural older adults. Keywords : hypertension, rural older adults, self-management

PP26 S-352

UNDERSTANDINGS OF ETHNIC 'OTHERNESS' AND CROSS-CULTURAL CARE ENCOUNTERS AMONGST PALLIATIVE CARE WORKERS

Pernilla AGARD¹, Sandra TORRES² (1. Private person, Sweden; 2. Department of Sociology, Uppsala Universitet, Sweden)

Introduction : Ideas regarding culture-appropriateness are central to taken for granted assumptions about how elderly care in general, and end-of-life care in particular, should be designed to meet the needs of diverse populations. There is, however, very little research about how culture-appropriateness is understood by health and social care workers. This study- which is informed by critical gerontology - departs from the research gap that exists in the literature on palliative care which acknowledges that research on cross-cultural interaction in this setting is scarce and that the debate on culture-appropriateness within palliative care needs to be problematized. Method : The empirical point of departure is focus group interviews with palliative care workers in Sweden (n=50) who have been interviewed about their understandings and experiences of cross-cultural interaction within the specific context that is end-of-life care. Departing from the socialconstructivist perspective and from Membership Categorization Analysis (MCA), this study sheds light on palliative care workers' understandings of cross-cultural interaction in care settings. Results : The findings show that these workers regard this type of interaction as challenging because they take for granted that this interaction entails communicating with and relating to ethnic 'Others'. As such, they understand ethnic 'Otherness' as a barrier to user-friendly and highquality end-of-life care and cross-cultural interaction as challenge to palliative care practice. Our analysis shows also that these workers' understandings are guided by the debate on culture-appropriate care and the assumptions about culture that this debate makes. Conclusion : This presentation problematizes therefore this debate and the understandings. Keywords : Cross-Cultural Encounters, cultureappropriateness

PP26 S-353

PREDICTION MODEL FOR COGNITIVE DECLINE IN OLDER ADULTS

J.H. BACK¹, Y. LEE², C. H. HONG³, K. S. LEE⁴, S. J. SON⁵, S. Y. MOON⁶, S. Y. LEE², H. KANG⁷ (1. National Health Insurance service, Health Insurance Policy Research Institute, Korea; 2. Department of Preventive Medicine and Public Health, Ajou University School of Medicine, Korea; 3. Department of Psychiatry, Ajou University School of Medicine, Korea; 4. Department of Psychiatry, CHA University School of Medicine, Korea; 5. Department of Psychiatry, Kwandong

University College of Medicine, Korea; 6. Department of Neurology, Ajou University School of Medicine, Korea; 7. Department of Informational Statistics, Hoseo University, Korea)

Introduction : With population aging, cognitive decline in older people poses as a major public health issue. This study examined cognitive decline and its determinants in older adults to develop a prediction model for cognitive decline. Method : Data were from the 2005-2011 Gwangju Dementia and Mild Cognitive Impairment Study (GDEM CIS), a community-based cohort consisting of 1,838 aged 65 years and older. Cognitive decline was defined as slope less than 0 on the Mini-Mental State Examination (MMSE), with ≤ 1 standard deviation (SD) categorized as minor decliner and > 1 SD as major decliner, based on the random slope and intercept linear mixed model. Baseline demographics, health behaviors, and health-related and genetic factors were analyzed to identify factors predictive of cognitive decline. Best model fit was assessed using regression, decision tree, neural network, and Bagging methods. Results : Among the study participants 7.4% showed cognitive decline, with 5.3 to 6.2% as minor decliners and 1.3 to 2.1% as major decliners. Significant predictors of cognitive decline identified were age, gender, education, baseline MMSE, and physical activity. Among the different methods used for assessing the performance of the prediction model based on area under the curve (AUC), Bagging method was judged to demonstrate the best fit. The correct classification rate of the prediction model was 94.8%. Conclusion : This study developed a prediction model for cognitive decline in older people. The model can be used in identifying population at risk of cognitive decline in the community-dwelling older adults. Keywords : cognitive decline, prediction

PP26 S-354

THE INFLUENCE OF THE AGED'S SOCIAL CAPITAL ON DEPRESSION

Mee Hye KIM, Boram KIM (Social Welfare, Ewha Graduate School of Social Welfare, Korea)

Introduction : In general, The aged's depression has been studied with individual characteristics such as demographic factor, economic factor, health factor, etc. However, studies analyzing the influence of the aged's social capital on their depression are rare. The purpose of this study is to figure out how social capital has an impact on its depression by analyzing how much the aged possess social capital. Method : The 2nd panel data of Korean Longitudinal Study of Ageing was used. This study was carried out by targeting the 4,040 aged older than 65 years. Social capital was measured with participation, social assistance, social network, citizen participation. Depression was measured by points of CES-10 item. Results : Poverty degree showed that the poor aged has more social assistance than the non-poor aged. Also, the non-poor aged have more social network than the poor aged. Moreover, the more the aged take social participation, the bigger their social networks are. These participation and networks help the aged have the less depression in social capital model. According to the integration model, only social networks in social capital significantly affects the decrease in depression. Also, there is a tendency for the male, person living with a spouse and judging they are healthy to have less depression rate than people with opposed characters. Conclusion : Since the aged's social participation and networks become significant variables in decreasing depression, they should enlarge their participating in various groups and participate in associations or expand the range of close relatives in order to prevent senescence's isolation. Keywords : social capital, the aged's depression

PP26 S-355

DOES VOLUNTARY ACTIVITY EFFECT DEPRESSION FOR OLDER ADULTS?

Rebekah NELSON¹, Jungup LEE¹, Jisue LEE², Ara JO³ (1. College of Social Work, Florida State University, USA; 2. College of Communication and Information Studies, Florida State University, USA; 3. Sport Management, College of Education, Florida State University, USA)

Introduction : What effectively protects older adults against the effects of depression? One factor that has been studied is participating in activities described as "voluntary". These voluntary activities usually consist of spending time outside of the home, interacting with people and participating in activities where the person feels a sense of accomplishment, and have been shown to help moderate levels of depression. Volunteering outside the home can be especially helpful for older adults who are past the age of retirement, and who feel a sense of loss due to the changes in activity levels as compared to when they were actively employed. Method : Data are drawn from the Americans' Changing Lives survey, a nationally representative panel study collected data in 1986, 1989, 1994, and 2002. The current analysis focused on adults aged 60 and older with data from the fourth wave of the Americans' Changing Lives (N = 487). The average age of participants was 77.48. 72.1% of sample was female and 54.2 % was widowed. Results : Older adults who are female and poor physical health condition are more likely to have depressive symptom. Voluntary activity is associated with lower depressive symptoms after controlling for age, gender, marital status, and self-reported health status. Additionally sociodemographic and health behavior variables mediated the effect of voluntary activity on depression. Conclusion : This study provides significant information regarding the relationship between voluntary activity and depression. It enables older adults to maintain high levels of voluntary activity as one of essential ways to help their mental health. Keywords : Voluntary activity, depression, and older adults

PP26 S-356

PLANNING FOR THE THIRD AGE : RELATIONSHIP BETWEEN READINESS FOR RETIREMENT AND LIFE SATISFACTION

Sang Yeol YOON¹, Yeong-Ran PARK² (1. Institute for Silver Industry Research, Kangnam University, Korea; 2. Silver Industry, Kangnam University, Korea)

Introduction : Preparing for the third age has become one of major social issues in Korea lately. The purpose of this research is to analyze the relationship between readiness for retirement and life satisfaction of the older residents living in the Yongin city in Korea. Method : A survey was conducted for 387 residents living in three districts in Yongin city in September through October, 2012. A structured questionnaire was used to ask socio demographic characteristics, participating activities, readiness for retirement and life satisfaction. Results : Preliminary analysis shows that the average score of life satisfaction is 3.41(sd=1.10). There is no difference between men and women, but statistical difference was found among the age groups. The average score for readiness for retirement is 2.7 (sd=1.10). Future analysis will include more comparisons among different groups, correlations between independent and dependent variables, and the impact of readiness on life satisfaction. Conclusion : According to this research, the respondents showed different levels of readiness in the readiness dimensions of the third age. Implications will be drawn for further research and program development for planning the third age. Keywords : third age, readiness for retirement life satisfaction

PP26 S-357

DEPRESSION AMONG OLDER CHINESE IN CHINA

Lu MU¹, Bum Jung KIM¹, Erica AUH² (1. School of Social Work, University of Hawaii at Manoa, USA; 2. School of Social Welfare, Ewha Womens University, Korea)

Introduction : In recent years, aging become a big issue in China; as a result, more elders need professional care. Although China government pays more attention on elders' material needs, few mental health services have been provided to them. Depression as the one of the biggest elders' mental issue, few studies presented it. Method : This study used qualitative research to review the relative resources to find the factors and implications of Chinese elders' depression. Results : As a result, Chinese elders' depression usually caused by financial, cultural, physical and behavioral factors. Conclusion : According to these factors, community support groups, case management and Senior agencies' support and volunteer program had presented as interventions to help the depressed elders. Keywords : Depression, Older Chinese, Risk Factors

PP26 S-358

POLYPHARMACY AND INAPPROPRIATE MEDICATION USE OF THE ELDERLY IN NURSING HOME

Jeong Sun KIM¹, Sook KANG² (1. College of Nursing, Chonnam National University, Korea; 2. Department of Nursing, Chonnam Techno University, Korea)

Introduction : Elderly people who are admitted in nursing homes is increasing due to decrease of family caring functions. Most of them have complex chronic diseases, so they depend on taking various drugs at the same time and will be use inappropriate medications. This study was done to investigate status of polypharmacy and inappropriate medications use in the elderly of nursing homes. Method : The subjects of this study were 230 elderly people in the nursing homes of A city. In this study, the medications were classified by Anatomical Therapeutic Chemical (ATC) code, polypharmacy was defined as taking medications more than five, and inappropriate medications use were identified by Beers criteria. Data was analyzed by using descriptive statistics and χ^2 -test. Results : The elderly people who were taking prescribed medications by two-step classification of ATC code were 136 (10.0%) taking medications for psychoanleptics, and 135(10.0%) taking medications for acid related disorders. Among the over-the-counter medications, 10(20.8%) were depending on antifungals for dermatological use, and 7(4.6%) were taking ophthalmologicals. The subjects with polypharmacy were 159(69.1%), and with inappropriate medications prescription were 116(50.4%). There was a significant difference in the polypharmacy according to the number of diseases ($p<.001$), fall experience($p=.004$) and the inappropriate medications prescription according to fall experience ($p=.045$). Conclusion : An ongoing medication monitoring system is necessary to minimize the adverse drug reactions of elderly. Keywords: Nursing homes, Polypharmacy, Inappropriate prescribing

PP26 S-359

AGE-RELATED LIFE SATISFACTION DECREASE IN THE ELDERLY IN THE POST-SOVIET COUNTRIES

Daria KHALTOURINA¹, Danila MEDVEDEV² (1. Council for Public Health and Demography, Russia; 2. Leader of the Project 'Aging Diagram', Russia)

Introduction : The analysis of the recent data from the World Values Survey shows that in most countries there is no significant correlation between age and life satisfaction. At the same time, the older people in

the post-Soviet countries make an exception. The goal of this study is to determine the reasons for this. Method : The set of correlations and multiple regression tests was performed using all available World Values Samples. The results were interpreted on the basis of the social and economic context of Post-Soviet societies. Results : There level of life satisfaction and happiness is significantly lower in the Post-Soviet countries than in the worldwide sample. Life satisfaction in women falls abruptly right by the age of 50, and it falls in males more gradually but quite visibly by the age of 60. This tendency does not take place in most countries of the world in the survey. The correlates of life satisfaction and happiness among the Post-Soviet elderly people are not different than in the rest of world, so the social context must be analyzed to explain this unusual trend. Conclusion : Social exclusion seems to be the best explanatory factor of low life satisfaction of the elderly people in the Post-Soviet countries. Traditional social networks like kinship and neighbor ties have been weakened due to the social transformation of the Soviet period. Low retirement age is responsible for early disruption of the social ties of the elderly people. At the same time, new type of social networks like volunteer and charity networks are only being formed. Keywords : aging, life satisfaction, Post-Soviet countries

PP26 S-360

SPOUSES' OPEN COMMUNICATION WITH CANCER PATIENTS ABOUT ILLNESS AND DEATH: A COMPARISON BETWEEN MEN AND WOMEN

Yaacov G BACHNER, Nily Y SELA, Sara CARMEL (*Public Health, Ben Gurion University, Israel*)

Introduction : Numerous studies document that caregivers face severe difficulties in communicating openly with their loved ones about both illness and death. The current study compares the communication level of male and female caregivers, and examines the contribution of different caregiver characteristics and situational variables to the explanation of communication level within both male and female groups. Method : 77 spouses--who were primary caregivers of terminal cancer patients--comprised of 29 males and 48 females, participated in the study. The questionnaire included measures of caregiver communication, caregiver characteristics (i.e. age, gender, education level, optimism, self-efficacy) and situational variables (i.e. duration and intensity of care). Results : Female spouses communicated more with their loved ones about the illness and death compared to their male counterparts. Among males, ethnic origin ($\beta=0.50$, $p<0.01$) and duration of care ($\beta=-0.38$, $p<0.05$) emerged as significant predictors of caregivers' level of communication. The model explained 44.1% of the variance. Among females, self-efficacy ($\beta=0.50$, $p<0.001$) and ethnic origin ($\beta=-0.26$, $p<0.05$) emerged as significant predictors and the model explained 30.5% of the variance. Conclusion : This study demonstrates the importance of gender to caregivers' level of communication with terminal cancer patients about illness and death. Additionally, among male and female caregivers, the caregiver ethnic origin was found to be significant predictor of communication. This should be considered by professionals when developing intervention programs for increasing caregivers' level of communication with dying patients. Keywords : communication, cancer, spouses

PP26 S-361

OLDER INDIVIDUALS HAVE LOWER RISK PERCEPTION SCORE: A STUDY ON RURAL MALAYSIA

Nazar Mohd Zabadi MOHD AZAHAR¹, Ambigga Devi KRISHNAPILLAI², Mohd Shahril AHMAD SAMAN², Khalid YUSOFF² (*1. Centre for Translational Research and Epidemiology,*

Faculty of Medicine, Universiti Teknologi MARA, Malaysia; 2. Faculty of Medicine, Universiti Teknologi MARA, Malaysia)

Introduction : Theoretical models proposed that perception of risk may play a significant role for behavioral changes. Underestimation of risk could impede prevention strategies. This study aimed to determine the level of cardiovascular risk perception among rural community in Malaysia. Method : This community-based study involving rural communities in the district of Raub, Pahang, Malaysia in 2010-2011. Community rural-dwellers aged 30 years old and above participated in this study. Framingham risk score (FRS) was calculated based on 'Framingham Heart Study' online calculator. A set of modified Risk and Health Behaviours Questionnaire (Cronbach's Alpha=0.972) were administered to the respondents. Results : A total of 600 respondents completed the questionnaire in this study, mean age 59.5 ± 10.7 years; 45% were aged ≥ 60 years old. Among those aged ≥ 60 years old, 43% were males, 70.2% were at high risk for CVD. Elderly respondents had significantly higher FRS compared to younger respondents (34 ± 20.2 vs 14.8 ± 12.2 , $p<0.001$). Mean for cardiovascular risk perception score was 118 ± 26 . Bivariate analysis showed that cardiovascular risk perception score was significantly lower among those aged ≥ 60 years old (116 ± 24) as compared to those aged <60 years old (120 ± 27) ($t(598)=1.936$, $p<0.05$). . Further, high risk for CVD respondents had significantly lowest cardiovascular risk perception score compared to moderate and low risk respondents ($p<0.05$). Conclusion : Elderly and high risk for CVD respondents in this study perceived their risk to be low for future cardiovascular events. Patient education is essential in order to make sure that our community understands their risk for cardiovascular disease. Keywords : cardiovascular risk perception, rural Malaysia, elderly

SS25 507-B-4

DISCOVERY OF VASCULAR CALCIFYING PROGENITOR CELLS: MECHANISM OF ATHEROSCLEROTIC CALCIFICATION

Hyo-soo KIM (*Department of MMBS (Molecular Medicine & Biopharmaceutical Sciences), Seoul National University, Korea*)

Introduction : To investigate the modulation or reversal of vascular calcification, we searched for calcifying progenitor cells in vessel. Method : Cells from the aortas of mice were sorted into four groups using Sca-1 and PDGFR α markers. Results : Sca-1+ progenitor cells exhibited greater osteoblastic differentiation potentials than Sca-1- cells. Among Sca-1+progenitor populations, PDGFR α - cells possessed bidirectional differentiation potentials towards both osteoblastic and osteoclastic lineages, whereas PDGFR α + cells differentiated into an osteoblastic lineage unidirectionally. When treated with PPAR γ agonist, Sca-1+/PDGFR α - cells preferentially differentiated into osteoclast-like cells. Sca-1+ progenitor cells in the artery originated from the bone marrow (BM) and could be clonally expanded. Systemic infusion of Sca-1+/PDGFR α - cells into Apoe $^{-/-}$ mice increased the severity of calcified atherosclerotic plaques, which was prevented by PPAR γ agonist. Conclusion : A subtype of BM-derived and vessel-resident progenitor cells offer a therapeutic target for the prevention of vascular calcification.(PLOS Biology 2013). Keywords : Vascular calcification; stem cell; vascular aging

SS24 507-R-1

THE CANADIAN BEVERIDGE MODEL AND ITS IMPLICATIONS FOR 'LATE STARTERS'

Howard BERGMAN (*Family Medicine, McGill University, Canada*)

Health care systems around the world are faced with the challenge of improving the health of their populations, meeting their health and

social service needs assuring quality of care and guaranteeing equity; all of this while striving to be cost-effective. Aging and chronic disease are two key issues in the challenge to improve the health of our populations and delay the onset of dependency and promote independent healthy aging. It can be said, without exaggeration, that the health and quality of life of older persons in the coming 50 years as well as the sustainability of our healthcare system depends on our ability to meet these challenges. In spite of major changes in the demography and epidemiologic transition, the paradigm of the acute care hospital and its relation with the community has not really changed in the past 60 years. There has not been sufficient debate on this question in the Canadian healthcare system which is based on a taxation foundation of financing of health and social services, the Beveridge model. This is due, in part, to certain assumptions, mainly that whatever you do will cost too much or any different incentives will have perverse effects. Based on the paradigm of care for older persons, this presentation will examine this question and lessons for «late starters». Keywords : canada; organisation; financing

THE JOURNAL OF FRAILTY & AGING

<http://www.jfrailtyaging.com>



The Journal of Frailty & Aging is a peer-reviewed international journal aimed at presenting articles that are related to research in the area of aging and age-related (sub)clinical conditions. In particular, the journal publishes high-quality papers describing and discussing social, biological, and clinical features underlying the onset and development of frailty in older persons. The Journal of Frailty & Aging is composed by five different sections :

- ***Biology of frailty and aging:*** In this section, the journal presents reports from preclinical studies and experiences focused at identifying, describing, and understanding the subclinical pathophysiological mechanisms at the basis of frailty and aging.
- ***Physical frailty and age-related body composition modifications:*** Studies exploring the physical and functional components of frailty are contained in this section. Moreover, since body composition plays a major role in determining physical frailty and, at the same time, represents the most evident feature of the aging process, special attention is given to studies focused on sarcopenia and obesity at older age.
- ***Neurosciences of frailty and aging:*** The section presents results from studies exploring the cognitive and neurological aspects of frailty and age-related conditions. In particular, papers on neurodegenerative conditions of advanced age are welcomed.
- ***Frailty and aging in clinics and public health:*** This journal's section is devoted at presenting studies on clinical issues of frailty and age-related conditions. This multidisciplinary section particularly welcomes reports from clinicians coming from different backgrounds and specialties dealing with the heterogeneous clinical manifestations of advanced age. Moreover, this part of the journal also contains reports on frailty- and age-related social and public health issues.
- ***Clinical trials and therapeutics:*** This final section contains all the manuscripts presenting data on (pharmacological and non-pharmacological) interventions aimed at preventing, delaying, or treating frailty and age-related conditions.

The Journal of Frailty & Aging is a quarterly publication of original papers, review articles, case reports, controversies, letters to the Editor, and book reviews. Manuscripts will be evaluated by the editorial staff and, if suitable, by expert reviewers assigned by the editors. The journal particularly welcomes papers by researchers from different backgrounds and specialties who may want to share their views and experiences on the common themes of frailty and aging.

COMPLEMENTARY COPY

I want receive a complementary copy of the Journal of Frailty & Aging

Name: First name :
Laboratory :
Address :
.....
City/State : Zip Code:
Country: E-mail :

**To return : CELSIUS, 54 route d'Espagne, 31200 Toulouse, France
(f.soula@celsius-net.com)**

<http://www.jfrailtyaging.com>

AUTHORS INDEX

AAGAARD, P	OP23 325-C-3, OP23 421-C-1	AHLSTROM, G	OP25 420-S-3
AARTSEN, M	SS24 122-S-3, SS26 413-S-1, SS26 413-S-3	AHMAD SAMAN, M	PP26 S-361
AARTSEN, MJ	SS26 413-S-2	AHMAD, M	PP25 S-327
ABBES, M	PP26 C-014	AHMAD, S	OP26 123-C-1
ABD HAMID, N	PP25 B-042	AHMADI, F	OP24 523-S-1, SS24 413-S-2
ABDUL AZIZ, S	PP26 C-041	AHMADI, N	OP24 523-S-1
ABDUL KARIM, N	PP25 B-042	AHN, C	PP26 S-143, PP26 S-144, PP26 S-145, PP26 S-153, PP26 S-161
ABDUL RAHMAN, A	PP25 B-042	AHN, H	OP25 520-S-1, PP25 R-051
ABDULRAHIM, S	SS24 113-S-2, SS25 514-S-1	AHN, J	OP26 221-S-5, PP25 R-053, PP26 C-160
ABE, K	OP23 321-C-2, OP23 323-C-5, PP26 C-111, PP26 C-123	AHN, M	OP27 211-S-6, PP25 S-161
ABE, T	PP25 C-212	AHN, N	PP26 B-075, PP26 S-078
ABE, Y	OP27 218-B-2, PP25 C-094, PP25 S-169, PP26 C-037	AHN, S	OP25 121-S-3, OP26 102-S-5, OP27 206-S-6
ABELL, N	OP27 213-S-3	AHONEN, R	OP23 322-C-1
ABERNETHY, AP	OP27 214-S-4	AI, AL	OP24 522-S-1, PP25 C-201
ABODERIN, I	PS24 501-R-3, PS26 201-R-3, SS24 306-R-3, SS25 316-R-4	AI, B	PP25 S-075
ABOLFATHI MOMTAZ, Y	OP26 406-S-2, OP27 120-S-4	AIDA, J	OP25 119-B-2, PP25 B-070, PP25 C-034
ABOLHASANI, M	PP26 C-129	AIDA, N	PP25 S-092, PP25 S-122, PP25 S-217
ABRAMOWSKA-KMON, A	SS24 108-R-4	AIDA, S	PP25 B-070
ABU HANNA, A	OP27 126-C-4	AIZHEN, J	OP23 324-C-1
ABYAD, AB	SS25 207-R-4	AJON-GEALOGO, G	OP27 207-S-2
ACKERMAN, M	PP25 S-247	AJROUCH, K	SS24 113-S-2, SS25 514-S-1
ACKLAND, R	SS26 416-R-1	AKAGAWA, A	PP25 S-083
ACTON, G	OP25 221-S-6, OP25 320-S-3	AKAGI, T	PP25 S-165
ADACHI, K	PP25 S-151, PP25 S-165, PP26 S-010	AKANUMA, T	PP25 S-034, PP26 C-071
ADACHI, M	PP26 R-019	AKATSU, H	OP26 219-B-3
ADAMS, A	OP26 123-C-6	AKBAR, A	PS24 204-R-4
ADAMS, K	OP25 423-S-2	AKBARI KAMRANI, A	PP25 C-111
ADEJUMO, O	OP26 314-S-2	AKBAYRAK, N	PP25 C-095, PP26 S-308
ADHIKARI, BR	OP24 405-S-4	AKHTAR, S	SS24 110-R-3
AFONSO, F	PP26 C-112	AKIHITO, I	PP26 C-185
AFRAM, B	PP25 S-101	AKISHITA, M	OP23 323-C-1, OP24 123-C-6, PS24 512-C-3
AGARD, P	PP26 S-352	AKIYAMA, H	OP23 419-S-3, PP25 S-222, PP25 S-226, PP25 S-300, SS24 113-S-1, SS24 119-S-3, SS24 221-S-4
AGAWA, R	PP25 S-292	AKPINAR, TS	OP27 221-C-1, PP25 C-029, PP26 C-052
AGGAR, C	OP27 307-S-3, OP27 323-C-5	AKYAR, I	OP27 303-S-4
AGGARWAL, G	PP25 S-349	ALAIN, M	OP27 104-S-1
AGHO, A	OP23 325-C-6	AL-AMOUD, M	PP26 S-048
AGNOLETTI, D	OP27 125-C-3	ALBERT, S	OP27 312-C-3
AGO, T	PP25 C-149	ALBERT-BLASCO, R	PP26 C-207
AGOSTONI, M	PP25 C-123	ALBINET, C	SS25 313-S-2
AGREE, EM	OP25 420-S-2	ALBINET, CT	PP25 C-110, PP25 S-174, SS25 313-S-1
AGUIAR, A	PP25 S-099	ALDER, CA	OP27 224-C-6
AGUINAGA, I	OP27 314-S-3		
AGUSTIN, D	PP25 C-040		
AHLGREN, C	OP27 313-S-3		

ALEKSANDR, S	PP25 C-007		PP26 S-301
ALESH, I	PP26 C-016	ANAN, Y	PP25 C-113, PP25 S-015,
ALEXA, I	OP23 424-C-1, OP26 113-S-5,		PP26 S-200
	OP27 122-C-6, PP26 C-100,	ANAND, D	PP25 C-221
	PP26 C-193	ANANIAS, J	OP27 304-S-5, PP26 S-189
ALEXA, O	OP26 113-S-5, PP26 C-193	ANBACKEN, E	SS24 215-S-3
ALEXANDER, K	OP23 313-C-2	ANDERSEN, S	PP25 C-027, PP25 C-152
ALEXANDROV, I	PP25 C-229	ANDERSEN-RANBERG, K	OP23 417-C-3, OP23 422-C-2,
ALEXANDROV, V	SS26 423-C-1		OP27 222-C-4
ALEXEEVA, N	PP26 C-001	ANDERSON, E	OP25 322-S-5
AL-GHAMDI, E	PP26 S-048	ANDO, F	OP27 122-C-2, PP25 C-160,
ALHAMDAN, A	PP26 S-048		PP25 S-081, PP26 C-022
ALI, A	OP27 122-C-5	ANDO, J	PP25 C-155
ALIAHMAT, N	PP25 B-014	ANDO, T	PP25 S-232, PP25 S-319,
ALISON, M	PS25 202-B-2		PP26 S-024
ALIZAD, V	OP23 324-C-2, PP25 C-172,	ANDRADE, FB	OP27 226-C-2
	SS24 124-R-2	ANDRADE, RN	PP26 S-297
ALLAIN-BOULE, N	PP25 C-169	ANDRE, N	SS25 313-S-2
ALLALI, G	OP23 318-C-2, OP27 118-B-3,	ANDREA, F	OP27 224-C-3
	OP27 324-C-3, PP26 C-107	ANDREOU, A	PP25 C-042, PP26 C-029
ALLARIA, V	PP25 C-142, PP26 C-119	ANDRES, P	OP24 521-S-3
ALLEN, M	SS24 227-C-4	ANDREW, MK	PP25 C-127
ALLMAN-FARINELLI, M	OP25 219-B-2	ANDREWS, M	SP26 205-1
ALMEIDA, D	SS24 418-S-1, SS24 418-S-2	ANDREWS, W	SP26 205-1
ALMEIDA, DM	SS24 418-S-3, SS24 418-S-4	ANDRUSKE, C	OP27 307-S-5
ALMEIDA, J	PP26 C-027	ANG, H	OP23 421-C-4
ALMEIDA, O	OP27 227-C-3	ANG, LW	OP27 122-C-3
ALMEIDA, QJ	PP26 C-130	ANGEL, J	OP23 319-S-1
ALMENAS-VELASCO, AJ	PP25 S-347	ANGEL, R	OP23 319-S-1
AL-MUAMMAR, M	PP26 S-048	ANGLEITNER, C	OP23 421-C-2
ALON, S	OP25 104-S-4, OP27 304-S-2,	ANIGSTEIN, M	OP27 103-S-1
	SS26 318-S-1	ANNWEILER, C	OP23 318-C-2, OP23 318-C-3,
ALONSO BOUZON, C	PP26 C-218		OP23 322-C-3, OP23 421-C-5,
ALONSO-RENEADO, J	OP23 322-C-4, PP26 C-218		OP23 422-C-3, OP23 422-C-5,
AL-ORF, S	PP26 S-048		OP25 105-S-5, OP27 118-B-3,
ALPASS, F	OP25 420-S-6, OP26 122-S-1,		OP27 318-B-2, OP27 324-C-3,
	OP27 205-S-3		OP27 324-C-4, PP26 C-106,
ALSHAMMARI, S	PP26 S-048		PP26 C-107, SS25 425-C-3
ALSUWAIDI, SA	SS25 207-R-2	ANSAH, JP	SS25 502-R-2
ALTAMIRANO, RO	PP25 C-044, PP25 C-046,	ANSTEY, KJ	OP25 106-S-4, OP27 116-S-2,
	PP25 C-125		SS24 421-S-4
ALVES, C	PP25 S-027	ANTONIETTI, A	SS27 202-S-2
ALVES, JF	OP24 522-S-4	ANTONUCCI, T	SS24 113-S-2, SS25 514-S-1
ALVES, L	PP26 B-008	ANUGRAHINI, I	PP26 C-058
ALVES, LC	OP27 226-C-2, OP27 227-C-6	ANZAI, S	PP25 S-242, PP25 S-357
AMADO, F	PP26 S-286	AOKI, M	PP26 R-020, PP26 R-025
AMADOR, S	OP23 320-R-2	AOYAMA, M	PP26 R-023
AMANO, H	OP25 421-S-5, OP25 422-S-3,	AOYAMA, T	PP25 C-070, PP26 C-180
	OP25 422-S-4, OP25 423-S-4	APANDI, M	PP26 C-095
AMANO, T	SS26 209-R-1	APELT, G	OP26 320-S-1, OP26 320-S-2
AMATYAKUL, S	PP25 B-050	APPEL, J	PP26 S-289, PP26 S-323
AMBASHTHA, AK	OP23 324-C-5, OP23 424-C-4	APT, NA	SS25 414-S-4
AMBROSE, A	SS25 425-C-2	ARAI, H	OP24 425-C-2, PP25 C-070,
AMBROSOVA, P	PP26 C-050		PP25 S-303, PP25 S-318,
AMIN, AN	PP25 C-202		PP26 C-223, PS24 312-C-4,
AMIN, Z	SS26 110-R-3		PS27 203-C-2
AMINOFF, BZ	OP23 425-C-1, OP26 308-C-7,	ARAI, T	OP27 122-C-1, PP25 C-034,
	PP25 C-218		SS25 317-B-2
AN, D	PP26 C-147	ARAI, Y	OP26 120-S-2, OP27 218-B-2,
AN, H	PP26 B-020, PP26 B-045,		PP25 C-094, PP25 S-187,
	PP26 B-051		PP25 S-193, PP26 C-037,
AN, J	OP27 309-S-6, PP26 S-066,		PP26 S-023, PP26 S-184,
	PP26 S-163, PP26 S-193,		PP26 S-208, PP26 S-212,

	SS24 118-S-1, SS24 118-S-2, SS24 118-S-3, SS24 118-S-4, SS24 218-S-1, SS24 322-S-5, SS24 413-S-3, SS25 125-C-2 SS24 326-C-1		
ARAKI, A		AUMONT, M	PP25 C-157
ARAKI, H	PP25 S-285, PP25 S-289	AUNG, T	OP27 122-C-5
ARAKI, M	PP26 C-124, PP26 C-158	AURELIAN, J	PP26 C-063
ARAMBEPOLA, C	OP25 107-S-2	AURELIAN, S	PP25 C-167, PP25 C-174
ARANDA, C	PP26 S-250	AURELIAN, SM	PP26 C-063, PP26 C-105
ARANGO-LOPERA, V	OP23 417-C-4, PP25 C-246, PP26 C-235	AUSTROM, MG	OP27 224-C-6
	PP26 S-249	AUYEUNG, T	OP24 123-C-5, OP27 112-R-6
ARANHA, VC	PP26 R-027	AVELLANA, JA	PP26 C-208, SS25 125-C-3
ARAUJO, AM	PP25 S-074, PP25 S-309, PP26 S-304	AVILA ALVA, M	PP26 C-170
ARAYAMA, N	SS26 111-R-3	AW, D	OP27 122-C-5
ARBAJE, AI	OP26 121-S-1	AWATA, S	PP26 S-055, SP25 415-1
ARBER, S	PP25 S-082, PP25 S-220, PP25 S-315	AYDIN, Y	OP27 221-C-1
AREE-UE, S	OP25 221-S-6, OP25 320-S-3 OP27 107-S-5, OP27 206-S-5	AYRES, B	PP25 C-108
AREVALO-FLECHAS, L	OP26 421-S-1, PP25 S-002, PP25 S-197, PP26 S-201, PP26 S-205	AYUKAWA, M	PP25 C-203
AREVALO-FLECHAS, LC	PP25 S-002, PP25 S-197, PP26 S-205	AYUMI, K	PP25 S-335
ARIAS MERINO, E	PP25 C-082, PP26 C-224	AYYADHURY, S	SS25 310-C-2
	PP25 C-141, PP26 C-036	AZEREDO, Z	PP26 S-127
ARIAS-MERINO, M	PP25 S-214	AZEREDO, ZA	OP23 319-S-3, PP25 B-060, PP25 S-007, PP25 S-038, PP26 S-292, PP26 S-328
ARIOGUL, S	OP26 119-B-4		PP25 S-030
ARIOKA, K	PP26 C-141	AZEVEDO TRINDADE, IO	OP27 104-S-2
ARIYOSHI, K	PP25 C-016	AZIMI, M	OP26 419-B-5
ARMAND, L	PP26 C-027	AZUMA, K	SS26 407-R-1, SS26 407-R-2
ARMSTRONG, JJ	PP26 C-235	BAAN, CA	SS24 120-S-1
ARMUTCU, B	PP26 S-175	BAARS, J	PP25 C-202
AROEIRA-NEVES, M	OP26 221-S-1	BACHMAN, M	PP26 S-360
ARROYO-ACEVEDO, P	PP25 S-041	BACHNER, YG	OP27 315-C-5, PP26 S-353
ARSHIN, V	PP25 S-284	BACK, J	PP26 B-020, PP26 B-045, SS24 322-S-1
ARSLANER, C	PP26 C-203	BAE, H	PP26 S-170
ARVANDI, MI	OP26 113-S-1	BAE, N	OP26 319-B-6, PP25 C-107
ARWIDSON, P	PP26 R-049	BAE, S	PP26 S-319
ASADA, M	PP25 S-292	BAE, Y	PP26 R-060, PP26 S-341
ASADOLLAHI, A	PP25 C-172, SS24 124-R-2	BAECKER, R	PP26 S-095, SS25 324-R-4
ASAKAWA, Y	PP26 S-047	BAEK, J	PP25 C-163
ASAMI, H	OP23 319-S-2	BAEK, S	PP25 C-078, PP25 C-079
ASGARI, A	OP26 219-B-3	BAEYENS, H	PP25 C-078, PP25 C-079
ASHARI, A	OP27 126-C-4	BAEYENS, J	OP27 221-C-1, PP25 C-029, PP26 C-052
ASHE, M	OP25 320-S-5	BAHAT, G	PP26 C-014, PP26 C-015, PP26 C-201
ASHIDA, K	PP25 S-348		PP25 C-011, PP25 C-158, PP26 C-012, PP26 C-013, SS24 410-R-4
ASKARI, M	OP23 318-C-1, SS26 326-C-1	BAHLOUL, Z	PP26 S-046
ASLAN, D	OP23 322-C-2	BAI, X	OP26 102-S-2
ASLANYAN, S	PP26 S-179		PP26 C-236
ASPELUND, T	PP25 C-217	BAIK, M	PP26 C-167
ASSEDELFT, WJ	PS24 311-B-2, SS25 125-C-8 SS24 423-S-4	BAILEY, K	PP25 B-051
ASTELL, A	PP26 C-211, PP26 C-212	BAINI, M	OP27 314-S-4
ASTIARANI, Y	PP26 C-067, SS25 427-C-2	BAJAJ, S	PP25 C-066
ATZMON, G	PP25 C-110, PP25 S-173, PP25 S-174, SS25 313-S-2	BAK, H	PP25 C-157
AU LIU, ES	OP26 119-B-2	BAKER, C	PP26 S-038, PP26 S-340
AUBEN, F	PP25 S-229, PP26 S-357	BAKO, G	OP26 211-R-5, OP26 412-R-4
AUBERTIN-LEHEUDRE, M	PP25 S-206	BAL DIT SOLLIER, C	PP26 S-297
AUDIFFREN, M	OP23 319-S-2	BALDWIN, C	SS24 317-B-3
		BALICER, R	OP24 521-S-3
AUGER, F		BALLALAI, CS	OP23 320-R-3
AUH, E		BALLARD, JW	SS25 207-R-1
AUH, S		BALLESTEROS, S	PP25 B-024
AULUCK, S		BALLOKOVA, A	PP26 C-162
		BALUBAID, HH	OP23 424-C-4
		BALUEVA, M	
		BAN, H	
		BANDHOPADHYAY, A	

BAND-WINTERSHTEIN, T	OP27 106-S-5		OP26 310-R-1, OP27 127-C-1,
BAND-WINTERSTEIN, T	OP27 303-S-6, OP27 304-S-1		PP25 C-187, PP25 C-195
BANG, H	OP25 227-C-2, OP25 227-C-4	BEAUCHET, O	OP23 318-C-2, OP23 318-C-3,
BANG, S	PP26 C-151		OP23 322-C-3, OP23 421-C-5,
BANKS, E	OP26 321-S-1		OP23 422-C-3, OP23 422-C-5,
BANSOD, D	OP27 101-S-1		OP25 105-S-5, OP26 101-S-2,
BANSOD, DW	OP26 103-S-1		OP27 118-B-3, OP27 225-C-2,
BAO, F	SS24 420-S-3		OP27 318-B-2, OP27 324-C-3,
BAO, Z	PP25 B-012, PP25 B-028,		OP27 324-C-4, PP25 S-248,
	PP25 B-029, PP25 B-033,		PP26 C-106, PP26 C-107,
	PP25 B-074		SS25 425-C-4
BAPTISTA, G	OP27 118-B-4	BEAULIEU, M	OP27 205-S-5, OP27 207-S-4,
BAPTISTA, R	PP25 S-027		PP25 R-003, PP25 S-328,
BARAKAT, A	SS25 524-R-3		PP26 R-060, PP26 S-326,
BARATEAU, M	PP26 R-062		PP26 S-341, SS25 115-S-3
BARBABELLA, F	OP27 120-S-6, SS24 510-R-4,	BECK, F	PP25 S-284
	SS24 513-S-2, SS26 116-R-3	BECK, I	PP25 R-031
	PP26 C-067	BECK, J	SS26 126-C-2
BARBAT-ARTIGAS, S	PP26 C-213	BECKER, C	SS24 424-S-1, SS25 526-C-1,
BARBE, C	PP25 S-181		SS25 526-C-4
BARBER, C	PP25 B-071	BECKER, H	OP25 221-S-6, OP25 320-S-3
BARBISAN, F	PP25 B-006	BECKER, S	PP26 R-052, SS24 421-S-2,
BARBOSA, SA	SS26 207-S-6		SS24 424-S-5
BARCLAY, S	OP26 219-B-6	BEE, PC	PP26 C-189
BARGER, JL	SS26 408-C-2	BEEKMAN, AT	SS26 413-S-2
BARKER, A	PP26 B-034	BEINIS, J	OP27 222-C-1
BARNES, LL	OP26 123-C-4	BELAND, F	SS24 116-C-1, SS24 116-C-4
BARRACLOUGH, E	PP25 C-044, PP25 C-046,	BELANGER, M	PP26 C-067
BARRENECHEA, MA	PP25 C-125	BELENGUER, A	PP26 C-209, SS25 125-C-3
	PP25 C-148	BELL, C	SS24 115-S-2
BARRETT, A	PP26 C-211	BELL, D	SS24 424-S-3
BARRIERE, J	SS25 213-S-4	BELL, S	OP26 308-C-1
BARRON, E	PP26 C-068, PP26 C-226	BELLEVILLE, S	SS26 213-S-3
BARROS, R	PP25 C-240	BELTRAMI, A	PS25 202-B-3
BARROU, Z	PP25 C-026	BELZILE, L	PP26 S-326
BARSALANI, R	PP25 S-143	BEN AHMED, L	OP27 311-S-2
BARTFAY, E	PP25 S-143	BEN NATAN, M	PP26 R-041
BARTFAY, WJ	OP27 102-S-4	BEN SALAH, R	PP26 C-201
BARTH, I	OP27 318-B-2, OP27 324-C-4	BEN-AHMED, L	OP25 225-R-2, OP27 102-S-4
BARTHA, R	OP23 313-C-4, OP25 520-S-6,	BENBERIN, V	PP25 B-016, SS26 423-C-2
BARTHOLOMEYCZIK, S	SS25 404-C-1	BEN-DAVID, BM	PP25 S-367
	OP25 122-S-4, SS24 308-R-3	BENETOS, A	OP27 125-C-1, OP27 125-C-3,
BARTLAM, B	OP23 414-C-6		PP25 C-010, PS24 212-C-3
BARTLING, B	PS24 311-B-2, SS25 125-C-1,	BENETT, J	SS24 424-S-4
BARZILAI, N	SS25 125-C-8	BEN-ISRAEL, J	PP26 R-041
	PP25 S-250	BENNETT, D	OP23 321-C-3
BASAKHA, M	PP25 S-066	BENNETT, J	SS26 126-C-2
BASHARINA, V	PP26 C-052	BENRAISS, A	PP25 S-173
BASKENT, A	OP27 216-S-4	BEN-SADOUN, G	SS26 226-C-4
BATCHELOR, F	OP27 102-S-4	BENTUR, N	OP26 211-R-5, OP26 310-R-2,
BAUCHET, J	PP26 R-062		OP26 412-R-4
BAUDINET, M	PP25 C-080	BEREDER, I	PP26 C-211
BAUER, J	PP25 C-084	BERG, N	PP26 S-309, PP26 S-326
BAUERNFEIND, G	PP26 S-182, PP26 S-343	BERGAMINI, L	OP27 224-C-3
BAUGE-FARALDI, O	OP24 107-R-5, SS24 310-R-1	BERGERZON-BITON, O	OP23 423-C-2
BAUM, C	OP25 101-S-3	BERGLAND, A	PP26 S-008
BAUM, CM	PP25 S-159	BERGLUND M.D., PHD, J	PP25 S-186
BAXTER, D	OP27 110-R-1	BERGMAN, H	PS24 201-R-3, SS24 116-C-2,
BAXTER, K	PP25 C-029, PP26 C-052		SS24 116-C-4, SS24 507-R-1
BAY, I	OP27 224-C-5	BERGVALL-KAREBORN, B	OP27 313-S-3
BAYER, A	OP27 109-S-5, PP25 S-154	BERG-WARMAN, A	OP24 101-S-2, OP24 101-S-3,
BEAMISH, JO	SS24 213-S-2, SS24 306-R-1		SS26 318-S-3
BEARD, J	OP23 421-C-3, OP26 121-S-2,	BERNABEL, R	OP26 308-C-3, SS24 113-S-3,
BEATTIE, E			

BERNACHEA, SE	SS25 327-C-3, SS25 327-C-4 PP25 C-044, PP25 C-046, PP25 C-125	BLYTH, F	OP25 219-B-2, OP27 227-C-2, OP27 315-C-1 OP23 313-C-1
BERNARD, M	OP25 121-S-2	BLYTH, FM	PP25 R-024, PP25 S-287
BERNARD, MA	PP25 R-050, SS24 221-S-3	BO, J	SS26 311-R-1
BERNARD, PL	SS25 313-S-1	BOAG, AV	OP26 113-S-6
BERNARD, S	OP27 126-C-1	BOCCUZZO, G	OP23 323-C-4, OP27 222-C-1, PP25 B-004, PP25 C-002, PP25 C-230, PP25 C-234, PP25 C-235, PP25 C-236, PP25 C-237, PP25 C-238, PP25 C-239, PP25 C-240
BERNARDI, J	PP25 S-013	BODDAERT, J	PP26 C-112
BERN-KLUG, M	OP27 206-S-4, PP26 S-333	BODEGAS, B	SS25 313-S-2
BERNSTEIN, KS	PP26 S-158	BODIN, R	OP24 521-S-1
BERR, C	PP25 S-284	BOEN, F	SS26 415-S-1
BERRUT, G	OP26 412-R-2, OP26 412-R-3, OP27 225-C-2	BOERNER, K	SP24 301-2
BERRY, J	OP25 106-S-5, OP26 121-S-4	BOERSCH-SUPAN, A	PP25 C-001
BERTANI, RF	PP26 C-009, PP26 C-089, PP26 C-090	BOGACHEV, A	PP25 C-165
BERTHOLON, L	PP25 C-241	BOGDA, K	SS26 414-S-4
BEST, R	PS27 202-S-2, SS25 524-R-3	BOHNSTINGL, M	OP25 420-S-3
BESWICK, A	SS24 308-R-3	BOKBERG, C	OP26 106-S-2
BETTGER, JP	OP26 123-C-6, OP27 123-C-2	BOLDERO, J	SS24 526-C-2
BEZRUKOV, VV	PP25 B-015	BOLTZ, M	PP25 C-101, PP26 C-009, PP26 C-089, PP26 C-090
BHATT, R	OP27 224-C-5	BONARDI, JM	PP25 B-015
BHATTARAI, S	OP24 405-S-4	BONDAR, VN	PP25 C-142, PP26 C-119
BHERER, L	SS25 313-S-3, SS25 313-S-4, SS26 213-S-1	BONIN-GUILLAUME, S	PP25 C-157
BICHARD, J	SS26 124-R-2, SS26 124-R-3	BONNET-ZAMPONI, D	PP26 C-208
BIDADIAN, M	PP26 C-129	BONONAD, S	OP25 420-S-5
BIELAKOVA, K	PP25 C-137, PP26 C-050	BONORA, A	OP23 420-C-3
BIER, B	SS26 213-S-3	BOONEN, S	SS25 524-R-3
BIETTE, K	OP25 121-S-6	BOOT, W	SS26 416-R-1, SS26 416-R-2, SS26 416-R-4
BIGBY, C	SS25 406-R-2	BOOTH, H	PP25 S-156
BIGGS, S	PP25 S-328, PS25 505-S-3, SS24 308-R-2, SS25 211-R-1	BORELL, L	SS26 224-R-3
BIJANI, A	PP25 C-253, PP26 C-236	BORG, ST	PP26 C-056
BILDGTGARD, T	SS24 323-S-1, SS24 323-S-2	BORGES, CA	PP25 C-245, PP25 S-336, PP26 C-068, PP26 C-188, PP26 C-226
BILGER, M	SS25 124-R-1	BORGES, F	OP23 326-C-4, OP27 323-C-6
BILLET, S	OP26 119-B-4	BORGES-YANEZ, S	PP25 C-010
BINAY SAFER, V	OP24 123-C-2, OP26 324-C-5	BORGI, C	PP26 S-175
BINDAWAS, S	PP26 S-048	BORINSKIY, S	PP25 C-234
BINDER, EF	OP27 319-C-4	BORNAND, A	PP25 R-055, PP26 R-063
BIRDITT, KS	SS24 515-S-3	BOROCHOWITZ, K	OP27 116-S-3
BISDEE, D	SS24 408-R-1	BOROCHOWITZ, KE	SS25 125-C-3
BJORNSSON, S	OP23 318-C-1, SS26 326-C-1	BORRAS, C	OP27 324-C-4
BLAAKILDE, A	OP25 122-S-6	BORRIE, MJ	OP27 216-S-4
BLAAKILDE, AL	OP26 221-S-1	BORSCHMANN, K	SS26 423-C-10
BLAIN, H	SS25 313-S-1	BORZOVA, I	OP27 110-R-4, OP27 218-B-1, PP25 B-048, PP25 B-049, PP25 R-011, PP25 S-042, PP25 S-227, PP26 C-043, PP26 C-171, PP26 R-027, PP26 R-030, PP26 S-051, PP26 S-166, PP26 S-214, PP26 S-329
BLANC, J	OP23 414-C-5	BOS, A	PP25 C-014
BLANCA, M	PP26 C-112	BOS, AG	PP25 C-180
BLANC-BISSON, C	OP23 414-C-5	BOSCHER, L	PP25 C-059
BLANCHARD, F	OP23 422-C-4, PP26 C-213	BOSHER, L	OP27 112-R-2, PP25 S-113
BLANCHARD, S	PP26 C-149	BOSMANS, J	OP26 420-S-2
BLEKESAUNE, M	PP25 S-185	BOSMANS, JE	
BLIESZNER, R	SS25 514-S-3		
BLISS, R	PP25 S-254, PP25 S-255		
BLIWISE, D	PS25 403-C-2, SS24 226-C-3		
BLOCH, F	SS25 525-C-1		
BLOM, J	OP27 123-C-1		
BLOM, JW	OP23 322-C-2		
BLOM, M	SS24 127-C-1		
BLOMBERG, B	PS24 204-R-3		
BLUESTONE, K	SS25 308-R-1		
BLUNDELL, A	PP25 S-210		
BLUNDELL, AG	SS25 226-C-1		

BOTTI, M	SS26 408-C-2		SS25 125-C-5
BOUCARD, G	PP25 C-110, PP25 S-173	BRODSKY, J	OP24 101-S-2, OP24 101-S-3
BOUDET, B	SS25 108-R-1, SS25 108-R-4	BROESE VAN GROENOU, M	OP27 107-S-4
BOUDIN, B	OP25 225-R-2, OP27 102-S-4, OP27 311-S-2	BROOKE, E	SS24 324-S-3, SS26 411-R-1
	SS25 110-R-2	BROOKS, J	OP26 210-R-2
BOUGHEN, J	PP26 C-211	BROSSOIE, N	OP26 310-R-5, PP26 R-022, SS25 514-S-3
BOULAHSSASS, R	PP25 B-004	BROTHERS, TD	SS26 425-C-4
BOULANGER, C	OP26 119-B-1, OP26 119-B-2, PP25 C-119, PP25 C-120	BROUWER-BROLSMA, EM	SS26 327-C-3
BOULANGER, E	PP26 C-074	BROWN WILSON, C	OP27 313-S-5
	PP25 C-110, PP25 S-173	BROWN, JS	PP26 S-266
BOULLE, A	OP23 318-C-4	BROWN, L	SS25 213-S-4
BOUQUET, CA	PP26 C-116	BROWN, S	OP25 221-S-6, OP25 320-S-3, PP26 S-138
BOURAS, C	PP25 B-001	BROWNE, C	PP25 S-045, SS25 504-R-3
BOURDEIX, I	OP23 414-C-5, OP25 222-C-2, OP27 212-R-5, OP27 320-S-3, PP26 R-062, SS26 208-C-1	BROWNE, CV	OP25 106-S-1, OP26 211-R-7
BOURDEL MARCHASSON, I	OP27 224-C-6	BROWNING, C	PS25 205-S-3, SS25 510-R-1
	PP25 C-234	BRUCKER, U	OP25 107-S-5, OP26 101-S-4
BOUSTANTI, MA	SS24 308-R-2	BRUCKER, UE	OP27 304-S-1, OP27 304-S-4
BOUVARD, E	OP24 107-R-3	BRUG, J	SS26 327-C-3
BOWMAN, D	OP27 104-S-1	BRUGG, B	PP26 C-106
BOYER, K	PP25 C-049, PP26 C-055	BRYANT, A	OP23 314-S-1
BOYER, R	SS24 218-S-2, SS24 413-S-1	BRYANT, C	OP26 106-S-2
BOZOGLU, E	PP25 C-140, PP25 C-176, PP26 C-168	BRYL, E	OP25 117-B-2
BRAAM, AW	SS26 408-C-2	BRZYSKA, M	OP27 307-S-2, PP26 B-039
BRADSHAW, L	PP25 R-012, PP25 R-013	BRZYSKI, P	OP27 307-S-2, PP26 B-039
	SS24 124-R-3	BUADZE, T	SS25 417-B-3
BRAND, C	PP25 C-172, SS24 124-R-2	BUCHCIK, JM	PP25 S-279
BRAND, G	PP25 S-053, PP26 S-181	BUDHATHOKI, SS	OP24 405-S-4
BRAND, H	SS26 408-C-2, SS26 408-C-3	BUDHWANI, S	OP24 412-S-1
BRANDAO, MP	PP25 S-045	BUDNICK, A	SS26 418-S-1, SS26 418-S-4
BRANIN, JJ	OP25 106-S-1, OP26 211-R-7, PS25 405-S-1, SS25 224-R-1	BUDNICK, A	OP27 109-S-2, PP25 S-167, PP25 S-257, PP26 R-056, SS24 419-S-4, SS26 218-S-1
BRAUER, S	OP27 120-S-3, SS25 525-C-2, SS26 207-S-6	BUGG, JM	OP27 319-C-4
BRAUN, K	PP26 C-116	BUISSIONNIERE, A	PP25 B-001
BRAUN, KL	OP25 420-S-6, OP27 205-S-3	BUKI, L	PP26 S-053
	PP25 B-004, PP25 C-002, PP25 C-230, PP25 C-237, PP25 C-239, PP25 S-284	BULCKAEN, H	OP26 119-B-4
BRAYNE, C	OP26 211-R-6	BUNKER, CH	OP25 422-S-2
	SS26 226-C-1, SS26 226-C-2	BUNN, F	PP26 C-042
BREDIN, A	SS26 415-S-1	BURDEOS, E	PP26 C-208
BREHENY, M	OP27 111-S-2	BURHOLT, V	OP25 512-S-2, OP27 211-S-1, OP27 309-S-3, SS24 419-S-2
BREINING, A	OP26 120-S-1	BURKETT, E	OP23 421-C-3
	OP23 425-C-5	BURLA, C	SS24 125-C-2
BREMNER, J	OP25 225-R-2	BURNS, CM	OP27 214-S-4
BREMOND, F	PP26 S-265	BURR, JA	PP25 C-093
BRENNAN-ING, M	OP27 119-S-6	BURTIN, A	SS26 423-C-5
BRETSCHNEIDER, W	OP23 319-S-5	BURZYNSKI, GS	SS25 325-C-2
BREWER, L	OP27 311-S-1	BUSKAS, P	SS26 207-S-2
BREZIS, M	PP25 S-024	BUSS, A	OP25 105-S-2, PP25 C-102
BRIAND, C	OP27 311-S-3, PP25 S-301, PP26 S-109	BUTLER, I	PP26 C-074
BRICK, Y	SS25 526-C-1, SS25 526-C-2, SS25 526-C-3	BUTTARO, M	PP25 C-089, PP25 C-090
BRIDGE, CE	PP25 C-026, PP26 C-023, SS24 426-C-2	BYAMBAA, B	OP23 324-C-3
BRILLEMAN, SL	PP26 C-212	BYEON, H	OP27 315-C-5, PP26 C-101
BRINK, S	OP26 310-R-1, OP27 215-S-4,	BYEON, J	PP26 B-075
BRINK, S		BYEON, K	PP25 S-206
BRITT, E		BYERS, S	PP25 S-317, PP26 S-202
BRITTAI, K		BYLES, J	OP26 310-R-3
		BYLES, JE	OP23 319-S-5, OP26 104-S-1, OP26 321-S-1, SS24 109-R-2, SS25 126-C-4
BROADBENT, E		BYUN, G	OP26 102-S-5
BROCHU, M			
BROCKER, P			
BRODATY, H			

BYUN, H	PP25 B-019, PP25 B-020, PP26 B-071, PS24 411-B-3	CASALINO, E	PP25 C-234
BYUN, J	PP26 B-084, PP26 C-227, PP26 C-230, PP26 S-078	CASAS HERRERO, A	PP26 C-221
BYUNG-KOO, Y	SS24 117-C-2	CASAS-HERRERO, A	PP26 C-218
C.M. VAN HAASTREGT, J	OP27 313-S-1	CASMAN, M	PP26 S-309
C.Y. LIU, H	OP27 110-R-2	CASPAR, S	OP23 320-R-4
CABERLON, I	OP27 110-R-4, PP25 R-011, PP26 C-043	CASSIM, B	PP25 C-023, PP26 C-182, PS24 501-R-2
CABLE, N	PP26 S-307	CASTAGNA, A	OP26 308-C-4
CABRAL, M	PP25 B-048, PP25 B-049, PP25 S-042, PP26 S-051	CASTELL, M	OP27 119-S-5
CADORE, E	PP26 C-221	CASTILLO, M	PP26 S-068
CAIRNS, D	OP27 112-R-3	CASTONGUAY, BK	SS25 112-R-4
CALADO, LB	PP25 C-071	CASTREJON-PEREZ, R	OP23 326-C-4
CALASANTI, T	PP26 S-080, PS25 205-S-1	CASTREJON-PEREZ, RC	OP27 323-C-6
CALATAYUD, A	PP26 C-208	CASTRO, AB	PP25 C-109
CALLAHAN, CM	OP27 224-C-6	CASTRO, S	PP26 C-059, PP26 S-250
CALLAN, A	OP27 108-S-3	CATZ, S	PP25 S-055
CALLESEN, MB	PP25 C-144	CAULEY, JA	OP25 422-S-2
CALZADA, I	SS24 108-R-2	CECCALDI, J	OP23 414-C-5
CAMBRA, K	PP26 C-218	CECCALDI, M	PP26 C-116
CAMBRA-CONTIN, K	OP23 322-C-4	CEDERBOM, S	OP25 101-S-1
CAMDEN, S	PP25 C-169	CEDRIC, A	PP26 C-210
CAMERON, I	PP26 C-079, SS24 109-R-3, SS24 316-C-1, SS26 111-R-1	CERNIC, K	SS26 414-S-1, SS26 414-S-2
CAMERON, ID	OP27 307-S-3, OP27 323-C-5	CERVENY, CO	PP25 S-316
CAMPBELL, A	PP25 S-125	CHA, H	OP25 512-S-1
CAMPBELL, JC	SS25 116-R-3	CHA, J	OP23 323-C-2
CAMPOS, GD	PP26 C-090	CHA, S	OP25 322-S-5
CAMPOS, GO	PP26 C-089	CHAE, DH	OP24 103-S-5
CANATAN, A	PP26 S-195	CHAE, S	OP27 315-C-5, PP26 B-080, PP26 S-088
CANETE, GD	PP25 C-046	CHAERUNISA, AR	PP25 C-217
CANKURTARAN, E	PP25 C-082	CHAHAL, JK	PP26 S-266
CANKURTARAN, M	PP25 C-082, PP26 C-224	CHAIR, SY	PP26 C-002
CANTORAL CEBALLOS, J	OP27 313-S-5	CHAIWONGNOI, U	PP26 S-016
CANY, L	OP23 414-C-5	CHAKARVARTY, SK	PP25 S-337
CAO, L	PP25 C-115	CHAKRAVARTY, I	PP25 S-337
CAO, Y	PP25 S-085	CHALKIADAKIS, G	PP25 C-042, PP26 C-029
CAPEZUTI, E	SS24 526-C-2	CHALLIS, D	SS25 519-S-1, SS25 519-S-2, SS25 519-S-3
CAPISIZU, A	PP25 C-167, PP25 C-174, PP26 C-105	CHAMBERLAIN, A	OP27 120-S-5
CAPISIZU, AA	PP26 C-063	CHAMBONNIER, L	PP25 B-001
CARDOSO, D	PP25 S-088, PP25 S-091	CHAN CHEUNG, A	SS24 124-R-2
CARLSSON, E	PP25 C-183	CHAN, A	OP25 107-S-2, OP26 310-R-4, PS26 305-S-2, SS25 502-R-4
CARMEL, S	OP27 107-S-2, OP27 114-S-2, PP26 S-360, PS25 204-R-2, SS25 124-R-2	CHAN, AK	PS24 205-S-3
CARNEIRO, JA	PP25 C-103, PP26 C-054	CHAN, C	OP27 323-C-4, PP25 C-164, PP25 C-232, PP25 C-251, PP25 S-047, PP26 R-057, PP26 S-174, PS27 305-S-3
CARNEY, G	OP26 406-S-1	CHAN, D	OP27 116-S-1, PP26 C-077, SS26 127-C-4
CARO-LOPEZ, E	PP25 C-246	CHAN, E	PP26 S-059
CAROZZI, E	PP26 S-250	CHAN, F	PP25 C-196
CARP, R	PP26 B-044	CHAN, H	PP25 C-099, PP25 C-232, PP25 S-231, PS26 105-S-3
CARPENTER, BD	SS24 215-S-1	CHAN, HY	OP23 423-C-4
CARPENTER, C	SS26 222-C-5	CHAN, I	PP26 C-027
CARPENTER, CR	SS26 322-C-4	CHAN, K	OP27 114-S-1, OP27 323-C-4, PP26 R-048
CARRICK, N	OP26 412-R-5	CHAN, L	PP25 C-192
CARROLL, PR	PP26 C-053	CHAN, P	OP24 425-C-3, OP25 421-S-4, PP25 C-145
CARTER, K	OP27 205-S-3	CHAN, R	OP23 321-C-1, PP26 S-065
CARUSO, C	OP25 117-B-2	CHAN, S	OP27 307-S-5, PP26 R-048,
CARUZO, CS	PP26 B-010		
CARVALHO, AM	PP26 B-009		
CARVALHO, GD	PP25 S-030		

	PP26 S-117, PP26 S-278, SS24 422-S-3	CHAUDHURI, A	PP25 S-134
CHAN, SS	OP23 423-C-4	CHAUDHURI, D	PP26 B-060
CHAN, T	PP25 C-196	CHAUDHURY, H	PP26 S-157
CHAN, W	SS24 514-S-5	CHAVES, P	OP27 125-C-4
CHAN, WK	OP23 323-C-6	CHAZIN, RM	OP26 210-R-3
CHAN, Y	OP27 214-S-5, PP25 C-192, PP25 R-039	CHE DIN, N	PP25 S-327
CHANDLER, AM	SS26 408-C-1	CHE TAHA, C	OP26 123-C-5
CHANG, AK	SS26 222-C-5	CHEAM, M	PP25 R-004
CHANG, AM	OP27 127-C-3	CHEATER, F	OP27 224-C-2
CHANG, B	PP26 S-272	CHEATHAM, LP	OP27 213-S-3
CHANG, C	OP27 216-S-6, PP25 C-013, PP25 C-032, PP25 C-035, PP25 C-041, PP25 C-061, PP25 C-062, PP25 C-085, PP25 C-228, PP26 C-030, PP26 C-144, SS26 127-C-3	CHEE, K	OP27 105-S-3
CHANG, CJ	PP25 C-171	CHEE, W	SS25 324-R-3
CHANG, CM	PP26 C-138	CHEE, Y	PP26 S-282
CHANG, E	PS27 301-R-3	CHEI, CL	OP26 310-R-4, SS25 502-R-4
CHANG, H	OP25 320-S-6, PP25 C-159, PP25 S-018, PP26 B-001, PP26 R-031, PP26 S-255	CHEN, C	OP23 326-C-3, OP25 106-S-2, OP27 227-C-4, PP25 C-063, PP25 C-100, PP25 R-023, PP25 S-111, PP26 C-153, PP26 R-010, PP26 R-021, PS24 512-C-4, SS25 317-B-1, SS26 127-C-3, SS26 127-C-4, SS26 207-S-3
CHANG, I	PP26 B-028, PP26 B-093, SS25 317-B-3	CHEN, CH	OP27 114-S-1, OP27 222-C-2
CHANG, J	OP24 105-S-2, PP25 S-004, PP26 C-135, PP26 S-146, SS27 124-R-1	CHEN, CY	PP25 C-200
CHANG, K	PP25 S-029, PP25 S-052, PP25 S-059, PP25 S-112	CHEN, D	PP25 B-023
CHANG, L	PP26 S-174, PP26 S-206, SS24 409-C-2	CHEN, DZ	PP25 R-004
CHANG, M	OP23 318-C-1, OP25 321-S-3	CHEN, G	PP25 B-013, SS24 210-R-2
CHANG, P	SS26 209-R-2, SS26 312-R-1	CHEN, H	OP25 321-S-4, OP26 101-S-5, PP25 C-222, PP25 C-223, PP25 S-111, PP25 S-251, PP26 B-077, PP26 S-338
CHANG, Q	PP26 C-195	CHEN, J	PP25 B-008, PP25 B-061, PP25 C-068, PP25 C-161, PP25 C-164, PP25 C-166, PP25 C-168, PP25 S-046, PP25 S-052, PP25 S-059, PP25 S-073, PP26 S-058, SS25 509-C-4
CHANG, R	SS26 209-R-4	CHEN, K	OP26 123-C-3, PP25 S-120, PP26 C-144
CHANG, S	OP25 421-S-4, PP25 C-188, PP25 C-191, PP26 R-036, PP26 R-039, PP26 S-064, PP26 S-192, SS25 324-R-3	CHEN, L	OP24 425-C-6, PP25 B-030, PP25 C-076, PP25 C-194, PP25 R-018, PP25 R-032, PP26 C-039, PP26 C-145, PP26 C-156, PS24 312-C-1, PS25 307-R-3, PS27 203-C-1, SS24 210-R-4, SS24 409-C-2, SS25 127-C-4, SS26 209-R-2, SS26 313-S-1, SS26 416-R-1
CHANG, SL	PP25 S-192	CHEN, M	OP23 423-C-3, OP25 105-S-4, OP25 321-S-4, OP27 227-C-5, PP25 R-032, PP25 S-120, PP25 S-204, PP26 R-035
CHANG, W	OP26 220-S-2, PP25 C-198, PP25 C-222, PP25 C-223, PP25 S-098	CHEN, P	PP25 S-163, SS24 121-S-2
CHANG, Y	OP26 123-C-3, PP25 C-035, PP25 C-077	CHEN, R	SS24 115-S-2
CHANG-LEE, S	PP25 S-118	CHEN, S	OP27 227-C-4, PP25 S-314, PP26 C-156
CHAO, H	PP25 R-002, PP25 S-368	CHEN, SY	OP27 213-S-4, PP26 S-288
CHAO, M	PP26 C-025	CHEN, T	OP26 102-S-4, OP27 227-C-4, PP25 C-100, PP26 C-051, PP26 C-121
CHAO, S	PP26 S-185	CHEN, W	PP25 S-036, SS24 420-S-3
CHAPMAN, I	OP27 227-C-1	CHEN, X	PP25 C-011, PP25 C-158,
CHARLES, S	SS24 418-S-2		
CHARLTON, K	PP26 C-182		
CHARLTON, KE	OP23 426-C-4		
CHARNESS, N	PS27 202-S-2, SS25 524-R-3		
CHARRIEAU, J	OP27 212-R-5		
CHASE, J	PP25 S-087		
CHATTERGEE, P	OP23 324-C-5, OP23 425-C-4		
CHATTERJEE, P	OP23 321-C-4, OP23 322-C-5, OP23 420-C-2, OP23 424-C-4, SS26 227-C-3		
CHAU, P	PP26 S-065		

CHEN, Y	PP26 C-013 PP25 R-026, PP25 S-018, PP25 S-188, PP26 C-010, SS26 313-S-2	CHIU, AD	OP26 122-S-3, OP26 122-S-4, OP26 122-S-5
CHEN, Z	SS24 420-S-3	CHIU, H	OP27 205-S-2
CHEUNG, C	PP26 S-288	CHIU, P	OP27 323-C-4
CHEUNG, E	OP23 321-C-1, PP26 S-064	CHIU, S	PP26 C-091, PP26 C-176
CHEUNG, EY	OP23 425-C-3, OP27 123-C-5	CHIU, Y	PP25 R-025
CHEUNG, H	OP27 227-C-5	CHO, B	PP26 C-060, PP26 C-172, PP26 S-032, PS25 201-R-3, PS27 203-C-3, SS24 309-C-2
CHEUNG, S	OP25 322-S-2, PP25 C-203, PP25 S-291, PP25 S-342, PP26 C-190, PP26 S-085, PP26 S-315	CHO, C	PP25 S-097
CHENG, SW	PP25 S-238	CHO, H	OP25 107-S-6, PP25 B-019
CHENG, Y	PP25 C-251, PP26 R-048	CHO, J	OP27 215-S-1, PP25 S-351, PP26 B-026, PP26 B-027, PP26 B-034, PP26 B-063, PP26 C-004, SS24 218-S-3
CHENOWETH, L	OP26 310-R-1	CHO, K	PP26 B-033, PP26 B-035, PP26 B-047, PP26 S-178, PP26 S-187, SS25 507-B-2
CHEONG, A	OP27 114-S-1	CHO, M	OP27 310-S-4, PP25 B-003, PP25 R-033, PP25 R-036, PP25 S-362, PP25 S-363, PP26 C-128, PP26 S-321
CHERIF, Y	PP26 C-014, PP26 C-015	CHO, S	OP23 424-C-5, OP25 322-S-6, OP27 125-C-5, PP26 B-029, PP26 B-057, PP26 B-058, PP26 S-158, SS24 317-B-4, SS25 210-C-4, SS27 302-S-1
CHERUBINI, A	SS24 308-R-3	CHO, W	PP26 S-317, SS25 108-R-2, SS25 306-R-4
CHERVIKOVA, N	PP25 B-016	CHO, Y	OP27 315-C-5, PP25 B-001, PP25 S-144, PP26 C-162, PP26 R-045, PP26 S-093, PP26 S-130, PP26 S-131, SP24 404-3
CHETA, DM	PP26 C-063	CHOE, J	PP26 S-134
CHEUNG, L	PP26 B-077	CHOGAHARA, M	OP24 520-S-5, OP25 321-S-1, OP25 321-S-2, OP25 321-S-5, PP25 S-243, PP26 S-169
CHEUNG, M	SS24 422-S-3	CHOI, A	PP26 C-149
CHEUNG, S	OP26 420-S-5, PP25 C-192	CHOI, B	PS24 512-C-2
CHEUNG, Y	OP27 115-S-3	CHOI, C	PP25 R-017
CHEUNG, YS	OP26 122-S-3, OP26 122-S-4, OP26 122-S-5	CHOI, CS	PP26 B-073
CHHERAWALA, N	OP25 219-B-4	CHOI, D	PP26 B-022, SS24 322-S-1, SS27 302-S-2
CHI, B	PP25 B-023	CHOI, E	PP25 B-043, PP25 B-051, PP26 B-044, PP26 S-061, SS24 518-S-4
CHI, HY	PP25 S-153	CHOI, H	PP26 B-032, PP26 B-037, PP26 B-059, PP26 B-083, PP26 C-140, PP26 S-191, PP26 S-198, SP24 202-3, SS24 417-B-2
CHI, I	OP23 419-S-5, OP26 102-S-3, OP27 210-S-4, PP26 S-105, SS24 119-S-1, SS25 206-R-1, SS26 126-C-4	CHOI, I	OP25 106-S-5, OP26 121-S-4, PP26 B-084, PP26 C-162, PP26 C-215, PP26 C-216, PP26 C-217, PP26 C-227, PP26 C-228, PP26 C-229, PP26 C-230, SS25 309-C-3, SS26 215-S-2
CHIA, K	OP27 114-S-1	CHOI, J	PP26 B-022, PP26 B-092, SP24 402-4
CHIANG, EC	OP27 218-B-3, OP27 218-B-4	CHOI, K	PP25 S-135, PP26 S-273, SS24 217-C-2, SS24 322-S-2,
CHIANG, V	PP26 S-180		
CHIANG, Y	PP26 S-174		
CHIATTI, C	OP27 120-S-6, SS24 510-R-4, SS26 116-R-3		
CHIATTI, CJ	SS24 513-S-2		
CHIBA, K	PP26 S-056		
CHIBA, M	PP25 C-098		
CHIBA, Y	PP25 C-252		
CHIE, W	OP23 422-C-6		
CHIEN, K	PP26 C-156		
CHIH, P	PP25 C-035		
CHIMEDSUREN, O	OP23 324-C-3		
CHIMEDTSEREN, C	OP26 120-S-4		
CHIN, H	PP26 S-299		
CHIN, HL	PP26 S-218		
CHIN, U	PP25 R-051		
CHING, C	SS24 423-S-4		
CHING-TENG, Y	PP26 S-270		
CHINNA, K	SS24 124-R-1		
CHIO, L	PP25 S-059		
CHIOU, C	OP25 522-S-1		
CHIOU, J	PP26 R-010, PP26 R-032		
CHIOU, S	SS24 409-C-2, SS24 526-C-1		
CHIRIBOGA, D	OP23 314-S-1		
CHIRIBOGA, DA	OP24 505-S-1, OP25 512-S-1, PP26 S-158		
CHIU, A	OP26 420-S-5		

CHOI, M	SS24 322-S-3 OP27 310-S-5, OP27 314-S-2, PP25 B-072, PP26 B-087, PP26 B-089, PP26 C-146, PP26 C-198, PP26 R-033, PP26 S-347, SS26 209-R-3	CHUNG, A CHUNG, B	OP25 106-S-3, PP26 C-121 PP25 B-072, PP26 B-087, PP26 B-089
CHOI, S	OP23 321-C-3, PP26 C-096, PP26 C-101, PP26 C-132, PP26 R-042, PP26 S-075, PP26 S-089, PP26 S-259, PP26 S-342, PS25 204-R-1, SP24 403-3, SS24 422-S-2	CHUNG, E CHUNG, H	OP27 206-S-6 OP24 520-S-1, OP26 419-B-7, OP27 318-B-5, OP27 318-B-6, PP26 B-020, PP26 B-043, PP26 B-045, PP26 B-051, PP26 B-061, PP26 B-087, SS24 417-B-4
CHOI, W	PP26 C-062, SS26 424-R-3	CHUNG, I	PP25 B-037, PP26 B-052, PP26 B-056
CHOI, Y	OP26 319-B-6, OP27 309-S-6, OP27 318-B-5, PP25 C-106, PP26 B-045, PP26 B-051, PP26 B-078, PP26 B-091, PP26 C-082, PP26 C-217, PP26 C-229, PP26 S-027, PP26 S-096, PP26 S-155, PP26 S-159, PP26 S-348, SS24 307-S-4, SS25 127-C-3, SS25 325-C-4, SS25 419-C-1	CHUNG, J	OP23 321-C-3, PP25 S-031, PP26 B-065, PP26 C-131
CHOKKANATHAN, S	OP27 104-S-3	CHUNG, K	OP26 319-B-6, OP27 318-B-5, PP26 B-020, PP26 B-045, PP26 B-051, PP26 B-059, SP25 301-4
CHOMY, F	OP23 414-C-5	CHUNG, M CHUNG, P CHUNG, S	SP24 404-1 SS26 226-C-2 PP25 C-107, PP26 C-096, PP26 S-171, PP26 S-191, SS25 126-C-1, SS27 124-R-3
CHON, Y	OP27 210-S-5	CHUNG, Y	OP27 315-C-4, PP26 C-082, PP26 C-096, SS25 127-C-3
CHONG, A	SS24 513-S-3, SS25 114-S-1	CHUPRIN, V	OP25 219-B-1
CHONG, EG	PP26 B-031	CID CASTEULANI, A	PP25 C-090
CHONG, M	PP25 C-091	CIOBOTARU, C	PP25 C-167, PP25 C-174
CHONG, MS	OP27 224-C-1, PS25 403-C-3	CIOCAN, D	OP23 422-C-4, PP25 C-241, PP26 C-213
CHONG, Y	PP26 S-211	CLAASSEN, J	OP25 119-B-1
CHONGBAU, H	OP25 106-S-3	CLAASSENS, L	OP27 107-S-4
CHOQUETTE, S	PP25 C-105	CLARFIELD, M	SS24 308-R-3
CHOU, H	PP26 C-091, PP26 C-176	CLARKE, P	OP27 109-S-4, OP27 306-S-1
CHOU, M	PP25 S-112, PP25 S-204, PP26 C-039, SS24 225-C-1	CLASSEN, K	SS24 424-S-2
CHOU, Y	PP25 S-192	CLAUDIO, V	PP25 S-088, PP25 S-089, PP25 S-090, PP25 S-091
CHOUW, H	PP25 S-086	CLAYDON, VE	OP27 324-C-1
CHOW, AY	SS24 215-S-2	CLELAND, C	SS25 213-S-1, SS25 213-S-3
CHOW, EO	OP27 212-R-3	CLEMSON, L	OP26 123-C-4, SS24 109-R-3, SS26 309-R-2, SS26 309-R-3, SS26 309-R-4
CHOW, H	PP25 S-152	CLIFFORD, A	SS24 109-R-4
CHOW, K	OP25 105-S-3	CLINNICK, L	OP23 320-R-1
CHOW, N	PS24 205-S-1, SS24 410-R-4	CLOPPET, A	PP25 C-234
CHOY, H	PP26 B-047	CLOSE, JC	OP26 123-C-4
CHRISTENSEN, IT	PP25 C-027	CLOSS, VE	OP27 319-C-2, PP26 C-056
CHRYSOHOOU, C	OP27 215-S-6	CLOUSTON, S	SS24 113-S-4
CHU, C	PP25 S-188, PP26 C-039	CLOVIS, J	PP25 S-060
CHU, D	OP25 121-S-5	COBBAN, S	PP25 S-060
CHU, L	OP23 323-C-3, PP25 S-021	COCHRANE, B	OP26 113-S-3, OP27 114-S-4, OP27 215-S-3, PP26 S-083
CHU, S	PP26 C-062	COGGER, VC	PP25 S-211
CHUA, W	OP27 122-C-5	COHEN, P	OP25 117-B-1, OP26 119-B-5, PP26 B-014
CHUANG, S	PP25 C-025, PP25 C-100	COHEN-BITTAN, J	OP27 118-B-5, PP26 B-062
CHUANG, W	OP27 220-S-6	COLEMAN-MILLER, G	OP23 323-C-4, OP27 222-C-1, PP25 C-002, PP25 C-236, PP25 C-237, PP25 C-239
CHUDYK, A	OP23 319-S-2	COLLETTE, F	PP26 R-051
CHUEN FUN, C	OP25 107-S-4	COLONNA-ROMANO, G	PP25 C-110, PP25 S-174
CHUI, D	PP26 C-108, PP26 C-109, SP24 403-1, SS25 209-C-4	COMIJS, H	OP25 117-B-2 SS26 413-S-3
CHUI, E	SS25 116-R-4		
CHUI, H	OP23 314-S-3		
CHUN, H	OP27 116-S-6, SS25 210-C-4		
CHUN, I	PP26 C-072		
CHUN, K	OP27 115-S-3		
CHUN, M	PP26 S-188, SS26 215-S-1		

COMIJS, HC	SS26 413-S-2	CUMMINGS, G	PP26 R-051
COMPTON, S	PP25 S-060	CUMMINGS, S	OP24 101-S-5
CONG, Z	SS24 519-S-2, SS26 215-S-3	CUNILL, J	PP26 C-220
CONLON, C	OP26 406-S-1	CUONG, BT	OP27 105-S-2
CONN, V	PP25 S-087	CURCIO, C	SS24 219-S-2
CONNOLY, P	OP27 222-C-5	CURCIO, CL	PP25 C-054
CONROY, S	PP25 C-176, PP25 S-210	CURRYER, C	SS24 109-R-2
COOGLE, CL	PP26 R-022	CYARTO, E	OP24 405-S-2
COOK, B	SS24 227-C-4	CYLKOWSKA-NOWAK, M	PP26 C-178
COOK, D	OP27 212-R-4	D'AVILA, R	SS24 125-C-2
COONEY, TM	OP25 511-S-3	DA CRUZ, IB	PP25 B-031
COOPER, D	SS24 110-R-2	DA ROSA, G	SS24 115-S-3
CORNU, C	OP23 318-C-3, OP23 422-C-3	DA SILVA, LA	PP25 S-013
CORONA FIGUEROA, B	PP26 S-201	DAATLAND, S	OP27 207-S-1
CORONA, LP	OP27 227-C-6	DAATLAND, SO	SS24 209-R-4
CORRADO, L	SS24 424-S-5	DABROWSKA, G	PP25 S-171
CORREA, BL	PP25 C-022	DAGENAIS, M	PP25 C-075
CORTE, B	OP25 512-S-4	DAHL, AK	SS26 326-C-3
COSCO, TD	OP27 120-S-3	DAHLBERG, L	PP25 S-308
COSTA, AP	PP26 S-050, SS25 516-R-2	DAICHMAN, LS	OP24 522-S-4, SS25 109-R-2,
COSTA, C	PP25 S-089, PP25 S-090		SS25 308-R-2
COSTA, E	SS24 125-C-2	DAKOS, V	OP25 119-B-1
COTTENCIN, A	PP25 S-223	DAL BIANCO, C	SS25 210-C-2
COUDERC, A	PP26 C-211	DALY, RM	OP25 222-C-4
COUGHLIN, JF	SS25 305-S-4	DALY, T	SS24 408-R-1
COUNSELL, S	PP26 C-157	DAMARELL, R	OP25 225-R-1
COURTEL, T	PP26 B-006	D'AMBROSIO, LA	SS25 305-S-4
COUTURIER, Y	PP25 S-150	DAMHOLDT, MF	PP25 C-144
COVLESCU, I	PP26 C-063	DAMODARAN, L	SS26 124-R-3
COX, C	OP25 105-S-6	D'AMURO, KT	SS24 408-R-1
CRACCO, C	PP25 C-230	DAN, X	PP25 C-145
CRAFTMAN GRANSJON, A	PP25 C-185	DANET, M	OP27 320-S-3
CRAMP, A	PP25 S-159	DANIELS, MJ	SS26 408-C-1
CRANDALL, J	SS25 125-C-1	DANIGELIS, N	PP25 S-244
CRAVEN, C	OP25 522-S-3	DANNEFER, D	SS24 120-S-2
CRAWFORD, J	SS25 125-C-5	DANNON, P	OP23 417-C-1
CREADY, CM	SS25 510-R-3	DAPPARABAIL, V	OP27 316-S-3
CREGAR, C	SS26 322-C-3	DARIN MATTSSON, A	PP25 S-040, PP25 S-051
CRESPO, SS	PP25 S-007	DAROUX, M	OP26 119-B-1, OP26 119-B-2
CRIDELICH, C	PP25 C-059, PP25 C-180	DARTIGUES, J	OP27 320-S-3
CRISANTE, R	SS26 108-C-2	DARZINS, P	PP26 C-157
CRISCIMANI, VA	PP26 B-008	DAS, PC	OP23 322-C-5, OP23 324-C-5,
CRISTOL, J	OP27 118-B-4		OP23 424-C-4, OP23 425-C-4,
CRIZZLE, AM	PP26 C-130, PP26 S-138		SS26 227-C-2
CROME, P	SS24 308-R-3, SS25 223-C-1	DAS, SK	OP26 123-C-5
CROTHERS, N	PP25 S-235	DATTA, C	SS25 526-C-2, SS25 526-C-3
CROTTY, M	OP27 113-S-5, SS26 111-R-1	DAUBA, J	OP23 414-C-5
CRUZ, IB	PP25 B-071	DAUNT, L	PP25 S-210
CSIKAI, EL	OP24 107-R-6	DAVEDYUK, EP	OP23 314-S-2
CUBES, J	PP26 C-208	DAVID, CC	OP27 214-S-4
CUENO, ME	PP25 B-065, PP26 B-019	DAVIES, C	SS24 109-R-3
CUESTA, D	PP26 C-208	DAVIES, O	OP23 423-C-1, OP27 113-S-5
CUEVA CONTRERAS, J	PP26 S-201	DAVIES, S	OP26 412-R-5, OP27 119-S-2
CUEVA-CONTRERAS, J	PP25 S-002, PP25 S-197,	DAVIS, MW	OP23 413-C-3
	PP26 S-205	DAVIS, S	OP27 119-S-1, PP25 S-125,
CUEVAS, PG	PP26 S-283		PP25 S-235
CUI, L	SS24 420-S-3	DAVISON, T	OP26 310-R-1
CULLINAN, J	PP25 R-008	DAY, L	SS26 309-R-1, SS26 309-R-2,
CUMMING, R	OP26 123-C-4, OP27 227-C-2,	DE BAAT, C	SS26 309-R-3, SS26 309-R-4
	PS27 204-R-1		SS25 326-C-1, SS25 326-C-2,
CUMMING, RG	OP23 313-C-1, OP25 219-B-2,	DE BELLIS, A	SS25 326-C-3
	OP27 315-C-1, PP25 C-253,	DE BOER, M	OP23 423-C-1
	PP26 C-236		OP27 115-S-2

DE BOER, T	SS24 127-C-1	DEMERS, L	OP25 420-S-1, PP25 S-240
DE BOISJOLLY-BONNEFOI, J	OP23 421-C-5	DEMIRALP, M	PP25 S-012
DE BRUIN, SR	SS26 407-R-1	DEMIRIS, G	PP25 S-031
DE DECKER, L	OP23 322-C-3, OP23 421-C-5, OP23 422-C-5, OP25 105-S-5, OP27 225-C-2, PP26 C-107	DEMIROVIC, D	PP26 B-090
DE DONDER, L	PP25 S-237, PP25 S-257, PP26 R-056, PP26 S-231, PP26 S-325	DEMIRTAS, A	PP26 S-308
DE FRAGA JR, R	SS24 125-C-2	DEMONTIERO, O	PP25 C-054
DE GAGNE, J	SS26 422-C-2	DEN ELZEN, W	OP27 123-C-1
DE GAGNE, JC	SS26 422-C-1	DEN ELZEN, WP	OP23 322-C-2
DE GROOT, L	SS26 327-C-2	DENCHER, NA	OP26 419-B-6, PS24 211-B-3
DE GROOT, LC	SS26 327-C-3	DENIS, J	PP25 S-150
DE JONGE, MC	OP27 313-S-1	DENISON, E	OP25 101-S-1
DE JONGHE, A	SS24 127-C-1, SS24 127-C-2, SS24 127-C-3	DENKINGER, M	OP27 119-S-5
DE LA ROSA, R	OP27 314-S-3	DENNISON, E	OP27 119-S-5
DE LA VEGA, S	SS24 216-C-1	DENT, E	OP27 227-C-1
DE LANGE, E	OP27 106-S-3, PP25 S-295	DENTON, M	PP25 S-147
DE LANGE, FJ	OP27 312-C-4	DERREUMAUX, A	SS26 226-C-4
DE MELO, CM	PP25 B-055	DESAI, MD, A	PP25 C-050
DE MEYER, L	SS25 326-C-4	DESCHAMPS, T	OP23 318-C-3, OP23 422-C-3
DE OLIVEIRA, C	SS26 212-R-1, SS26 212-R-2	DESJARDINS, S	OP27 104-S-1
DE PAULA, JA	PP25 S-013	DESMET, P	PP25 C-078, PP25 C-079
DE PAZ, JA	PP25 B-031, PP25 B-071	DESROSIERS, J	PP25 S-240
DE ROOIJ, S	SS24 127-C-1, SS24 127-C-2	D'ESTE, C	OP26 104-S-1
DE ROOIJ, SE	OP27 126-C-4, OP27 312-C-4	DEVRIENDT, E	SS25 516-R-4
DE SOUSA NETO, T	PP26 R-027	DEWI, VP	PP25 C-040, PS25 405-S-2
DE VET, HC	OP27 115-S-2	DEY, AB	OP23 321-C-4, OP23 322-C-5, OP23 324-C-5, OP23 420-C-2, OP23 424-C-4, OP23 425-C-4, OP27 323-C-2, SS26 227-C-1, SS26 316-R-3
DE VISSCHERE, L	SS25 326-C-2, SS25 326-C-3, SS25 326-C-4	DHARMAGE, S	OP27 216-S-4
DE WITTE, N	OP27 109-S-2, PP25 S-167, PP25 S-257, PP26 R-056, PP26 S-231	DHONUKSHE-RUTTEN, R	SS26 327-C-2
DEAN, C	OP26 123-C-4	DHONUKSHE-RUTTEN, RA	SS26 327-C-3
DEAN, W	PP26 S-068	DI ROSA, M	SS24 513-S-2, SS26 116-R-3
DEBERT, GG	OP27 314-S-1, PP25 S-329	DIACONEASA, AG	PP25 B-045, PP25 B-046
DEBOYSSON, C	SS26 213-S-3	DIALLO, L	OP27 212-R-5
DECAVEL, F	OP25 105-S-5	DIAZ DE LEON, C	PP26 S-253
DECKER-MARUSKA, M	SS26 409-R-2	DIAZ, S	PP25 C-067
DECKERS LEME, M	OP23 422-C-1	DICKINSON, A	OP27 119-S-2, OP27 216-S-2, PP25 S-025, PP25 S-146, PP26 C-042
DECLERCQ, A	OP26 211-R-6, SS25 516-R-4	DIEHL, M	OP26 421-S-3
DECOSTER, J	OP23 314-S-1	DIEUDONNE, B	PP25 C-240
DEEG, D	OP27 107-S-4, OP27 119-S-5, SS26 413-S-1	DIJKSTRA, A	SS25 524-R-1
DEEG, DJ	PP25 C-064, SS24 218-S-2, SS24 413-S-1, SS26 112-R-3, SS26 413-S-2	DIJKSTRA, BH	SS25 524-R-1
DEGUCHI, K	OP23 323-C-5	DIKKEN, J	OP27 303-S-1
DEGUCHI, S	OP23 323-C-5	DILLEY, L	SS26 424-R-4
DEKIGAI, H	PP26 R-050	DING, X	OP27 313-S-2
DEKKER, J	OP23 313-C-3, OP25 222-C-3	DIONNE, I	PP26 C-023
DEKONINCK, J	PP25 C-078, PP25 C-079	DIONNE, IJ	OP25 219-B-3, PP25 C-026, PP25 C-105, SS24 426-C-4, SS25 427-C-1, SS25 427-C-3
DELABRIERE, I	PP25 C-119, PP25 C-120	DIPONEGORO, SL	PP25 C-040, PS25 405-S-2
DELAMARRE DAMIER, F	OP26 412-R-2, OP26 412-R-3, PP25 C-008	DJUARI, L	PP25 S-065
DELCOURT, C	OP27 320-S-3	DO CARMO LENCASTRE, M	SS24 125-C-2
DELECLUSE, C	OP24 521-S-1	DO, Y	SS25 502-R-1
DELGADO, V	OP23 413-C-4	DOBBS, C	SS24 419-S-2
DELIENS, L	OP27 115-S-2	DOE DE MAINDREVILLE, A	PP25 R-013
DELLAMORA, M	PP25 S-159	DOE, SS	OP27 104-S-5
DELLER, J	OP27 220-S-3, OP27 220-S-5	DOGANAY, S	PP25 C-004
		DOH, M	PP25 S-345
		DOHRENWEND, A	PP25 S-176, PP26 S-226
		DOI, S	PP26 R-016
		DOI, T	PP25 C-113, PP25 S-015,

DOMBROWSKI, W	PP26 S-200	DURRIEU, J	OP23 414-C-5, OP25 222-C-2
DOMMERMUTH, L	PP25 S-269	DURSO, SC	SS26 109-R-1
DONAHUE, P	PP25 S-185	DURU ASIRET, G	OP27 303-S-4
DONALDSON, A	PP26 R-060, PP26 S-341	DURUYTER, F	OP25 420-S-1
DONG, B	SS26 309-R-3	DURY, S	PP25 S-237, PP26 R-056, PP26 S-231
DONG, D	OP27 313-S-2, PP25 S-364, PP26 C-026, PP26 S-022	DUVAL, Y	PP25 B-026
DONG, H	OP27 313-S-2	DUVDEVANY, A	OP23 413-C-1
DONG, X	OP26 419-B-7, PP26 B-073	DWIPA, L	PP26 C-095
DONHAUE, P	PS27 301-R-1, PS27 301-R-3	DYAS, J	PP26 C-168
DONLON, T	OP24 106-S-4	DYKSTRA, PA	OP25 522-S-2
DORAN, D	SS24 115-S-2	DYMEK-SKOCZYNSKA, A	PP26 C-178
DORAN, D	OP25 219-B-6, OP26 122-S-6	EALLES, J	OP27 213-S-1
DORE, D	OP25 219-B-4	EBELING, P	OP27 226-C-3
DORTMANN, O	OP23 313-C-4	EBIHARA, T	PP26 C-223
DORUK, H	OP24 123-C-2, OP26 324-C-5, PP25 C-049, PP25 C-095, PP26 C-055	EDAHIRO, A	PP25 C-212, PP25 C-252, PP25 S-126, PP25 S-138 PP25 R-031, PP25 S-221
DOS SANTOS, AJ	PP26 C-054	EDBERG, A	SS24 110-R-2
DOUGHTY, RN	OP24 123-C-1	EDES, T	OP27 127-C-1
DOUNO, M	PP25 S-083	EDIRIPPULIGE, S	PP25 C-176
DOUSSAU, A	OP23 414-C-5	EDMANS, J	OP23 313-C-2, OP27 125-C-6, OP27 127-C-3, PP26 C-157, SS24 509-R-2
DOUTRELIGNE, S	OP26 412-R-2, OP26 412-R-3	EDWARDS, H	PP25 S-247
DOW, B	OP26 106-S-2, OP27 216-S-5	EDWARDS, J	OP25 221-S-1
DOWNEY, C	SS26 126-C-3	EDWARDS, M	SS24 507-R-2
DOWSON, L	OP27 216-S-4	EDWARDS, N	OP27 114-S-1
DR. KIMMEL, A	OP26 101-S-4	EE, C	OP27 224-C-5, PP26 C-075
DRAEGER, D	SS26 418-S-1, SS26 418-S-4	EELES, E	SS25 212-R-1, SS25 212-R-3
DRAME, M	OP23 422-C-4, PP25 B-026, PP25 C-241, PP26 B-006, PP26 C-214	EGILSDOTTIR, O	SS25 212-R-2
DRAPANIOTIS, P	SS26 223-C-3	EGILSDOTTIR, Ø	PP25 B-025
DRETTAKIS, G	SS26 226-C-4	EGORIN, K	PP25 S-022
DREWES, YM	OP23 322-C-2	EGUCHI, K	OP26 211-R-5, OP26 412-R-4
DREY, M	PP25 C-080	EILAT-TSANANI, S	SS25 212-R-3
DRUNAT, O	PP25 S-032, PP26 S-182, PP26 S-343	EILERSTEN, G	OP27 316-S-1, SS25 212-R-1, SS25 212-R-2
DU, P	KL25 004-, PS24 205-S-4, SS24 213-S-1	EILERTSEN, G	OP23 318-C-1, SS26 326-C-1
DU, S	PP25 S-325	EIRNARSSON, B	PP25 C-056, PP26 C-047
DUAN, J	PP26 C-011	EKDAHL, C	OP23 420-C-4
DUARTE, Y	OP27 226-C-2, OP27 227-C-6, OP27 321-C-3	EKLUND, P	PP26 C-014
DUARTE, YA	PP25 S-003	EL AOUD, S	OP27 111-S-2
DUBAIL, D	OP27 125-C-3	ELGER, B	OP25 119-B-4
DUBE, M	OP27 104-S-1	ELKINS, M	PP26 B-090
DUBUC, N	OP27 114-S-5	ELLINGSEN, TJ	SS26 413-S-1
DUGAN, E	PP25 R-001, PP25 S-050, PP25 S-344	ELLWARDT, L	PP25 S-186
DUGGAL, NA	PS24 204-R-1	ELMSTAHL M.D., PHD, S	PP25 C-022
DUGSTAD, J	SS25 312-R-1	ELY, LS	SS24 118-S-2
DUNBAR, P	SS24 227-C-4	ELZEN, WD	PP25 S-286
DUNBAR, S	OP27 116-S-4	EMAMI, A	OP26 420-S-6
DUNKERLEY, L	OP25 101-S-2	EMILSSON, UM	PP26 S-284
DUNNING, TT	SS24 325-C-1	EMILY, MP	PP25 C-169
DUNSTAN, DW	OP25 222-C-4	EMOND, M	OP25 105-S-6
DUONG, B	PP26 S-119	EMSLEY, R	SS26 111-R-2
DUPUY, A	OP27 118-B-4	ENDERBY, PM	OP27 223-C-4, PP26 C-069
DUQUE, G	PP25 C-054, PS26 203-C-2, SS26 125-C-1, SS26 125-C-3	ENDO, H	OP26 320-S-6, PP25 S-116
DUQUE-ALARCON, X	OP23 417-C-4	ENDO, K	PP25 S-149
DURGANTE, PC	PP25 S-058	ENG, J	SP26 301-1, SP26 301-2
DURIEUX, N	OP26 119-B-2	ENGELHARDT, K	PP25 C-022
		ENGROFF, P	SS26 327-C-2
		ENNEMAN, A	SS26 327-C-3
		ENNEMAN, AW	OP25 221-S-4, PP25 S-067, PP25 S-245, PP25 S-246
		ENSTE, P	

EO, H	PP26 B-069	FARIDI, E	PP26 R-058
EO, S	PP26 B-071	FARINHA, F	OP24 522-S-4
ERDENEKHUYAG, B	OP23 324-C-3	FAROOQUI, A	SS25 124-R-1
ERDOGAN, Z	PP25 C-173	FARQUHAR, M	SS26 207-S-6
ERGEN, A	PP25 C-082	FARRE, A	SS24 308-R-3
ERGIS, A	SS26 213-S-4	FASBENDER, U	OP27 220-S-5
ERGUN, A	PP25 C-173, SS24 124-R-2	FASSNACHT, V	OP23 424-C-2
ERICKSON, K	SS25 313-S-4	FAST, J	OP26 104-S-3, SS24 122-S-1, SS26 214-S-3
ERIKAVITRI, E	PP25 S-065	FATEHI, F	PP25 R-049
ERIKSDOTTER, M	OP23 318-C-5, OP26 308-C-2	FATHI, Z	PP25 C-086
ERIKSEN, ML	OP23 417-C-3, OP23 422-C-2, OP27 222-C-4	FAUCOUNAU, V	PP25 B-004, PP25 C-002, PP25 C-240
ERIKSSON, GM	SS24 310-R-2	FAXEN-IRVING, G	OP23 318-C-5
ERIKSSON, H	PP25 S-286	FAYE, O	OP23 319-S-4
ERIKSSON, L	PP25 S-286	FEDERSPIEL, C	OP27 112-R-1, PP25 C-226, PP26 C-155
ERMILOV, VV	OP23 414-C-2	FEDICHEV, PO	SS25 217-B-4
ERNSTHBRAVELL, M	PP25 S-296	FEENEY, K	OP26 314-S-3
EROL, S	PP25 C-173	FEI, S	SP24 502-2
EROLA, J	SS26 114-S-3	FEIGENBAUM, S	OP26 314-S-4
ERONEN, J	OP25 121-S-1	FELDMAN, F	OP27 312-C-1, SS26 424-R-2, SS26 424-R-4
ERTEN, N	OP27 221-C-1, PP25 C-029, PP26 C-052	FELICETTI, V	PP26 S-214
ESCOUROLLE-PELTIER, F	PP25 C-086	FELISBINO, I	PP25 S-013
ESHRATI, B	OP27 104-S-2	FEMIA, EE	SS24 418-S-4
ESIN, E	PP25 C-082	FENELON, V	PP25 B-001
ESLAMI, S	OP27 126-C-4	FENG, L	OP23 324-C-1, OP25 105-S-3, OP27 223-C-1, OP27 226-C-1 SS24 518-S-3
ESPINAL, M	OP25 222-C-5	FENG, Q	PP26 C-016, PP26 C-142
ESPINO, DV	PP25 C-221	FERENCE, BA	PP26 C-171
ESTABROOKS, C	PP26 R-051	FERNANDES, SF	OP24 511-S-1
ESTERHUIZEN, T	PP26 C-182	FERNANDES, VM	PS25 202-B-1
ESTES, C	SS24 120-S-4	FERNANDEZ FRAGA, M	OP27 225-C-1
ETHERIDGE, F	PP25 S-150	FERNANDO, U	SS25 313-S-2
ETHERTON-BEER, C	SS26 408-C-3	FERRAND, C	SS25 108-R-4
ETO, M	PS25 307-R-1	FERRANE, I	OP25 322-S-3, OP27 215-S-2, OP27 308-S-2
EVANS, AC	SS25 409-C-2	FERRARO, KF	OP25 320-S-4
EVANS, DA	PP26 B-034	FERRAZ, IT	PP26 C-112
EVANS, E	SS25 213-S-1, SS25 213-S-4	FERRE, A	PP26 S-325
EVANS, MA	SS24 227-C-2, SS26 301-C-1	FERREIRA ALVES, J	OP27 118-B-4
EWALD M. BRONKHORST, E	SS25 326-C-2	FERREIRA, E	PP25 B-006
EXTERMANN, M	PS25 203-C-1	FERREIRA, MS	PP26 C-009
EZIEFULA, U	OP27 306-S-4	FERRIOLI, E	PP25 C-071, PP25 C-101, PP25 C-103, PP26 C-054, PP26 C-089, PP26 C-090, SS24 427-C-4
F.M.T. DU MOULIN, M	OP27 313-S-1	FERRIOLLI, E	OP23 320-R-3, SS24 113-S-3, SS25 327-C-2, SS25 327-C-3, SS25 327-C-4
FABBO, A	OP25 420-S-5, OP26 308-C-4	FIALOVA, D	OP24 102-S-2
FABBRI, F	OP25 225-R-2, OP27 311-S-2	FIGUEIREDO, D	PP25 S-037
FADAYEVATAN, R	PP25 C-172, SS24 124-R-2	FIGUEROA, R	OP25 119-B-1
FAGUNDES, ML	PP26 C-027	FIKKERS, B	PP25 C-022
FAIRHALL, N	OP27 323-C-5	FILHO, IG	SS26 309-R-2
FALKENBERG, H	SS25 212-R-2	FINCH, C	PS27 305-S-1
FALKENBERG, HK	SS25 212-R-1, SS25 212-R-3, SS25 312-R-1	FINDSEN, BC	SS24 515-S-1
FAN, L	PP25 S-325	FINGERMAN, K	SS24 515-S-3
FAN, Y	SS24 419-S-3, SS24 423-S-2	FINGERMAN, KL	OP25 101-S-2
FANG, I	PP25 S-086, PP25 S-152, PP26 S-064	FINK, P	SS25 124-R-1
FANG, L	PP25 S-209	FINKELSTEIN, E	OP27 222-C-3
FANG, P	OP25 421-S-4	FINLAYSON, H	
FANG, W	PP25 C-077		
FANG, X	PP26 C-010		
FANTINO, B	OP23 422-C-5, OP26 101-S-2, OP27 118-B-3, OP27 324-C-3, PP25 S-248, PP26 C-106		
FARIAS, FM	PP25 S-026		
FARIAS, RR	OP27 319-C-2		

FINLAYSON, K	OP23 313-C-2, OP27 125-C-6, OP27 127-C-3	FREDDOLINO, P	PP25 S-190
FINN, C	OP27 108-S-3, PP25 R-008	FREEDMAN, M	SP25 301-1
FINNE SOVERI, H	SS25 327-C-4	FREEMAN, S	PP26 C-159, PP26 C-179, PP26 S-122, SS24 207-S-1
FINNE-SOVERI, H	OP26 211-R-6, OP26 324-C-1, SS25 327-C-2, SS25 327-C-3	FREIRE, C	SP26 301-4
FIORI, K	SS26 416-R-2	FRENCH, DJ	SS24 421-S-4
FISHER, AA	OP23 413-C-3	FRENZEL, M	OP26 419-B-6, PS24 211-B-3
FITA, I	OP23 424-C-1, OP27 122-C-6, PP26 C-100	FREERICKS, P	SP26 304-1
FLAMAING, J	OP23 420-C-3, SS25 516-R-4	FRIEDRICH, K	OP27 211-S-5
FLAXMAN, S	OP27 120-S-5	FRIGUI, M	PP26 C-015, PP26 C-201
FLECK, MP	OP23 314-S-5	FRIJTERS, DH	OP23 418-S-2, PP25 C-064
FLEMING, I	SS24 227-C-4	FRIKHA, F	PP26 C-014, PP26 C-201
FLEMING, J	SS25 525-C-2, SS26 207-S-6	FRISON, VB	OP23 325-C-4
FLEMING, R	OP27 316-S-2	FROGGATT, K	OP27 119-S-2
FLICKER, L	OP27 227-C-3	FROSTHOLM, L	OP25 101-S-2
FLOCCIA, M	OP27 212-R-5	FRULIO, N	OP25 222-C-2
FLOREK, M	PP26 B-039	FU, S	PP25 C-030
FLORENCIO, M	PP26 R-027	FU, Y	PP25 R-002
FLORES, BE	OP25 221-S-6, OP25 320-S-3	FUENTES, SA	OP25 320-S-4, PP25 S-316
FLORES, P	PP26 C-059, PP26 S-250	FUHRER, M	OP25 420-S-1
FLYNN, M	SS24 514-S-4	FUJII, C	PP25 C-162
FLYNN, T	SS25 124-R-1	FUJII, H	PP25 S-268
FOEBEL, A	OP26 324-C-1, SS25 327-C-2	FUJII, M	PP25 C-134, PP25 C-135
FOEBEL, AD	OP23 320-R-3, OP26 308-C-3	FUJIMAKI, Y	PP25 C-179
FOERSTER, J	OP25 117-B-2	FUJIMOTO, M	OP23 425-C-2, PP25 C-207
FOGG, S	OP27 120-S-5	FUJIMURA, S	PP26 R-004
FOGUEM, C	PP25 R-012, PP25 R-013	FUJINAMI, T	PP25 S-129
FONCK, M	OP23 414-C-5	FUJISAKI, S	PP25 C-182
FONG, N	OP27 114-S-1	FUJISAWA, M	PP25 S-036
FOO, C	OP23 421-C-4, PP25 C-199, PP25 C-249, SS26 222-C-4	FUJITA, A	PP25 S-132
FOO, K	SS25 502-R-1	FUJITA, K	PP25 S-202, PP25 S-311
FORDER, P	OP26 321-S-1	FUJITA, M	OP26 420-S-1, OP26 420-S-3, PP26 S-307
FOREBACK, J	PP26 S-226	FUJITA, S	PP25 S-114
FOREST, A	PP25 C-235, PP25 C-236, PP25 C-237, PP25 C-238, PP25 C-239	FUJITA, Y	SS24 408-R-2
FORMOSA, M	PS27 305-S-4, SS24 313-S-3	FUJIWARA, M	PP25 C-034
FOROUGHAN, M	PP25 C-111	FUJIWARA, Y	OP23 325-C-5, OP25 421-S-5, OP25 422-S-3, OP25 422-S-4, OP25 423-S-4, PP25 C-141, PP25 S-232, PP25 S-241, PP25 S-309, PP25 S-319, PP25 S-326, PP26 C-036, PP26 C-185, PP26 R-014, PP26 S-012, PP26 S-304, SS24 222-S-2, SS24 326-C-1
FORSSELL, E	OP24 101-S-4, SS24 410-R-2	FUJIYAMA, J	PP25 C-210
FORSSELL, EK	OP24 101-S-1	FUKADA, O	PP25 C-156
FORSTER, A	OP27 224-C-2	FUKAHORI, H	PP25 S-020
FORSYTH, D	PP26 C-169	FUKAYA, C	OP26 324-C-2
FORT, M	PP26 C-112	FUKAYA, T	OP23 325-C-5, OP25 421-S-5, OP25 422-S-3, OP25 422-S-4, OP25 423-S-4, PP25 S-300, PP25 S-309, PP25 S-326, PP26 R-014, PP26 S-304
FOSTER, P	PP25 C-140	FUKU, N	OP27 122-C-1
FOUAD, RA	OP27 113-S-1	FUKUDA, M	PP25 C-177
FOUGERE, B	OP26 119-B-4	FUKUDA, N	SS24 121-S-1, SS26 214-S-2
FOUQUET, Y	OP27 102-S-4	FUKUI, K	PP26 B-005, PP26 B-085
FOZARD, J	SS26 312-R-3	FUKUI, Y	PP26 C-037
FOZARD, JL	SS26 312-R-2	FUKUMA, M	PP26 S-010
FRACKOWIAK, T	OP26 221-S-3	FUKUMOTO, M	PP26 C-037
FRANCIS, L	SS25 126-C-4	FUKUOKA, E	PP25 R-036
FRANCK, N	OP25 225-R-2	FUKUTOMI, E	PP25 S-036
FRANCO, A	KL27 001-1		
FRANCOIS, E	PP26 C-211, PP26 C-212		
FRANCOIS, J	OP27 309-S-1		
FRANK, L	SS24 308-R-3		
FRANKEL, M	OP23 425-C-5		
FRANKLIN, M	PP26 C-168		
FRANSSON, E	PP25 S-296		
FRASER, D	PP26 R-013		

FULLER-THOMSON, E	PP26 R-060, PP26 S-341	GHASEMZADEH, H	OP25 222-C-5
FULOP, T	OP25 219-B-3, PS24 204-R-2, SS24 116-C-1, SS25 310-C-1, SS25 427-C-3, SS25 427-C-4	GHAZALI, A	PP25 S-327
FUNG, HH	PS24 305-S-2	GHAZALI, S	PP25 S-327
FUNG, V	OP26 310-R-6	GHINESCU, M	PP26 C-063
FURUICHI, Y	OP25 117-B-4	GI, B	OP27 227-C-5
FURUKAWA, K	PP26 C-223	GIANNAKOPOULOS, P	OP23 318-C-4
FURUNA, T	PP25 S-028, PP25 S-034, PP25 S-043, PP25 S-056, PP25 S-057, PP26 C-071, PP26 S-052	GIANNELLI, S	PP26 C-110
FURUTA, A	PP25 C-182	GIBB, M	OP23 313-C-2, OP27 127-C-3
FURUTA, Y	PP25 C-179, PP25 S-121	GIBSON, M	PP25 S-157
FUTAKI, T	PP25 S-035	GIENCKE, P	PP25 S-269
GA, H	SS24 225-C-3, SS24 309-C-3	GIERVELD, J	SS24 122-S-1, SS26 214-S-1, SS26 214-S-2
GAFAROV, V	OP24 123-C-3, OP26 221-S-2	GILHOOLY, M	OP27 103-S-2
GAFAROVA, A	OP24 123-C-3, OP26 221-S-2	GILL, S	OP25 221-S-6, OP25 320-S-3
GAGE, H	OP27 119-S-2	GILLEARD, C	OP27 102-S-1
GAGULIN, I	OP24 123-C-3, OP26 221-S-2	GILLEARD, CJ	OP27 207-S-3
GAIOZISHVILI, M	SS25 417-B-1	GILLES, B	PP26 C-210
GALENKAMP, H	SS24 218-S-2, SS24 413-S-1	GILLGAN, L	OP27 222-C-5
GAMBASSI, G	OP26 308-C-3, SS25 426-C-2	GINDIN, J	SS25 327-C-3
GAMBHIR, I	PP25 C-139	GINNIVAN, N	OP25 120-S-2
GAMBHIR, IS	SS26 316-R-1	GINOS, P	OP24 522-S-2, PP25 S-177
GAMBINI, J	SS25 125-C-3	GINZBURG, Y	OP23 423-C-2
GAMEZ, S	OP23 413-C-4	GIONHAKU, N	PP26 C-037
GAN, C	PP25 C-248	GIOVANNUCCI, E	PP26 C-143
GAN, HT	PP25 B-073	GIRALDO RODRIGUEZ, L	PP26 C-170
GAO, H	PP25 S-139	GIROUARD, C	OP25 521-C-2
GAO, X	PP26 S-263	GIROUX, S	OP25 225-R-2
GAO, Y	PP25 S-184, PP25 S-208	GISKES, K	OP27 215-S-4
GAO, Z	PP25 B-012, PP25 B-028	GIVIGI, HR	PP26 C-027
GARCEZ LEME, LE	OP23 422-C-1	GKINOPOULOS, T	OP24 522-S-2, PP25 S-177
GARCIA, YM	PP25 C-108, PP26 S-249	GLADMAN, J	PP25 C-140, PP25 C-176, PP25 S-210, PP26 C-169
GARCIA-PENA, C	OP23 417-C-4	GLADMAN, JR	PP26 C-168
GARFINKEL, D	OP27 221-C-2, SS24 227-C-1, SS26 301-C-4	GLASS, AP	PS27 201-R-1
GARMS-HOMOLOVA, V	OP26 211-R-6, OP26 320-S-1, OP26 320-S-2	GLEIZE, F	PP25 C-072
GARON, S	OP27 205-S-5, OP27 207-S-4, PP25 R-003	GLENDINNING, C	OP26 210-R-2, OP27 110-R-1, SS24 508-R-2
GARRAUX, G	PP25 S-174	GLOZMAN, J	OP24 107-R-4
GARROUSTE, C	SS25 210-C-2	GNJIDIC, D	OP26 308-C-1, OP27 227-C-2
GARST, JH	OP25 222-C-5	GO, Y	PP25 S-354
GARVIN, T	PP25 S-166	GOARIN, H	PP25 C-132
GARY, M	SS24 308-R-3	GOBBENS, R	PP25 S-257
GASIOR, K	PP26 S-271	GOBBENS, RJ	OP27 226-C-6
GAUBERT-DAHAN, M	PP25 C-157, PP25 C-214	GOBBI, FC	PP26 B-009
GAUDREAU, P	OP25 219-B-3, SS24 116-C-1, SS24 116-C-4, SS25 427-C-3, SS25 427-C-4	GODA, A	PP25 B-063
GAUTIER, S	OP27 125-C-3	GODFREY, A	SS25 213-S-1, SS25 213-S-4
GAVRILOV, I	PP25 B-024, PP25 B-025	GODFREY, M	OP27 224-C-2, SS25 223-C-2
GEORGIOU, A	OP27 206-S-1	GODOY MONZON, D	PP25 C-089, PP25 C-090
GERLACK, L	PP26 S-166	GOEDHARD, W	SS25 518-S-1
GERMAIN, C	OP23 414-C-5, OP26 101-S-2, PP25 S-248	GOGA, PHARM.D. BCPP, JK	PP25 C-050
GERSTORF, D	OP23 314-S-3	GOGOL, M	PP25 C-254, SS26 223-C-4
GETACHEW, R	OP25 222-C-5	GOH, H	PP26 C-222
GEVA, G	PP26 R-013	GOH, L	OP24 412-S-3
GHADIMI, R	PP25 C-253	GOHMA, H	PP25 S-092, PP25 S-122, PP25 S-217
GHALEHSARI, N	OP25 222-C-5	GOJYO, S	PP25 C-162
		GOLD, G	OP23 318-C-4, OP23 424-C-2, OP26 211-R-1
		GOLDBERG, S	PP25 C-140
		GOLMAYER, P	OP23 421-C-2
		GOMBOJAV, B	PP26 C-174
		GOMES, AS	PP25 B-047, PP25 S-013
		GOMES, I	OP23 325-C-4, OP26 221-S-4,

	OP26 320-S-3, OP27 319-C-2, PP25 S-058	GREGOIRE, J	OP25 521-C-2
GOMEZ, F	PP25 C-054, SS24 219-S-4	GREINER, C	PP26 S-056
GOMEZ, M	PP26 S-068	GREPLOVA, K	PP26 C-050
GONCALVES, E	PP26 S-249	GRIFFITHS, C	OP27 216-S-2, PP25 S-025, PP26 C-042
GONDO, Y	OP23 424-C-3, OP25 421-S-2, OP26 120-S-2, OP27 218-B-2, PP25 C-231, PP25 S-182, PP25 S-187, PP25 S-193, PP25 S-194, PP26 S-023, PP26 S-184, PP26 S-204, PP26 S-208, PP26 S-212, SS24 115-S-1, SS24 218-S-1, SS24 413-S-3	GRIMES, CA	OP25 222-C-4
GONFRIER, S	PP26 C-211, PP26 C-212	GROMOVA, E	OP24 123-C-3, OP26 221-S-2
GONZALES, E	OP27 109-S-3, OP27 121-S-1, OP27 220-S-1, PP26 S-338	GROSCH, C	PP25 C-080
GONZALEZ, R	SS24 421-S-2	GROSSIN, N	OP26 119-B-1, OP26 119-B-2
GONZALEZ-ARES, JA	OP23 413-C-4	GROTHAUS, L	PP25 S-055
GOODMAN, C	OP23 320-R-2, OP26 412-R-5, OP27 119-S-2	GROVE, J	SS24 115-S-2
GOOSEN, EW	PP25 B-047	GRUE, EV	SS25 312-R-3
GORANZON, H	OP23 318-C-5	GRUENEWALD, T	PP25 S-005
GORDON, A	PP25 S-210	GU, X	SP24 203-1
GORDON, AL	PP25 C-228, PP26 C-168, SS25 226-C-1	GU, Y	OP26 308-C-6, OP27 319-C-3, PP26 C-103
GOREY, KM	PP25 S-143	GU, Z	PP25 C-145
GORGILADZE, D	SS26 423-C-1	GUDJONSSON, MC	SS26 326-C-1
GORMAN, MR	PS26 201-R-4, SS24 213-S-3	GUDNASON, V	OP23 318-C-1, SS26 326-C-1
GOROSPE, C	PP26 B-002	GUERIN, O	PP25 C-059, PP25 C-180, PP26 C-211, PP26 C-212
GOROSPE, CM	PP25 B-002	GUERRA, S	OP24 102-S-2
GORZONI, M	SS24 125-C-2	GUERRIN, O	PP26 C-116
GOSLINGS, CJ	OP27 312-C-4	GUERZONI, A	OP25 420-S-5
GOSSET, P	OP26 119-B-4	GUERZONI, M	OP27 224-C-3
GOTO, J	OP23 419-S-3, PP25 S-114, PP25 S-222	GUEYE, N	OP27 114-S-5
GOTO, M	OP25 117-B-4, OP25 119-B-2, PP26 S-021, SS25 517-B-1	GUILLEMIN, F	OP27 125-C-3
GOTO, S	OP26 219-B-5, PS24 211-B-3, PS26 202-B-2	GUILLEN-GRIMA, F	OP27 314-S-3
GOTO, Y	PP25 C-156	GUN, H	PP25 S-012
GOTTLIEB, MG	PP25 C-022, PP25 S-026, PP25 S-027, PP26 C-056	GUO, A	SS25 318-S-3
GOUIAA, R	PP26 C-014, PP26 C-015, PP26 C-201	GUPTA, D	PP25 S-337
GOULART, M	PP25 C-245	GUR, K	PP25 C-173, SS24 124-R-2
GOURAUD-TANGUY, A	OP27 225-C-2	GURGU, M	PP26 S-074
GRAF, C	PP26 C-110	GURJAR, V	OP23 424-C-4
GRAINER, C	PP26 R-004	GUR-YAISH, N	SS26 422-C-3
GRASSMAN, EJ	PP25 S-233	GUSCHO, Y	OP27 107-S-3
GRAY, L	OP23 421-C-3, PP25 C-187, PP25 C-195, PP25 R-049, SS25 516-R-2	GUSSEKLOO, J	OP23 322-C-2, OP27 123-C-1, SS24 118-S-1, SS24 118-S-2, SS24 118-S-3, SS24 118-S-4
GRAY, LC	OP27 126-C-5, OP27 127-C-1, OP27 323-C-3, PP26 C-157, PP26 C-196, SS25 516-R-1, SS25 516-R-3, SS26 111-R-1	GUSTAFSSON JERTFELT, I	SS26 207-S-4
GRAY-DONALD, K	OP25 219-B-3	GUTIERREZ-ROBLEDO, L	OP27 321-C-2, PP25 C-246, PP26 C-235, SS24 116-C-3
GREBNEV, D	PP25 B-017, PP25 B-018	GUTIERREZ-ROBLEDO, LM	OP27 323-C-6
GRECHIKHINA, M	OP27 218-B-5	GUTMAN, G	OP27 109-S-1, OP27 303-S-3, PP25 S-328, PP26 R-060, PP26 S-327, PP26 S-341, PS27 301-R-4
GREEN, J	OP27 224-C-2	GUTMAN-FRISH, P	OP24 511-S-3
GREENBERG, J	PP25 S-277	GUY, A	OP27 121-S-3, PP25 S-189, PP25 S-228, PP26 S-337
GREFFARD, S	PP25 C-240	GWEE, X	OP24 103-S-3, OP25 120-S-5, OP27 223-C-1
		H SU, P	PP26 C-003
		HA, H	PP26 S-154
		HA, J	PP26 B-016, PP26 C-166, PP26 S-303
		HA, S	PP26 C-162
		HA, Y	PP26 C-084, PP26 C-085
		HAAK, M	OP27 309-S-2
		HAALAND, BA	OP26 310-R-4
		HAAN, DE - LYON, F	SS25 524-R-1
		HAANES, G	OP27 316-S-1
		HAAPALAINEN, P	PP25 S-253

HASEGAWA, S	PP26 C-117	HER, J	PP26 B-025
HASHI, H	PP26 R-004	HERFST, D	PP26 R-054
HASHIDATE, H	PP25 C-098, PP25 C-146	HERLOFSON, K	PP25 S-185
HASHIMOTO, H	PS25 410-R-2	HERM, A	OP27 215-S-6
HASHIMOTO, M	OP26 122-S-2	HERMSEN, LA	OP23 313-C-3, OP25 222-C-3
HASHIMOTO, T	PP26 S-267	HERRMANN, FR	OP23 318-C-2, OP23 318-C-4, OP23 424-C-2, OP27 324-C-3, PP26 B-079, PP26 C-106, PP26 C-110
HASHIZUME, N	PP25 C-215		
HASHIZUME, Y	PP25 S-137		
HASSAN NUDIN, S	OP27 120-S-4	HERTING, J	OP26 113-S-3, OP27 114-S-4
HASSAN, BH	OP27 113-S-1	HERTOGH, C	SS24 308-R-3
HASSING, L	SS26 326-C-2	HERTOGH, CM	OP27 115-S-2
HASSING, LB	SS26 326-C-3	HERTZOG, C	PS24 305-S-1
HATA, A	PP26 S-307	HERVONEN, A	SS24 218-S-2
HATA, R	PP25 S-115, PP25 S-124	HESHIKI, Y	PP25 C-153
HATAKEYAMA, M	PP25 C-150	HESIKI, Y	PP25 C-154
HATAMOCHI, A	OP25 119-B-2	HESS, M	OP27 303-S-1
HATTHAKIT, U	OP24 520-S-3	HEUSINGER, J	SS26 218-S-4
HAUBOIS, G	PP26 C-107	HEYL, V	SS26 223-C-3
HAUSTEIN, S	OP27 102-S-2	HIBI, S	OP23 323-C-1
HAYAKAWA, T	OP26 219-B-3	HIDAYAT, A-	OP27 213-S-2
HAYASHI, H	PP26 C-098	HIERZER, A	SS26 414-S-4
HAYASHI, M	PP25 S-281	HIGASHINO, S	PP25 S-223, PP25 S-260
HAYASHI, S	PP25 B-066	HIGASHIURA, H	PP26 R-004
HAYASHI, T	PP25 B-059, SS24 117-C-4, SS24 206-C-1	HIGGS, PF	OP27 207-S-3
	PP25 C-224, SS26 311-R-2	HIGUCHI, M	SS24 517-B-2
HAYASHI, Y	SS25 224-R-1	HIGUCHI, S	PP26 C-202
HAYASHIDA, C	SS25 112-R-3, SS25 224-R-5	HIKOJI, K	OP24 520-S-5, OP25 321-S-1, OP25 321-S-2, OP25 321-S-5, PP26 S-169
HAYASHIDA, CT	SS24 121-S-1		PP25 S-067
HAYATA, N	OP27 226-C-3		SS26 425-C-2
HAYES, A	OP25 225-R-1	HILBERT, J	PP26 S-070
HAYMAN, S	PP25 R-005	HILDEBRAND, BA	SS26 408-C-3
HAYWOOD, A	PP26 R-005	HILGERT, JB	OP24 425-C-4, OP27 216-S-5, PP26 S-047, SS25 208-R-3, SS26 110-R-2, SS26 309-R-2, SS26 309-R-3, SS26 309-R-4, SS26 408-C-2, SS26 408-C-3
HAZRATI, M	OP23 423-C-1	HILL, A	OP27 216-S-4
HE, G	PP25 B-023	HILL, K	OP26 419-B-6
HE, H	OP23 425-C-2		OP27 216-S-5
HE, P	PP25 B-013, SS24 115-S-2		OP23 319-S-1
HE, Q	OP27 108-S-3		OP26 308-C-1, OP27 227-C-2
HEALY, R	SS25 213-S-1, SS25 213-S-2, SS25 213-S-3, SS25 213-S-4	HILL, KD	OP25 117-B-1, OP26 119-B-5, PP26 B-014, PP26 C-053, PP26 R-043
HEAVEN, B	OP27 114-S-5	HILL, R	PP25 C-141
	PP25 C-047	HILL, S	PP26 S-029
HEBERT, R	OP27 123-C-1	HILL, T	PP26 R-049
HEIDARIAN, S	OP23 325-C-1	HILMER, S	OP25 219-B-2, OP27 315-C-1
HEIJMANS, M	OP23 421-C-2	HILMER, SN	PP25 C-212, PP25 C-252, PP25 S-094, PP25 S-126, PP25 S-138, PP26 C-185
HEINONEN, A	OP27 119-S-2		PP25 S-311, PP26 S-223
HEISE, P	SS25 217-B-2		PP25 C-122
HELEN, M	OP27 316-S-4	HIMURO, Y	PP25 C-108
HELFAND, SL	PP25 C-242	HIRAI, K	OP23 419-S-4, SS24 307-S-3
HELLSTROM MUHLI, U	OP27 224-C-6	HIRAMATSU, T	PP25 C-197, PP25 S-017, PP25 S-069, PP26 S-055
HEMADRI, D	OP23 325-C-3, OP23 421-C-1	HIRANI, V	OP26 324-C-1, PP26 C-141
HENDRIE, HC	OP27 122-C-3	HIRANO, H	OP23 320-R-3, PP26 C-159, PP26 C-179, PP26 S-050,
HENDRIKSEN, C	OP27 309-S-3		
HENG, D	OP26 101-S-2, PP25 S-248		
HENNESSY, C	OP26 121-S-2		
HENNI, S	OP25 222-C-1	HIRANO, T	
HENWOOD, T	OP26 319-B-4, PP25 B-035, PP26 B-026, PP26 B-048, PP26 B-049	HIRAO, K	
HENWOOD, TR	OP27 116-S-4	HIRAOKA, D	
HEO, J	PP26 S-148	HIRAOKA, K	
	PP26 S-104	HIRAYAMA, R	
	OP25 225-R-2, OP27 311-S-2		
HEO, S		HIRDES, J	
HEO, T		HIRDES, JP	
HEPBURN, K			
HEPWORTH, M			

HIROFUMI, O	PP26 S-122, PP26 S-272, SS25 516-R-2	HONG, Y	SS24 210-R-3, SS26 426-C-1
HIROKAWA, K	PP26 S-052	HONGO, M	PP25 C-156, PP26 S-155,
HIROSAKI, M	PP25 R-036	HONJOH, S	PP26 S-159, PP26 S-348
HIROSE, H	PP25 S-036	HONMA, A	PP25 S-093
HIROSE, N	PP25 C-189	HOOGENDIJK, E	PP26 B-040
	OP27 218-B-2, PP25 C-094, PP26 C-037, SS25 125-C-2, SS25 125-C-8	HOOGENDIJK, EO	PP26 R-029, PP26 R-047
	OP23 419-S-3, PP25 S-222	HOOYMAN, NR	PP25 C-065
HIROSE, Y	PP26 R-020, PP26 R-025	HOPCROFT, P	PP25 C-064, SS26 407-R-3
HIROTA, M	PP25 S-272	HOPPMANN, C	PP25 S-211
HIROTSU, K	PP25 S-328	HORGAS, A	OP27 126-C-5
HIRST, S	PP25 S-164	HORGEN, G	OP23 314-S-3
HISANO, S	PP26 R-060, PP26 S-341		OP25 520-S-1
HITZIG, S	PP25 S-103		OP27 316-S-1, SS25 212-R-1, SS25 212-R-2, SS25 212-R-3
HO, BJ	PP25 C-031, PP25 C-043		OP27 206-S-3, PP25 S-319
HO, C	OP25 421-S-4		OP26 419-B-5
HO, H	OP26 321-S-3, PP26 S-117		SS24 319-S-3
HO, J	PP26 R-031		PP26 R-008, PP26 R-009
HO, M	PP25 S-008, PP25 S-127		PP25 S-017
HO, Y	SS25 213-S-1, SS25 213-S-3		OP25 520-S-3, SS25 508-R-1
HOBBS, N	OP25 420-S-4		OP25 105-S-6
HOBSON, S	OP26 421-S-2		PP26 R-050
HOCKING, C	SS26 418-S-3		SS26 415-S-1
HODGSON, NA	SP24 301-4		OP25 420-S-6
HOEKMAN, A	SS24 514-S-5		OP27 309-S-2
HOFACKER, D	SS24 514-S-1		OP24 511-S-2
HOFACKER, D	SS24 113-S-4		OP26 113-S-1
HOFER, S	SS25 214-S-1, SS25 214-S-2		OP27 215-S-5, PP25 S-075
HOFF, A	PS24 501-R-3, SS25 316-R-4		PP26 B-040
HOFFMAN, JR	SS26 408-C-3		PP26 R-024
HOFFMANN, T	OP23 414-C-6		OP27 313-S-4
HOFMANN, H	PP26 S-271		PP25 S-291, PP25 S-342
HOFMARCHER, MM	SS25 324-R-2		PP25 C-069
HOFSTETTER, CR	OP23 313-C-5, PP25 C-040,		PP25 S-309, PP26 S-304
HOGERVORST, E	PP26 C-136		PP25 C-253, PP26 C-236
	PS25 405-S-2		SS24 209-R-3
HOGERVOST, E	PP26 C-169		PP25 B-008, PP25 C-068, PP25 C-161, PP25 C-164, PP25 C-166, PP25 C-168, PP25 S-073, PP25 S-304
HOLDITCH, C	OP23 313-C-4, OP25 520-S-6		OP23 414-C-5
HOLLE, B	PP25 C-152		PP25 S-243
HOLM, I	PP25 C-118		PP25 C-165
HOLMEN, AH	OP27 225-C-3, PP26 C-154,		SS25 324-R-2
HOLMEROVA, I	SS25 124-R-3		OP26 123-C-4
	PP25 S-286		SS24 508-R-3, SS26 110-R-4
HOLMGREN, J	OP27 126-C-1		PP25 R-055, PP26 R-063
HOLT-NOREIKS, S	SS24 126-C-2		SS26 425-C-2
HOLTZER, RR	PP25 S-357		SS25 223-C-2
HONDA, H	PS25 503-C-2		PP26 C-154
HONDA, M	PP26 S-067, SP24 202-4		PP26 S-220
HONG, B	PP26 C-101, PP26 S-353		OP24 505-S-4, SS26 127-C-4
HONG, C	PP26 S-013		PP26 C-145
HONG, GS	OP25 512-S-4		PP26 S-299
HONG, HJ	OP27 108-S-4, OP27 306-S-3, PP26 B-089, PP26 C-057, PP26 C-094, PP26 C-198, PP26 R-045, PP26 S-057		PP25 R-002, PP25 S-368
HONG, J	OP27 125-C-5		PP25 C-092
	PS25 503-C-3		PP25 C-108
	PP26 R-026		PP25 S-046, PP26 S-058, SS24 223-S-3
HONG, K	OP23 417-C-5, OP25 322-S-4,		SS25 317-B-3, SS26 127-C-4
HONG, N	PP25 R-004, PP26 S-014,		OP23 313-C-1
HONG, O	PP26 S-121, PP26 S-260,		PP26 C-039, SS24 223-S-2, SS24 223-S-3, SS24 326-C-3,
HONG, S			
		HORI, K	
		HORIE, K	
		HORIIKE, K	
		HORIO, S	
		HORIUCHI, F	
		HORN, A	
		HORNE, M	
		HORNYAK, R	
		HOROWITZ, A	
		HORRELL, B	
		HORSTMANN, V	
		HORTON, K	
		HOSEINZADEH, AH	
		HOSHI, T	
		HOSHIKAWA, H	
		HOSHIYAMA, N	
		HOSIER, AF	
		HOSOE, Y	
		HOSOI, E	
		HOSOI, T	
		HOSSEINI, S	
		HOTTA, S	
		HOU, M	
		HOUEDE, N	
		HOUNOKI, K	
		HOUSE, PD	
		HOVELL, MF	
		HOWARD, K	
		HOWE, A	
		HOWELL, S	
		HOWLETT, SE	
		HOYLE, J	
		HRADCOVA, D	
		HSIAL, YF	
		HSIAO, C	
		HSIAO, S	
		HSIAO, Y	
		HSIEH, M	
		HSIEH, W	
		HSING, WT	
		HSIUNG, C	
		HSIUNG, CA	
		HSU, B	
		HSU, C	

HSU, H	SS24 409-C-1 OP26 220-S-2, PP25 C-031, PP25 C-043, PP25 S-098, PP25 S-192, PP26 C-200		PP25 R-032, PP26 R-035, PP26 S-218, PP26 S-235, PP26 S-299
HSU, J	OP26 310-R-6	HUNTER, JL	OP27 205-S-1
HSU, K	PP25 C-159	HUPLI, M	PP25 R-022
HSU, M	PP25 S-339, PP26 C-091, PP26 C-176, PP26 S-213	HUREAUX-HUYNH, R	OP23 322-C-3
HSU, Y	PP25 C-024, PP26 C-034, PP26 S-129, SS26 226-C-2, SS26 312-R-4	HURRIA, A	PP26 C-149
HSUEH, M	PP26 S-064	HURUGOURI, R	PP26 R-020, PP26 R-025
HU, H	PP26 C-121, PP26 C-145	HUSH, J	OP25 119-B-4
HU, L	PP26 C-156, SS25 318-S-4	HUSIN, NM	OP26 123-C-5
HU, M	OP27 227-C-4, PP26 C-121, PP26 C-145, PP26 S-222, PP26 S-224, PP26 S-248	HUSSAIN, R	PP26 S-047
HU, S	PP26 C-010, PP26 C-025, SP24 402-1	HUSSEIN, S	PP26 S-245
HU, W	PP26 S-017	HUVENT-GRELLE, D	PP25 C-119, PP25 C-120
HU, X	PP25 C-170, SS25 418-S-2	HUXHOLD, O	SS26 325-C-2
HU, Y	PP25 C-030, PP25 S-325	HWANG, B	PP25 C-107
HUAN, H	SS26 423-C-4	HWANG, E	OP27 109-S-1, OP27 109-S-5, PP25 S-154, PP26 B-054, PP26 B-055, PP26 C-057, PP26 C-094, PP26 S-107, PS24 411-B-4
HUANG, A	PP26 C-145		PP25 C-060, PP26 B-091, PS26 303-C-3
HUANG, C	OP26 321-S-2, OP27 320-S-6, PP25 S-049, PP25 S-271, PP26 C-138	HWANG, H	PP26 R-031
HUANG, D	OP27 118-B-1, OP27 118-B-2		PP26 R-037, PP26 S-005, PP26 S-147, PP26 S-160, PP26 S-161
HUANG, H	OP26 123-C-3, PP25 C-250, PP25 S-283, PP26 C-030, SS26 116-R-4	HWANG, I	PP26 S-262
HUANG, J	PP26 R-017, PP26 S-168, PP26 S-196	HWANG, J	PP26 S-251
HUANG, M	PP25 C-100, PP26 S-196		PP26 R-031, SS25 216 -2, SS26 127-C-2
HUANG, S	PP25 S-283, PP26 C-003	HWANG, K	PP26 S-046
HUANG, W	PP25 B-023	HWANG, N	OP24 106-S-3
HUANG, Y	PP25 C-013, PP25 C-032, PP25 R-002, PP25 S-029, PP25 S-059, PP25 S-112	HWANG, S	OP23 414-C-1, OP27 313-S-1
HUANG, YH	PP25 C-171		PP26 C-059
HUBBARD, R	OP27 222-C-6, OP27 224-C-5	HWANG, Y	PP26 C-218
HUBBARD, RE	OP27 126-C-5, OP27 226-C-5, OP27 323-C-3, PP25 R-010, PP26 C-075, PP26 C-196, SS26 425-C-3	HYDE, M	OP23 322-C-4
HUBBLE, K	PP25 C-165	I.J.M. KEMPEN, G	OP25 121-S-6
HUBER, P	OP26 211-R-1	IBACETA, A	PP25 S-327
HUGO, FN	PP26 S-070	IBANEZ, B	OP26 406-S-2, OP27 120-S-4, OP27 320-S-5, SS26 110-R-2
HUI, AN	SS24 423-S-1	IBANEZ-BEROIZ, B	SP26 301-3
HUI, E	PP26 S-117	IBARRA, B	PP25 C-233
HUISMAN, M	OP27 107-S-4, PP25 C-064, SS24 113-S-4, SS24 218-S-2, SS26 325-C-3, SS26 413-S-2	IBRAHIM, N	PP25 S-132
HUIZER- PAJKOS, A	OP25 117-B-1, OP26 119-B-5	IBRAHIM, R	PP25 R-046
HUIZER-PAJKOS, A	PP26 B-014		PP26 C-161, PP26 C-202
HUMBLE, L	SS26 311-R-3	ICHIDA, Y	OP25 220-S-1
HUMPHREY, D	OP27 216-S-2, PP25 S-025, PP26 C-042	ICHIKAWA, Y	OP27 214-S-1, OP27 214-S-2, PP25 R-009
HUNG, H	PP25 C-085	ICHIRIZUKA, T	PP25 C-208
HUNG, J	PP25 S-029	IDE, H	OP27 104-S-4
HUNG, K	PP26 C-121	IDE, S	OP23 424-C-1, OP27 122-C-6, PP26 C-100
HUNG, SS	PP26 S-123	IECOVICH, E	PP25 S-340, PP25 S-341
HUNG, Y	OP25 105-S-4, OP25 321-S-4,	IGARASHI, A	PP26 C-185
		IGARASHI, M	PP25 C-220
		IGBAFE, EC	PP25 S-028, PP25 S-034, PP25 S-043, PP25 S-056, PP25 S-057, PP26 C-071, PP26 S-052
		IGNAT, I	PP25 S-114
		IGUCHI, T	PP26 C-161
		IHARA, K	OP23 323-C-1, OP23 419-S-3, OP24 123-C-6, PP25 S-114,
		IHARA, M	
		IHIRA, H	
		IHORI, M	
		IIDA, K	
		IJIMA, K	

IJIMA, S	PP25 S-222, PP25 S-226, SS24 119-S-3, SS24 417-B-3	ISHERWOOD, L	OP25 511-S-1
IINO, S	PP25 C-150, PP26 C-092	ISHIBASHI, R	OP23 425-C-2, PP25 C-207
IINUMA, T	PP25 S-083	ISHIBASHI, T	PP25 S-274, SS25 116-R-3, SS26 209-R-1
IIZAKA, S	PP26 C-037, SS24 118-S-3	ISHIBASHI, Y	PP25 S-064
IKEBE, K	PP26 C-203	ISHIDA, H	PP26 S-257
	OP23 424-C-3, OP26 120-S-2, PP25 C-231, PP25 S-187, PP25 S-193, PP26 S-023, PP26 S-184, PP26 S-208, PP26 S-212, SS24 218-S-1, SS24 413-S-3	ISHIGAMI, A	PP25 B-043, PP26 B-044, PS26 202-B-1
IKEDA, K	OP26 419-B-5	ISHII, A	PP26 S-204
IKEDA, N	PP25 C-177	ISHII, H	PP25 B-064
IKEDA, Y	OP23 321-C-2, OP23 323-C-5, PP26 C-111, PP26 C-123	ISHII, K	PP26 S-012
IKEGAMI, N	SS25 116-R-3, SS26 209-R-1	ISHII, N	PP25 B-066, PS24 411-B-2
IKEGAWA, S	OP27 122-C-1	ISHII, T	PP25 B-066, PS24 411-B-2
IKEUCHI, T	SS24 517-B-3	ISHII, Y	PP25 S-064
IKEZAKI, S	PP25 S-009	ISHIKAWA, H	PP25 S-109
IKEZOE, T	PP26 R-049	ISHIKAWA, K	PP26 C-202
ILIE, A	OP26 113-S-5, PP26 C-193	ISHIKAWA, N	OP25 119-B-2, PP25 C-034
ILIES, D	PP25 R-004	ISHIKAWA, T	OP23 425-C-2, PP25 C-207
ILIFFE, S	OP26 412-R-5, OP27 119-S-2	ISHIKAWA, Y	OP25 117-B-4, OP25 119-B-2
ILNITSKI, A	PP26 C-017, PP26 C-021	ISHIMOTO, Y	PP25 S-036
IM, A	PP26 B-080	ISHINE, M	PP25 S-036
IM, E	PP25 S-097, SS25 324-R-3	ISHIOKA, Y	OP25 421-S-2, OP26 120-S-2, PP25 S-187, PP25 S-193, PP26 S-184, PP26 S-208, PP26 S-212, SS24 413-S-3
IMAGAWA, T	PP25 S-285	ISHIWATA, K	PP26 S-012
IMAI, H	PP25 S-036	ISHIWATA, R	PP25 C-129
IMAI, K	PP25 B-065, PP26 B-019	ISHIZAKI, T	PP25 C-197, PP25 S-069, PP25 S-187
IMAI, T	PP25 C-160	ISHIZAWA, N	OP25 321-S-2
IMAI, Y	OP24 123-C-6, OP27 210-S-3, PP25 S-261, SP25 215-1	ISHIZUKI, T	PP25 R-035
IMAIZUMI, S	OP27 212-R-6, PP26 C-038	ISMAIL, I	PP26 C-136
IMAM, B	OP27 222-C-3	ISMAIL, N	PP25 C-091, PP26 C-049
IMBEAULT, P	PP25 C-026	ISMAIL, R	PS25 405-S-2
IMMONEN, M	OP23 420-C-4	ISMAIL, RI	OP23 313-C-5
IMRE, SG	SS26 427-C-1, SS26 427-C-2, SS26 427-C-3, SS26 427-C-4	ISOMURA, M	PP25 S-061
IMURA, H	KL27 004-, PP25 S-094	ISOWA, T	PP26 S-056
INA, K	SS24 117-C-1, SS24 206-C-2	ISPIERTO, L	PP26 C-112
INAGAKI, H	OP27 218-B-2, PP25 S-187, PP26 S-212, SS24 115-S-1	ITO, D	PP26 C-158
INAJIMA, T	OP24 123-C-6	ITO, H	OP27 122-C-1, PP25 B-043, SS24 326-C-1
INGRAM, DK	PS26 202-B-3	ITO, M	PP25 S-145, SP25 515-1
INOMATA, C	PP26 S-023	ITO, T	PP25 C-113, PP25 S-015, PP25 S-268, PP25 S-292, PP26 S-200
INOUE, K	PP26 R-020, PP26 R-025	ITOH, N	PP25 C-182
INOUE, M	PP25 S-214	ITUME, EM	OP25 104-S-6
INOUE, S	OP26 419-B-5	IVANENKO, S	OP24 107-R-1, OP26 119-B-3
INOUE, T	OP27 310-S-4, PP25 C-098, PP25 C-129, PP25 S-168	IVKO, K	OP25 421-S-6, SS26 423-C-2
INOUEY, S	OP27 224-C-2	IVKO, O	SS26 423-C-2
INUZUKA, G	PP25 S-072, PP25 S-074	IWAKI-EGAWA, S	OP25 117-B-4
INUZUKA, T	PP25 C-224	IWAMITSU, H	PP25 C-162
INVESTIGATORS, T(OP26 321-S-1	IWAMOTO, M	OP24 523-S-3
IP, L	PP26 R-048	IWAMOTO, T	PP25 C-058, PP25 C-121, PP25 C-122, PP25 C-133, PP26 C-064, PP26 C-124
IRIE, K	PP25 B-068	IWARSSON, S	OP27 309-S-2, SS24 510-R-3
IRIS, M	PP26 R-060, PP26 S-341	IWASE, T	PP26 C-037
IRVIN, VL	SS25 324-R-2	IWAYA, S	PP25 R-019
ISAACSON, M	SS25 305-S-4	IWUJI, N	OP27 306-S-4, PP25 S-352
ISARAMALAI, S	OP24 520-S-3	IZQUIERDO, M	PP26 C-221
ISERSON, K	PP25 C-089	IZUMI, S	PP25 R-041, PP25 S-009
ISHCHUK, V	PS25 102-B-4	IZUMIMOTO, N	PP25 S-169

IZZATI, SN	PP26 C-233	JEON, B	PP26 B-004, PP26 C-125,
J.H. DEEG, D	SS26 325-C-3		PP26 C-126, PP26 C-232
JACKSON, J	SS24 221-S-2	JEON, D	PP26 C-160
JACOB F ^o , W	PP25 C-108, PP26 S-249	JEON, E	PP26 S-069, PP26 S-084
JACOBS, JM	PP25 B-075, PP26 C-237	JEON, G	PP26 S-036, PP26 S-298
JACONDINO, C	PP25 S-027	JEON, H	OP26 324-C-6, OP27 309-S-6,
JACQUELINE, A	OP23 319-S-1		PP25 S-324, PP26 C-132
JACQUES, M	SS25 313-S-2	JEON, M	PP25 S-365
JAFARI, M	SS24 317-B-1	JEON, S	PP26 S-013
JAGGER, C	SS24 118-S-1, SS24 118-S-2,	JEON, Y	OP26 310-R-1, OP27 125-C-5,
	SS24 118-S-3, SS24 118-S-4,		PP26 B-044, PP26 C-083,
	SS24 510-R-2, SS25 126-C-3		SS26 110-R-1
JAIME, A	SS24 108-R-2	JEONG, D	PP26 B-067
JAKOBSSON, U	OP27 123-C-4, PP25 C-056,	JEONG, H	OP24 425-C-1, PP25 C-138,
	PP25 R-031, PP25 S-221,		PP26 B-020, PP26 B-043,
	PP26 C-047		PP26 B-045
JALLOULI, M	PP26 C-014, PP26 C-015,	JEONG, J	PP26 B-075, PP26 B-091
	PP26 C-201	JEONG, K	OP27 103-S-4
JAMALI, S	PP25 C-253	JEONG, M	PP26 B-024, PP26 S-072,
JANER, L	OP25 119-B-4		PP26 S-260
JANG, B	PP26 B-044	JEONG, S	PP25 B-037, PP25 S-297,
JANG, E	OP26 319-B-6, OP27 318-B-5,		PP26 B-052, PP26 B-056,
	PP25 R-053, PP26 B-020,		PP26 S-099
	PP26 B-043, PP26 S-273	JERLIU, N	SS24 124-R-3
JANG, H	OP24 425-C-1, OP27 318-B-3,	JESTE, DV	OP25 120-S-5
	PP26 S-004, SS24 326-C-4	JHA, AA	OP23 322-C-5
JANG, I	PP26 B-033, PP26 B-046	JHO, S	PP25 B-051, PP26 B-072,
JANG, J	PP26 S-229		PP26 C-135
JANG, K	OP25 218-S-2	JHUN, J	PP25 B-003, PP26 B-036
JANG, M	PP26 S-045, PP26 S-331	JIA, Y	OP27 208-S-2
JANG, S	OP25 322-S-6, OP27 123-C-3,	JIANG, Z	OP23 423-C-1
	PP26 B-055, PP26 B-075,	JIANG, C	PP25 S-008, PP25 S-127
	PP26 S-036, PP26 S-078,	JIANG, L	OP24 511-S-5, OP25 121-S-3
	PP26 S-273, PP26 S-298,	JIANG, M	OP25 105-S-3
	SS25 210-C-4, SS25 305-S-3	JIE, Z	SS24 117-C-3
JANG, W	PP26 C-096, PP26 C-133	JIN, A	OP25 105-S-3
JANG, Y	OP24 505-S-1, OP25 512-S-1,	JIN, J	PP26 B-044
	OP26 406-S-5, OP27 208-S-3,	JIN, M	PP26 S-153
	PP25 S-330, PP25 S-333,	JIN, S	PP26 C-010
	PP26 B-087, PP26 B-094,	JIN, Y	PP26 S-011
	PP26 S-158	JIVRAJ, S	OP23 314-S-4, SS24 308-R-1,
JANIG, H	SS26 414-S-1, SS26 414-S-2		SS24 421-S-3
JANLOV, A	OP25 420-S-3	JO, A	PP26 S-178, PP26 S-355
JANSEN VAN RENSBURG, S	PP26 S-210	JO, B	SS25 108-R-2
JANSEN, A	OP27 112-R-2, PP25 S-113	JO, C	PP26 B-057
JANSEN, AP	SS26 407-R-3	JO, G	PP26 C-132
JANSEN, D	PP25 C-065	JO, H	PP26 B-001
JANSEN, S	OP27 312-C-4, SS24 127-C-1	JO, K	PP26 C-133
JANSSEN-GRIEVE, C	PP26 S-138	JO, N	PP26 B-088
JAROLIMOVA, E	PP26 C-154	JO, S	OP26 119-B-6, PP25 B-072
JATHAR, SS	OP23 424-C-4	JOANETTE, Y	OP24 412-S-4
JAUREGUI, JR	PP25 C-089, PP25 C-090,	JOERGENSEN, H	PP26 B-090
	PS26 203-C-3, SS24 219-S-3	JOHANSEN, A	PP26 C-075
JAY, E	OP27 225-C-1	JOHANSSON, B	SS26 325-C-1
JAYAWARDENA, C	SS25 526-C-2, SS25 526-C-3	JOHANSSON, SM	OP25 322-S-2
JE, Y	PP26 C-143	JOHNELL, K	OP26 308-C-2
JEANDEL, C	OP27 118-B-4	JOHNSEN, S	PP25 C-118
JEDLINSKA, M	OP27 225-C-3, PP26 C-154	JOHNSON, D	PP25 S-212
JEE, Y	PP26 S-044	JOHNSON, J	OP27 206-S-1
JEGERMALM, M	PP25 S-233, PP25 S-296	JOHNSON, S	OP27 216-S-3
JEN, I	PP25 S-073	JOHNSON, TE	PS24 211-B-2
JENN, J	PP26 R-062	JOHNSTON, C	PP26 C-053, PP26 R-043
JENSEN, AB	OP25 221-S-5	JOKHADZE, T	SS25 417-B-3

JOLING, K	OP26 420-S-2, PP26 C-159	JUNIOR, PL	PP25 C-101
JOLLIET, P	PP25 C-008	JURGEN, R	PP25 B-037
JOLLY, D	OP23 422-C-4	JUSTINA YAT WA, L	OP25 107-S-3
JOLY, L	OP27 125-C-1	JUTAI, J	OP25 420-S-1
JONES, B	OP25 117-B-1, OP26 119-B-5	JYLHA, M	SS24 122-S-3, SS24 218-S-2
JONES, G	OP25 219-B-4, OP27 226-C-3	K C, Y	PP25 S-133
JONES, IR	SS24 313-S-2	K.H. KWOK, D	OP24 405-S-1
JONES, R	PP25 C-140	KA'OPUA, LS	OP26 211-R-7
JONSDOTTIR, MK	OP23 318-C-1, SS26 326-C-1	KA'OPUA, L	PP25 S-045
JONSSON, P	OP26 211-R-6	KABESHOVA, A	OP23 422-C-5
JONSSON, PV	OP23 318-C-1, SS26 326-C-1	KACHAN, E	OP24 523-S-6, OP25 421-S-6, OP27 113-S-3, SS26 423-C-2
JOO, E	SS25 527-C-1		OP26 320-S-4
JOO, Y	PP26 R-026	KACHEL, J	PP25 R-013
JORDAN, K	OP25 121-S-2	KACK, M	SS26 414-S-1, SS26 414-S-2
JORDAN, L	SS26 418-S-1, SS26 418-S-4	KADA, O	PP26 C-203
JORDON, W	OP25 222-C-1	KADONO, T	SS25 417-B-2
JØRGENSEN, MG	OP23 325-C-3, OP23 421-C-1, PP25 C-027	KADOTANI, T	OP26 104-S-2, OP26 210-R-6, OP27 308-S-4, PP25 S-180
JOUANNY, P	OP27 224-C-4, PP25 C-072, PP26 C-116	KADOYA, Y	PS25 302-B-1
JOYAU, C	PP25 C-008	KAEBERLEIN, M	PP25 B-043
JU, J	PP26 B-037	KAGAMI, Y	PP26 S-023
JU, Y	PP26 B-075, PP26 S-078	KAGEYAMA, K	PP26 S-257, PP26 S-258
JUAREZ, G	PP25 S-053, PP26 S-181	KAHANA, B	PP26 S-006
JUBY, A	SS24 526-C-4	KAHANA, E	PP26 S-006
JUBY, AG	SS26 108-C-4	KAI, I	OP25 420-S-2, PP25 S-093, PP25 S-236, PP25 S-320
JULLAMAT, P	OP23 319-S-3		PP26 S-215
JULLAMATE, P	PP26 S-016, PP26 S-081, PP26 S-127, PP26 S-137	KAIRALA, M	SS26 410-R-1, SS26 410-R-2
JULLAMATE, P-	OP27 113-S-2, PP26 S-126	KAISER, R	PP25 S-117, PP25 S-178
JUN, H	PP26 S-187, PP26 S-188	KAKIYAMA, E	SS26 418-S-1, SS26 418-S-4
JUN, J	OP26 421-S-5, PP26 C-162	KALINOWSKI, S	PP25 S-084
JUN, X	SP24 402-2	KAMADA, M	SS26 408-C-2
JUNG, A	PP26 S-348	KAMAR, J	PP26 B-031
JUNG, B	OP25 101-S-3	KAMARUZAMAN, A	OP23 419-S-3, PP25 S-114, PP25 S-222
JUNG, D	PP26 S-035, PP26 S-347, SS25 325-C-4	KAMATA, M	PP26 R-049
JUNG, E	SS26 209-R-3	KAMEGAYA, T	OP26 324-C-2
JUNG, G	OP27 123-C-3	KAMEI, S	PP25 S-309, PP26 S-304
JUNG, H	OP24 425-C-1, OP27 321-C-4, PP25 B-020, PP26 B-001, PP26 C-032, PS24 411-B-3	KAMEI, T	OP25 219-B-5
	PP25 C-138	KAMEO, S	PP25 C-182
JUNG, I	OP27 125-C-5, PP25 R-017, SP24 302-3	KAMIBAYASHI, T	OP23 424-C-3, OP26 120-S-2, PP25 C-231, PP25 S-187, PP25 S-193, PP26 S-023, PP26 S-184, PP26 S-208, PP26 S-212, SS24 218-S-1, SS24 413-S-3
JUNG, K	OP26 324-C-6, PP26 C-096	KAMIDE, K	PP25 C-177, PP25 S-039, PP25 S-063, PP25 S-162
JUNG, M	OP23 418-S-3, PP26 B-023, PP26 S-076		PP25 C-112, PP25 C-129
JUNG, P	PP26 S-228	KAMIDE, N	OP26 420-S-1, OP26 420-S-3
JUNG, S	PP25 S-033, PP25 S-037, PP26 B-075, PP26 B-088, PP26 S-078, PP26 S-162, PP26 S-163	KAMIMURA, T	PP25 C-081, PP26 R-025
	OP26 119-B-6, PP25 B-072	KAMIYA, K	SS24 113-S-1
JUNG, U	PP26 S-350	KAMIYAMA, M	PP25 C-074
JUNG, W	OP23 419-S-5, OP27 209-S-5, PP25 R-053, PP26 B-045, PP26 B-051, PP26 B-081, PP26 C-192, PP26 C-225, PP26 S-142, PP26 S-155, PP26 S-159, PP26 S-164, SS24 119-S-2, SS26 209-R-3	KAMO, T	PP25 C-149
JUNG, Y	PP26 C-056	KAMOUCHI, M	OP23 321-C-3
		KAMPHUIS, P	OP27 320-S-4, PP25 S-121
JUNGES, S		KANAMORI, M	PP25 C-141
		KANAO-OKAMOTO, A	PP25 S-096
		KANDA, M	PP25 C-141, PP26 C-036
		KANDA, N	OP23 322-C-5, OP23 424-C-4
		KANDEL, R	OP25 117-B-1
		KANE, A	PP26 B-014
		KANE, AE	

KANEDA, M	PP26 R-061	KATO, M	PP25 S-292, PP26 R-049
KANEHARA, Y	PP25 C-153, PP25 C-154	KATO, S	PP25 S-070
KANEKI, M	PP26 B-073	KATO, Y	PP25 C-160
KANEKO, E	PP25 S-169	KATSUKO, K	PP25 S-142
KANEKO, Y	PP25 S-202, PP26 B-041	KATSUYA, S	PP26 C-123
KANESVARAN, R	PS25 203-C-3	KATTAKAYAM, JJ	OP25 120-S-3, OP27 211-S-2
KANETAKA, H	PP25 C-121, PP25 C-122, PP25 C-133	KATZ, P	SS24 527-C-1, SS26 107-C-2
KANG, C	PP26 S-078	KATZ, PR	SS25 123-C-1
KANG, D	PP26 B-074	KATZ, R	PS25 505-S-2, SS25 514-S-2
KANG, E	PP26 C-132	KATZ, Y	OP23 413-C-1
KANG, H	OP26 319-B-4, PP25 S-123, PP26 B-048, PP26 B-049, PP26 S-112, PP26 S-350, PP26 S-353	KAUFMAN, D	OP25 321-S-3
KANG, J	PP25 B-051, PP26 B-001, PP26 C-126, PP26 S-027, PP26 S-057, PP26 S-148	KAUL, S	PS25 102-B-3, SS24 318-B-1
KANG, K	PP25 C-106	KAWAI, H	PP26 C-185
KANG, M	OP23 323-C-2, PP25 B-002, PP26 B-002, PP26 S-026	KAWAI, T	OP23 424-C-3, PP25 C-231
KANG, N	PP26 B-004, PP26 C-125, PP26 C-232	KAWAKAMI, I	PP25 C-209
KANG, S	OP27 205-S-4, OP27 206-S-6, PP25 S-351, PP26 B-082, PP26 B-089, PP26 S-086, PP26 S-358, SS24 322-S-1, SS25 527-C-2	KAWAKAMI, K	OP26 219-B-5, PS26 202-B-2
KANG, Y	OP26 406-S-5, OP27 318-B-6, PP25 S-135, PP26 C-231, SS26 110-R-1	KAWAMATA, H	PP25 S-064
KANGCHAI, W	PP26 S-016, PP26 S-137	KAWAMURA, A	PP25 S-039, PP25 S-063, PP25 S-162
KANNUS, P	OP23 325-C-1, OP27 216-S-1	KAWAMURA, H	OP23 425-C-2, PP25 C-207
KANO, M	SP26 301-1	KAWAMURA, K	PP25 S-105
KAO, T	PP25 C-077	KAWAMURA, Y	PP26 R-008, PP26 R-009
KAOPUA, LS	OP25 106-S-1	KAWASAKI, M	OP25 421-S-2
KARAN, MA	OP27 221-C-1, PP25 C-029, PP26 C-052	KAY, L	OP25 220-S-2
KARASU, C	SS26 423-C-3	KAY, T	PS25 405-S-1, PS25 405-S-3, SS25 224-R-1, SS25 224-R-3
KARDOL, T	PP25 S-167	KAYAMA, H	PP25 C-070
KAREBAN, T	PP26 S-135	KAYIBANDA, J	OP25 521-C-2
KAREHOLT, I	PP25 S-051, PP25 S-278	KEARNEY, F	OP27 122-C-5
KAREHOLT, IP	PP25 S-040	KEARNEY-SCHWARTZ, A	OP27 125-C-1, PP25 C-010
KARIMLO, M	PP25 C-111	KEARNS, W	SS26 312-R-3
KARINKANTA, S	OP23 325-C-1, OP27 216-S-1	KEARNS, WD	SS26 312-R-2
KARISTO, A	SS25 211-R-2	KEATING, N	OP27 213-S-1, PS24 501-R-2, SS24 122-S-1, SS25 414-S-1, SS26 214-S-4, SS26 218-S-3
KARIUKI, NN	OP27 218-B-3	KEE, Y	PS27 305-S-2
KARIYA, A	OP27 212-R-6, PP25 S-023	KEEFE, J	PP25 S-147
KARLSSON, M	PP25 C-012	KEIKO, H	PP25 C-203
KARLSSON, S	OP25 420-S-3, OP26 420-S-6, OP27 103-S-5, SS25 519-S-1	KEINAN-BOKER, L	OP26 320-S-4
KARNIKOWSKI, M	PP26 S-166	KELLY, K	SS24 227-C-4
KARUNA, S	OP27 113-S-2	KELSON, E	OP24 105-S-4
KASAHARA, Y	PP25 S-036	KEMPEN, JV	OP23 420-C-5, SS24 124-R-4
KASAOKA, K	PP26 S-021	KENDIG, H	OP27 121-S-4, SP26 205-2, SS24 421-S-4, SS25 316-R-2, SS26 114-S-1
KASPAR, R	OP26 421-S-3	KENGERI, SS	OP27 218-B-3, OP27 218-B-4
KATAJISTO, J	PP25 S-140	KENNEDY, B	KL24 004-1, PS25 302-B-2
KATAKURA, S	PP25 S-072	KEOGH, JW	OP25 222-C-1
KATAMOTO, S	OP26 219-B-5, PS26 202-B-2	KERCHER, K	PP26 S-196
KATAOKA, M	PP25 S-281, PP26 C-161	KERR, G	OP27 125-C-6
KATAYAMA, M	SS24 121-S-1, SS24 121-S-3	KERRY, S	OP27 212-R-4
KATAYAMA, Y	OP26 324-C-2	KERSE, N	OP24 123-C-1, OP26 113-S-2, SS24 118-S-2, SS24 118-S-4, SS25 526-C-1, SS25 526-C-2, SS25 526-C-3
KATHERIA, V	PP26 C-149	KESSLER, LA	SS26 408-C-1
		KETTUNEN, R	OP23 322-C-1
		KHADKA, P	PP25 B-037, PP26 B-052, PP26 B-056
		KHAIKIN, Y	OP23 413-C-1
		KHALTOURINA, D	PP26 S-359
		KHALYAVKIN, A	PP25 B-034, PP26 B-013, PP26 B-038

KHAN, A	SS26 225-C-2	KIM, H	OP23 419-S-5, OP24 405-S-5,
KHANAL, VK	OP24 405-S-4		OP24 522-S-1, OP25 106-S-3,
KHANH, T	SS26 423-C-4		OP25 106-S-6, OP27 104-S-6,
KHATOON, S	OP23 424-C-4		OP27 205-S-1, OP27 213-S-3,
KHAVINSON, V	OP23 426-C-3, OP25 117-B-3,		OP27 215-S-1, PP25 B-002,
	PP25 B-016, PP25 S-066,		PP25 B-003, PP25 B-062,
	PP26 C-001, PS25 102-B-1,		PP25 B-072, PP25 C-069,
	SS26 423-C-4		PP25 C-191, PP25 C-201,
KHIAMI, F	OP23 323-C-4, OP27 222-C-1		PP25 R-030, PP25 S-019,
KHO, H	PS25 506-C-3		PP25 S-081, PP25 S-135,
KHOO, E	SS24 124-R-1, SS24 124-R-2		PP25 S-199, PP25 S-215,
KHUBULAVA, GG	PP25 C-003		PP25 S-219, PP26 B-002,
KI, M	PP25 C-163		PP26 B-012, PP26 B-027,
KIELY, KM	OP27 116-S-2		PP26 B-036, PP26 B-037,
KIKKAWA, N	PP26 C-202		PP26 B-044, PP26 B-045,
KIKUCHI, K	PP25 S-145, PP25 S-307		PP26 B-070, PP26 B-071,
KILIC, B	PP25 C-016, PP25 C-095		PP26 B-075, PP26 B-081,
KILIC, C	PP26 C-052		PP26 B-082, PP26 C-062,
KILPELAINEN, A	PP26 S-215		PP26 C-101, PP26 C-131,
KIM, J	PP25 S-342		PP26 C-140, PP26 C-164,
KIM, AJ	OP26 103-S-2		PP26 C-185, PP26 C-192,
KIM, B	OP24 103-S-6, OP25 106-S-1,		PP26 R-045, PP26 S-031,
	OP26 211-R-7, PP25 S-045,		PP26 S-035, PP26 S-037,
	PP25 S-229, PP25 S-294,		PP26 S-039, PP26 S-040,
	PP25 S-346, PP25 S-350,		PP26 S-041, PP26 S-043,
	PP25 S-351, PP26 B-007,		PP26 S-046, PP26 S-063,
	PP26 B-091, PP26 C-040,		PP26 S-091, PP26 S-149,
	PP26 S-027, PP26 S-031,		PP26 S-155, PP26 S-159,
	PP26 S-153, PP26 S-295,		PP26 S-229, PP26 S-276,
	PP26 S-311, PP26 S-354,		PP26 S-348, PS24 512-C-1,
	PP26 S-357, SS25 325-C-4		SS24 119-S-2, SS24 209-R-2,
KIM, C	OP24 425-C-1, OP24 505-S-5,		SS24 224-S-3, SS25 416-R-3,
	OP25 119-B-5, OP26 406-S-5,		SS25 507-B-4, SS25 509-C-2,
	OP27 208-S-3, OP27 321-C-4,		SS26 209-R-3, SS26 315-S-1,
	OP27 323-C-1, PP25 C-244,		SS26 315-S-3
	PP25 S-144, PP26 B-015,	KIM, I	OP27 116-S-6, PP26 C-215,
	PP26 B-091, PP26 C-083,		PP26 C-230, SS25 108-R-2
	PP26 C-140, PP26 R-045,	KIM, J	OP23 321-C-3, OP25 322-S-5,
	PP26 S-102, PP26 S-139,		OP26 319-B-4, OP27 106-S-4,
	PP26 S-140, PP26 S-264,		OP27 125-C-5, OP27 209-S-6,
	PP26 S-296, PP26 S-344,		OP27 304-S-6, OP27 306-S-3,
	SP24 402-3, SS25 209-C-1,		OP27 315-C-4, OP27 315-C-5,
	SS25 325-C-4, SS25 523-C-2		OP27 318-B-4, PP25 B-035,
KIM, CA	OP25 521-C-3		PP25 C-005, PP25 R-006,
KIM, D	OP23 323-C-2, OP26 319-B-6,		PP25 R-014, PP25 S-206,
	OP26 419-B-7, OP27 101-S-5,		PP25 S-215, PP25 S-263,
	OP27 104-S-6, OP27 209-S-5,		PP25 S-266, PP25 S-338,
	OP27 315-C-6, OP27 318-B-5,		PP25 S-346, PP25 S-354,
	PP26 B-020, PP26 B-043,		PP25 S-355, PP25 S-365,
	PP26 B-045, PP26 C-225,		PP26 B-001, PP26 B-024,
	PP26 S-287, PP26 S-310,		PP26 B-026, PP26 B-027,
	PP26 S-346, SS24 210-R-1		PP26 B-036, PP26 B-048,
KIM, DH	OP25 521-C-3, OP27 125-C-4		PP26 B-049, PP26 B-084,
KIM, E	OP24 425-C-1, PP25 C-188,		PP26 B-088, PP26 B-095,
	PP26 B-037, PP26 R-036,		PP26 C-057, PP26 C-083,
	PP26 S-075, PP26 S-108,		PP26 C-087, PP26 C-088,
	PP26 S-136, PP26 S-350,		PP26 C-094, PP26 C-139,
	PS25 506-C-1, SP24 404-5,		PP26 C-163, PP26 C-192,
	SS25 527-C-1		PP26 C-227, PP26 C-228,
KIM, EH	PP26 S-089		PP26 C-229, PP26 C-234,
KIM, G	OP23 314-S-1, OP27 309-S-6,		PP26 R-006, PP26 R-059,
	PP26 B-091, PP26 B-094,		PP26 S-004, PP26 S-005,
	PP26 C-102		PP26 S-027, PP26 S-030,

	PP26 S-040, PP26 S-041, PP26 S-042, PP26 S-067, PP26 S-096, PP26 S-124, PP26 S-154, PP26 S-238, PP26 S-269, PP26 S-303, PP26 S-351, PP26 S-358, PS25 203-C-2, SP24 301-1, SP24 404-6, SP24 503-3, SS25 113-S-2, SS25 407-B-2, SS25 523-C-2, SS25 526-C-5, SS26 209-R-3, SS26 215-S-1		OP26 319-B-4, OP27 308-S-2, OP27 318-B-4, OP27 321-C
KIM, K	OP26 123-C-2, OP26 221-S-5, OP27 215-S-1, OP27 315-C-4, OP27 321-C-4, PP25 R-017, PP25 S-330, PP25 S-333, PP26 B-033, PP26 B-035, PP26 B-047, PP26 B-075, PP26 B-087, PP26 C-004, PP26 C-066, PP26 C-082, PP26 C-099, PP26 C-102, PP26 C-127, PP26 C-151, PP26 C-160, PP26 C-173, PP26 R-044, PP26 S-069, PP26 S-072, PP26 S-078, PP26 S-084, PP26 S-086, PP26 S-273, PS25 307-R-2, PS26 105-S-1, PS26 105-S-4, SP24 303-3, SP25 215-2, SS24 307-S-4, SS24 418-S-4, SS24 515-S-3, SS25 127-C-3, SS25 209-C-2, SS25 416-R-1, SS25 523-C-2		PP26 B-006, PP25 R-015, PP26 B-042, PP26 B-048, PP26 B-049, PP26 B-051, PP26 B-058, PP26 B-088, PP26 B-089, PP26 C-057, PP26 C-094, PP26 C-115, PP26 C-118, PP26 C-125, PP26 C-126, PP26 C-134, PP26 C-135, PP26 C-160, PP26 C-175, PP26 C-190, PP26 C-232, PP26 S-040, PP26 S-043, PP26 S-075, PP26 S-082, PP26 S-084, PP26 S-089, PP26 S-155, PP26 S-159, PP26 S-161, PP26 S-171, PP26 S-191, PP26 S-219, PP26 S-280, PP26 S-340, PP26 S-348, PS24 211-B-4, PS24 512-C-2, SP24 403-4, SS24 421-S-4, SS25 216 -2, SS25 409-C-5, SS25 527-C-1, SS27 302-S-3
	OP27 107-S-1	KIM, T	PP26 B-037, PP26 C-134, PP26 C-225, PP26 R-040, PP26 S-004, PP26 S-113, PP26 S-114, SS25 109-R-4
KIM, KB	OP24 102-S-5, OP27 107-S-1, OP27 109-S-4, OP27 306-S-1, OP27 318-B-6, PP25 B-010, PP25 C-005, PP25 C-069, PP25 C-188, PP25 S-033, PP25 S-037, PP25 S-267, PP25 S-290, PP25 S-350, PP25 S-361, PP25 S-362, PP25 S-363, PP26 B-004, PP26 B-048, PP26 B-073, PP26 C-035, PP26 C-066, PP26 C-086, PP26 C-125, PP26 C-126, PP26 C-162, PP26 C-185, PP26 C-222, PP26 C-232, PP26 R-034, PP26 R-037, PP26 R-039, PP26 S-042, PP26 S-120, PP26 S-187, PP26 S-228, PP26 S-236, PP26 S-244, PP26 S-276, PP26 S-281, PP26 S-302, PP26 S-354, PS27 203-C-3, SS24 518-S-6, SS25 109-R-1, SS25 113-S-1	KIM, W	PP25 C-107, PP26 B-029, PP26 S-223
KIM, M	PP26 C-173	KIM, Y	OP26 319-B-6, OP27 123-C-3, PP25 B-019, PP25 B-043, PP25 C-005, PP25 R-053, PP26 B-044, PP26 B-073, PP26 B-080, PP26 B-086, PP26 C-035, PP26 C-066, PP26 C-122, PP26 C-143, PP26 C-160, PP26 C-215, PP26 R-006, PP26 S-003, PP26 S-009, PP26 S-027, PP26 S-044, PP26 S-110, PP26 S-155, PP26 S-159, PP26 S-171, PP26 S-183, PP26 S-191, PP26 S-193, PP26 S-348, PS24 411-B-3, SS24 222-S-4, SS24 322-S-1, SS24 322-S-2, SS24 322-S-3, SS24 322-S-4, SS24 422-S-2, SS25 409-C-1, SS25 504-R-1, SS25 523-C-2
KIM, MD, PHD, M	OP27 318-B-6, PP26 B-001, PP26 C-032, PP26 S-167, PP26 S-277, SS25 325-C-4	KIM-APPEL, D	PP26 S-289, PP26 S-323
KIM, N	PP26 B-059	KIMATA, M	PP25 S-114
KIM, P	OP24 208-S-2, OP24 522-S-3, OP25 106-S-4, OP26 120-S-3,	KIMBALL, J	OP25 222-C-5
KIM, S		KIMBERLEY, H	SS24 308-R-2
		KIMUHU, M	OP27 108-S-1
		KIMURA, A	PP25 C-224
		KIMURA, M	PP25 S-028, PP25 S-043, PP25 S-056
		KIMURA, S	PS24 201-R-2
		KIMURA, Y	PP25 S-036, PP25 S-061
		KIN YI, K	OP25 107-S-4
		KING, D	OP25 511-S-1

KING, J	OP27 312-C-3	KOH, Y	PP26 B-057, PP26 S-026
KING, N	PP26 S-080	KOHARA, K	PS24 212-C-2
KINGSTON, A	SS24 118-S-2	KOHLER, K	OP23 313-C-4
KINOSHITA, K	PP25 S-306	KOIKE, T	PP25 S-232, PP25 S-309, PP25 S-319, PP25 S-326, PP26 S-304
KINOUE, T	PP26 C-098		PP25 C-081
KINUGAWA, K	PP25 B-005	KOIZUMI, M	OP26 420-S-4
KINUKAWA, M	OP27 310-S-4, PP25 S-168	KOJIMA, K	PP25 S-145, PP26 C-185
KIRIHARA, K	PP25 C-153, PP25 C-154	KOJIMA, M	PP25 C-069, PP26 S-055
KIRKEVOLD, M	OP27 316-S-1	KOJIMA, N	SS24 225-C-4
KIRKLAND, S	SS26 325-C-4	KOJIMA, T	PP25 S-306
KIRKPATRICK, CM	PP26 C-053, PP26 R-043	KOJO, S	SS26 226-C-3
KISE, M	PP25 S-214	KOKONOZI, A	OP27 119-S-4, SS26 223-C-2
KISHIDA, K	PP25 S-115, PP25 S-124	KOLLAND, F	PP25 S-185
KISHIMOTO, S	PP26 B-041	KOLØEN, K	PP26 S-246
KISHIMOTO, Y	PP26 C-185	KOLOMER, S	PP25 C-162
KITAMURA, Y	PP25 C-189	KOMAKI, K	PP26 C-070
KITAZAWA, K	PP26 S-243	KOMATSU, T	PP25 S-274
KITAZONO, T	PP25 C-149	KOMATSU, Y	PP26 C-037
KITSIS, RN	PP26 B-030	KOMIYAMA, K	SS26 226-C-3
KITZIS, A	SS25 313-S-2	KOMPATSIARIS, I	OP27 223-C-4, OP27 321-C-1
KIVIPELTO, M	OP23 417-C-2	KONDO, I	PP25 S-297, PP26 S-099, PP26 S-307, SP26 301-1, SP26 301-3
KLASSEN, T	SS27 124-R-2	KONDO, K	PP25 R-037
KLEIN, LC	SS24 418-S-4	KONDO, M	PP25 S-243, SP26 301-3
KLEIN, R	OP27 125-C-4	KONDO, N	OP24 425-C-5, SS24 216-C-4
KLEINA, T	OP25 520-S-3	KONG, B	PP25 S-104
KLENK, J	SS25 526-C-4	KONG, C	OP27 125-C-5, PP26 S-106
KLIE, T	SS24 307-S-1	KONG, E	OP27 215-S-5, PP25 S-075
KNIGHT, B	OP24 220-S-1, PS24 305-S-3	KONG, F	PP26 C-057, PP26 C-094
KNIGHT, BG	OP24 522-S-3	KONG, H	SS26 226-C-3
KO, E	OP27 120-S-1, PP26 S-234	KONIG, A	PP26 C-158
KO, J	OP24 505-S-1, OP25 225-R-3, SS25 112-R-1	KONISHI, E	PP26 R-051
	PP26 B-087, PP26 C-102	KONNERT, J	PP25 S-123
KO, M	SS24 519-S-3	KONNO, R	PP25 S-094
KO, P	SS25 309-C-2	KONO, Y	SS26 423-C-7
KO, S	PP25 C-151	KONOVALOV, S	PP25 C-233
KO, W	PP25 S-080, PP26 B-023	KONYA, C	PP26 C-084, PP26 C-085
KO, Y	PP25 S-300, PP25 S-326	KOO, K	PP25 C-036, PP26 C-081
KOBAYASHI, E	OP23 425-C-2, OP25 219-B-5, PP25 C-207, PP26 C-202, PP26 R-060, PP26 S-341	KOO, M	SS25 527-C-1
KOBAYASHI, K	PP25 S-023, PP25 S-158, PP26 R-020, PP26 R-025	KOO, Y	PP26 B-059
	PP25 C-141, PP25 S-010, PP25 S-064, PP25 S-092, PP25 S-122, PP25 S-217, PP26 C-036	KOOK, M	OP26 308-C-1
KOBAYASHI, M	PP26 C-238, PP26 R-029, PP26 R-047, PP26 S-019	KOPONEN, M	OP26 319-B-2
	PP25 S-010, PP25 S-085, PP26 C-114	KOPP, Z	SS25 217-B-5
KOBAYASHI, N	OP27 215-S-4	KOPYL, S	SS25 523-C-1, SS25 523-C-4
	PP25 S-108	KORC-GRODZICKI, B	PS25 102-B-4
KOBAYASHI, S	OP25 520-S-6	KORKUSHKO, O	PP25 C-086
	SS26 418-S-1, SS26 418-S-4	KORRIBI-MERIBAI, W	PS27 202-S-2, SS25 524-R-3, SS26 312-R-3
KOCHAN, NA	PP26 S-234, PP26 S-322	KORT, H	SS26 427-C-1
KODAMA, H	OP27 114-S-1	KOSA, K	PP26 C-223
KOEHLER, K	PP25 R-004	KOSAKA, Y	PP25 C-016
KOENNER, F	OP27 114-S-1, OP27 122-C-3, OP27 222-C-2, PP25 S-103, SS24 518-S-7, SS26 110-R-3	KOSE, S	OP24 123-C-2, OP26 324-C-5
KOH, B	PP25 S-290	KOSEOGLU, F	PP25 R-022
KOH, D	OP27 122-C-3	KOSKENNIEMI, J	PP25 S-218
KOH, G		KOSKINEN, S	PP26 S-196
KOH, GC		KOSLOSKI, K	PP26 S-049
		KOSSUMOV, A	OP27 312-C-4
		KOSTER, RW	PP25 C-209
KOH, S		KOTO, T	SS24 108-R-4
KOH, WP		KOTOWSKA, IE	OP24 522-S-2, PP25 S-177
		KOTSELIDOU, D	

KOU, I	OP27 122-C-1	KUNO, K	PP25 R-052
KOUMURA, A	PP25 C-224	KUO, C	PP25 S-086
KOUTI, L	PP25 C-143, PP26 C-129	KUO, H	PP26 S-001
KOVACS, A	SS26 427-C-2, SS26 427-C-3, SS26 427-C-4	KUO, I	SS25 526-C-2
KOVALENKO, E	OP27 218-B-5	KUO, K	OP23 422-C-6
KOVARI, E	OP23 318-C-4	KUO, KN	SS26 127-C-4
KOWN, O	PP25 R-051	KUO, L	PP25 C-193
KOYAMA, H	OP25 219-B-5, SS25 517-B-4	KUO, P	PP25 S-127
KOYANAGI, H	PP26 C-203	KUO, S	PP25 R-020, PP25 S-080
KOZAI, Y	PP26 C-123	KUO, T	PP25 R-034, PP26 S-123, PP26 S-173, PP26 S-177, PP26 S-213, PP26 S-225, PP26 S-314, SS25 526-C-3
KOZAKAI, R	PP25 S-081		PS26 206-R-2
KOZAKI, K	PS24 201-R-2	KUPANG, F	SS24 207-S-3
KOZLOV, K	PP25 C-001, PP26 C-001	KUPFERSCHMIDT, A	SS25 504-R-2
KOZLOV, KL	PP25 C-003	KURAOKA, M	PP25 C-220
KOZLOV, L	OP23 426-C-3, OP26 106-S-1, PP25 S-066	KURATA, C	PP25 C-190, PP25 C-220
KOZONO, M	OP26 120-S-2, PP25 S-187, PP26 S-184, PP26 S-208, PP26 S-212, SS24 413-S-3	KURATA, S	OP23 321-C-2, OP23 323-C-5
	OP26 221-S-1	KURATA, T	PP25 C-149
KRASNIK, A	PS24 211-B-3	KURODA, J	PP25 S-330, PP25 S-333
KRATOCHWIL, M	PP25 S-100	KURODA, K	PP26 C-065
KRAUSE, G	PP26 B-079	KURODA, Y	OP25 421-S-2
KRAUSE, K	SS24 324-S-2	KUROKAWA, I	SS24 316-C-2, SS24 316-C-4
KREKULA, C	SS25 217-B-3	KURRLE, S	OP27 323-C-5
KREMENTSOVA, AV	SS26 418-S-1, SS26 418-S-4	KURRLE, SE	PP25 C-173, PP25 C-211, SS24 124-R-2
KREUTZ, R	PP26 C-075	KURTULUS, Z	OP25 520-S-5
KRISHNAN, M	PP25 B-044	KURUBE, N	PP26 S-335
KRISHNAN, V	PP26 S-361	KUSAKA, N	PS25 405-S-2
KRISHNAPILLAI, A	OP27 123-C-4, PP25 C-056, PP26 C-047	KUSDHANY, L	PP25 C-040
KRISTENSSON, J	OP24 220-S-3	KUSDHANY, LS	SS25 323-C-4
KRITCHEVSKY, S	PP26 S-008	KUSHNER-KOW, J	PP26 S-049
KROHNE, K	OP24 101-S-5	KUSHUGULOVA, A	OP27 118-B-4
KROPF, NP	PP26 C-178	KUSTER, N	PP26 B-068
KROPINSKA, S	PP26 C-154	KUSUDO, T	OP27 213-S-2
KRUPICKA, R	PP26 B-013	KUSUMARATNA, RK	OP23 424-C-3, PP25 C-231
KRUTKO, V	PP26 R-060, PP26 S-341	KUSUNOKI, H	OP27 225-C-4
KRYZANOWSKI, L	SS25 305-S-2	KUSWARDHANI, RT	PP25 S-176, PP26 S-135, PP26 S-226
KU, LE	PP26 S-224	KUSZ, HG	PP26 S-056
KU, Y	OP25 120-S-5, OP27 223-C-1	KUWADA, N	PP25 C-149
KUA, E	PP25 C-091	KUWASHIRO, T	OP27 226-C-5
KUA, J	PP26 C-050	KUYIS, SS	PP25 C-082
KUBESOVA, HM	PP25 C-141	KUYUMCU, M	PP26 C-224
KUBO, K	SS26 423-C-9	KUYUMCU, ME	PP25 C-208, PP26 C-022, PP26 C-186, PP26 R-023
KUDRYAVTSEV, V	PP26 C-061	KUZUYA, M	SS25 212-R-2, SS25 212-R-3
KUHN, M	SS26 418-S-1		PP26 B-063
KUHNERT, R	SS26 114-S-3	KVIKSTAD, T	PP25 S-234
KUIVALAINEN, S	PP25 C-108	KWAK, C	PP26 B-004, PP26 C-125, PP26 C-126, PP26 C-232
KUMAGAI, LM	OP23 321-C-4	KWAK, M	SS25 206-R-1
KUMAR, N	OP23 321-C-4, OP23 322-C-5, OP23 425-C-4	KWAK, Y	OP23 325-C-2
KUMAR, P	OP25 120-S-5, OP27 223-C-1		OP24 123-C-5, OP27 112-R-6
KUMAR, R	OP23 420-C-2	KWAN, C	PP26 C-040
KUMAR, V	PP25 B-070	KWOK, B	OP26 319-B-5, PP26 S-279
KUMASAKA, T	SS25 518-S-3	KWOK, T	OP27 109-S-5, PP25 S-154, PP26 B-024, PP26 C-231
KUMASHIRO, M	PP25 C-121, PP25 C-122, PP25 C-133	KWON, D	PP25 S-190
KUME, K	PP26 S-054, PP26 S-079	KWON, E	PP25 R-045, PP26 S-108, PP26 S-183
	PP26 S-257, PP26 S-258	KWON, H	OP27 318-B-4, PP25 B-072,
KUMPHON, B	PP25 C-162		
KUNISADA, M	PP26 S-266	KWON, I	
KUNIYASU, T		KWON, J	
KUNKEL, S		KWON, K	

KWON, O	PP26 B-016, SS25 419-C-2	LAU, M	SS25 116-R-4
KWON, S	PP26 R-045, PP26 S-154	LAU, W	PP26 S-315
	OP24 102-S-5, OP25 512-S-1,	LAUMANN, E	SS24 224-S-2
	PS25 410-R-3	LAUNAY, C	OP23 318-C-2, OP23 322-C-3,
KWON, Y	PP26 S-236, PP26 S-281		OP23 422-C-5, OP27 118-B-3,
KWONG, EW	OP27 114-S-3		PP26 C-107
KYUOGOKU, M	PP25 S-230	LAUNER, LJ	OP23 318-C-1, SS26 326-C-1
LAATIKAINEN, T	OP23 417-C-2	LAURBERG, P	PP25 C-027
LABAT, C	OP27 125-C-1, OP27 125-C-3	LAURE, D	PP26 C-210
LACHANCE, CC	OP27 312-C-1	LAVALLART, B	PP25 S-284
LACOLLEY, P	OP27 125-C-3	LAVAU-DENES, S	OP23 414-C-5
LACROIX, A	OP26 113-S-3, OP27 114-S-4,	LAW, A	OP25 121-S-5
	OP27 215-S-3	LAW, G	SS25 424-R-4
LAESOE, U	OP23 325-C-3, OP23 421-C-1	LAWLER, MJ	PP26 S-197
LAFONT, C	SS25 108-R-4	LAWLOR, EF	SS25 116-R-1
LAGERGREN, M	OP25 520-S-5	LAZAR, A	PP25 S-031
LAGRO, J	OP25 119-B-1	LE COUTEUR, D	OP27 227-C-2, SS24 317-B-3
LAHMAR, C	OP23 414-C-5	LE COUTEUR, DG	OP25 117-B-1, OP26 119-B-5,
LAI CHUN, Y	OP25 107-S-4		PP26 B-014
LAI, C	PP26 R-035	LE FRESNE, Y	PP25 C-072
LAI, CK	PP26 R-028, PP26 S-059,	LE MANACH, Y	OP27 222-C-1
	SS25 424-R-1	LE MAY, A	OP27 112-R-3
LAI, D	OP24 103-S-4, SS24 410-R-1,	LE, A	PP25 S-334
	SS25 318-S-2, SS25 318-S-3	LEAL, I	OP25 220-S-3, OP25 221-S-3,
LAI, H	PP25 C-097, PP25 S-049,		PP25 B-057, PP25 B-058,
	SS26 127-C-2, SS26 127-C-3		PP25 S-076, PP25 S-077,
LAI, M	PP25 C-018, PP25 C-025,		PP25 S-078, PP25 S-079,
	PP26 C-025		PP25 S-088, PP25 S-091,
LAI, Y	PP25 S-018		PP25 S-175, PP25 S-191,
LAING, AC	OP27 312-C-1		PP25 S-207, PP25 S-256
LAKS, J	PP25 C-245, PP25 S-336,	LEBON, J	PP25 C-105
	PP26 C-188, PP26 C-226	LEBRAO, M	OP27 226-C-2, OP27 227-C-6,
LALIBERTE, A	PP25 R-003		OP27 321-C-3, PP25 S-003
LAM, P	OP27 323-C-4	LEBRUN, D	PP26 C-213
LAMA VALDIVIA, J	PP25 S-358	LECAILLE, C	OP23 414-C-5
LAMURA, G	OP27 120-S-6, SS24 510-R-4,	LECAMWASAM, D	OP27 222-C-5
	SS24 513-S-2, SS26 116-R-3	LECHNER, H	SS26 414-S-3
LAN, C	SS26 209-R-2	LEE, B	OP23 417-C-5, OP26 324-C-6,
LAN, T	PP25 C-076, PP25 C-222,		P26 R-044, SS25 216 -4
	PP25 C-223	LEE, BK	PP26 C-131
LANDGREN, F	SS26 408-C-2	LEE, BS	OP24 505-S-1
LANDI, F	SS25 327-C-4	LEE, C	OP27 205-S-2, PP25 C-100,
LANE, H	OP23 414-C-3, OP23 414-C-4		PP25 C-151, PP25 R-001,
LANE, R	PS26 201-R-2		PP25 S-008, PP25 S-127,
LANG, B	OP25 104-S-1, OP27 304-S-2,		PP25 S-128, PP25 S-291,
	SS26 318-S-2		PP25 S-342, PP25 S-344,
LANG, G	PP26 S-325		PP26 B-004, PP26 B-081,
LANGEGGEN, I	SS25 312-R-1		PP26 C-099, PP26 C-125,
LANGHENDRIES, D	PP26 S-309, PP26 S-326		PP26 C-126, PP26 C-127,
LANNIN, N	SS24 109-R-3		PP26 C-232, PS24 211-B-4,
LANO, J	OP27 118-B-4		SS25 325-C-4
LAPIERRE, S	OP27 104-S-1	LEE, CD	PP26 B-062
LAPIERRE, T	SS26 214-S-4	LEE, D	PP25 R-006, PP25 R-014,
LAPPEGARD, T	PP25 S-185		PP25 R-015, PP26 B-001,
LARA, J	SS25 213-S-1, SS25 213-S-4		PP26 B-067, PP26 C-032,
LARANJEIRA, C	PP25 S-095, PP26 S-176		PP26 R-044, PP26 S-060,
LARBI, A	SS25 310-C-1, SS25 310-C-2		PP26 S-071, PP26 S-146,
LARENTE, N	SS26 108-C-2		PP26 S-164, PS25 303-C-2,
LARON, M	OP24 101-S-2, OP24 101-S-3		SP25 415-2, SS25 114-S-2,
LARSSON, E	PP25 C-152		SS25 127-C-3, SS25 318-S-1
LARSSON, N	PS24 411-B-1	LEE, DT	OP23 423-C-4
LASITHIOTAKIS, K	PP25 C-042, PP26 C-029	LEE, E	OP24 425-C-1, OP26 220-S-4,
LAU, C	PP26 C-206		OP27 104-S-6, OP27 220-S-2,

	OP27 318-B-3, PP25 R-045,	LEE, JD	PP26 C-138
	PP26 B-046, PP26 C-035,	LEE, JS	OP24 123-C-5, OP27 112-R-6
	PP26 C-162, PP26 R-017,	LEE, JY	PP26 C-131
	PP26 R-044, PP26 S-171,	LEE, K	OP27 104-S-6, OP27 114-S-1,
	PP26 S-191, PP26 S-295,		OP27 116-S-4, OP27 205-S-4,
	SP25 315-1		PP25 S-232, PP25 S-319,
LEE, G	PP26 S-003		PP26 B-078, PP26 C-080,
LEE, H	OP23 417-C-5, OP23 424-C-5,		PP26 C-101, PP26 S-118,
	OP25 522-S-4, OP26 101-S-3,		PP26 S-155, PP26 S-159,
	OP27 106-S-2, OP27 106-S-4,		PP26 S-191, PP26 S-197,
	PP25 C-006, PP25 C-164,		PP26 S-348, PP26 S-353,
	PP25 S-029, PP25 S-048,		SS25 309-C-4, SS25 527-C-1,
	PP25 S-050, PP25 S-052,		SS26 126-C-1
	PP25 S-059, PP25 S-112,	LEE, L	PP25 R-017
	PP25 S-360, PP26 B-020,	LEE, M	OP24 505-S-4, PP25 B-036,
	PP26 B-045, PP26 B-051,		PP25 S-048, PP25 S-198,
	PP26 B-078, PP26 B-080,		PP25 S-224, PP25 S-282,
	PP26 C-031, PP26 C-035,		PP26 B-024, PP26 B-080,
	PP26 C-045, PP26 C-080,		PP26 C-088, PP26 C-133,
	PP26 C-160, PP26 C-162,		PP26 S-009, PP26 S-038,
	PP26 S-110, PP26 S-111,		PP26 S-062, PP26 S-151,
	PP26 S-113, PP26 S-114,		PP26 S-152, PP26 S-260,
	PP26 S-124, PP26 S-132,		PP26 S-275, PS27 301-R-5,
	PP26 S-239, PP26 S-240,		SS24 422-S-1
	PP26 S-346, PS24 512-C-2,	LEE, MM	PP26 S-330, SS25 317-B-1
	SP24 303-4, SS24 322-S-2,	LEE, N	PP26 C-162
	SS24 322-S-3, SS24 514-S-3,	LEE, P	PP25 S-008, PP25 S-059,
	SS25 111-R-2, SS25 210-C-4,		PP25 S-127, PP25 S-128
	SS25 517-B-5	LEE, S	OP24 405-S-2, OP25 222-C-5,
LEE, HB	OP27 107-S-1		OP25 227-C-4, OP27 211-S-6,
LEE, HY	OP25 122-S-3, PP26 S-238,		PP25 B-002, PP25 B-035,
	SS24 422-S-1, SS24 422-S-2		PP25 C-113, PP25 C-199,
LEE, I	SS25 114-S-2		PP25 S-015, PP25 S-081,
LEE, J	OP25 120-S-6, OP25 227-C-3,		PP25 S-161, PP25 S-219,
	OP25 227-C-4, OP25 322-S-6,		PP25 S-236, PP26 B-002,
	OP26 220-S-4, OP26 314-S-3,		PP26 B-003, PP26 B-022,
	OP26 319-B-4, OP26 319-B-6,		PP26 B-029, PP26 B-033,
	OP27 220-S-2, PP25 B-003,		PP26 B-049, PP26 B-058,
	PP25 B-035, PP25 B-037,		PP26 B-067, PP26 B-084,
	PP25 B-072, PP25 C-181,		PP26 B-089, PP26 C-020,
	PP25 C-202, PP25 C-244,		PP26 C-062, PP26 C-101,
	PP25 R-040, PP25 S-004,		PP26 C-102, PP26 C-151,
	PP25 S-206, PP26 B-036,		PP26 C-163, PP26 C-166,
	PP26 B-037, PP26 B-048,		PP26 C-215, PP26 C-216,
	PP26 B-049, PP26 B-052,		PP26 C-217, PP26 C-227,
	PP26 B-056, PP26 B-084,		PP26 C-228, PP26 C-229,
	PP26 B-089, PP26 C-008,		PP26 C-230, PP26 R-036,
	PP26 C-035, PP26 C-037,		PP26 R-039, PP26 S-015,
	PP26 C-146, PP26 C-150,		PP26 S-057, PP26 S-075,
	PP26 C-190, PP26 C-198,		PP26 S-155, PP26 S-157,
	PP26 C-215, PP26 C-216,		PP26 S-159, PP26 S-200,
	PP26 C-217, PP26 C-228,		PP26 S-228, PP26 S-269,
	PP26 C-232, PP26 S-006,		PP26 S-319, PP26 S-353,
	PP26 S-027, PP26 S-094,		SP24 203-4, SS24 418-S-3,
	PP26 S-160, PP26 S-178,		SS25 309-C-3, SS25 324-R-1,
	PP26 S-197, PP26 S-264,		SS25 509-C-3
	PP26 S-268, PP26 S-279,	LEE, SH	PP25 S-200
	PP26 S-302, PP26 S-355,	LEE, SJ	PP26 S-089
	SS24 322-S-1, SS24 514-S-3,	LEE, SK	SS25 416-R-2
	SS24 515-S-4, SS25 111-R-3,	LEE, T	PP25 B-067, PP25 C-062,
	SS25 206-R-2, SS25 325-C-4,		PP26 B-018, PP26 B-059,
	SS25 419-C-3, SS26 426-C-2,		PP26 B-083
	SS27 302-S-4	LEE, W	OP24 208-S-1, PP25 C-076,

	PP26 B-089, PP26 C-062, PP26 S-228, PP26 S-316, PS24 312-C-1, SS25 127-C-4 OP23 417-C-5, OP24 522-S-5, OP25 321-S-6, OP26 321-S-2, OP27 210-S-4, OP27 315-C-4, OP27 315-C-5, PP25 B-020, PP25 B-037, PP25 C-005, PP25 C-041, PP25 R-006, PP25 S-134, PP25 S-206, PP25 S-249, PP25 S-339, PP26 B-024, PP26 B-030, PP26 B-094, PP26 C-082, PP26 C-084, PP26 C-085, PP26 C-101, PP26 C-120, PP26 C-139, PP26 C-162, PP26 C-174, PP26 R-006, PP26 S-018, PP26 S-027, PP26 S-045, PP26 S-084, PP26 S-086, PP26 S-092, PP26 S-095, PP26 S-142, PP26 S-143, PP26 S-144, PP26 S-145, PP26 S-146, PP26 S-147, PP26 S-153, PP26 S-154, PP26 S-160, PP26 S-161, PP26 S-164, PP26 S-186, PP26 S-197, PP26 S-224, PP26 S-248, PP26 S-353, PS25 410-R-4, PS27 201-R-3, PS27 203-C-3, SS24 310-R-3, SS25 127-C-3, SS25 324-R-2, SS25 324-R-4, SS25 509-C-1, SS25 527-C-4, SS26 127-C-2 OP24 102-S-3		
LEE, Y		LEU, Y LEUNG, A	SS26 415-S-2 OP25 121-S-5, PP26 S-105, PP26 S-180, SS24 422-S-3, SS24 422-S-4 OP27 225-C-1, PP25 S-047, PP26 S-105 PP26 C-002 OP26 420-S-5, OP27 115-S-3, SS26 110-R-4 OP23 425-C-3, OP26 122-S-3, OP26 122-S-4, OP26 122-S-5, OP27 123-C-5 PP26 S-119 OP23 321-C-1, OP24 123-C-5, OP27 112-R-6, PP26 S-065 OP27 214-S-5, OP27 312-C-1, OP27 323-C-4, PP25 C-251 OP27 323-C-4, SS26 209-R-4 PP25 B-030 OP26 314-S-4 OP27 215-S-4, SS25 125-C-5, SS25 125-C-8 OP27 120-S-1 OP27 218-B-1, PP25 S-042 OP24 505-S-3 PP26 S-317 SS25 417-B-1 OP25 225-R-4 OP26 419-B-4 OP24 505-S-4, OP26 123-C-3, OP27 226-C-4, PP25 C-031, PP25 C-043, PP25 C-062, PP25 C-116, PP25 C-159, PP25 S-195, PP25 S-196, PP26 C-025, SS26 213-S-2 OP25 322-S-4, PP25 B-061 OP27 102-S-3 SS24 407-R-2 SP24 302-1 SS24 420-S-3, SS25 127-C-2 OP25 119-B-3, OP26 419-B-4, PP25 B-038, PP25 S-294 PP26 S-299 PP25 C-083, PP26 S-117 PP25 C-192, PP25 R-039, PP25 R-048, SS24 410-R-5 OP27 226-C-4, PP25 C-017, PP25 C-018, PP25 C-019, PP25 C-024, PP25 C-025, PP25 C-031, PP25 C-043, PP25 C-061, PP25 C-062, PP25 C-225 PP25 C-232, PP26 S-180 SS24 214-S-3, SS24 419-S-1 PP25 B-022, SS24 420-S-3 OP23 423-C-1, PP25 C-087, PP25 C-097, PP25 S-049, PP26 B-068, PP26 C-024, PP26 C-121, SP24 302-1, SS24 514-S-5 OP27 224-C-4 PP25 S-204, PP26 C-039 SS24 423-S-3
	PP25 C-157 OP23 324-C-1 SS25 210-C-3, SS26 212-R-3 SS24 109-R-2 OP27 320-S-2, PP25 R-022, PP25 S-218, SS25 519-S-1, SS25 519-S-2, SS25 519-S-3 PP25 C-184 OP24 523-S-5, OP26 314-S-2 PP26 S-271 SS26 407-R-1 OP26 211-R-4 SS26 109-R-1 OP25 420-S-1 OP27 116-S-4 PP25 C-053 PP25 S-284 OP23 313-C-3, OP25 222-C-3 PP26 C-049 OP26 119-B-4 SS25 108-R-4 SS26 409-R-1 OP26 419-B-3 PP25 C-012 PP25 S-032 SS24 308-R-3 PP25 C-229 OP26 420-S-6		
LEESON, GW		LEUNG, D LEUNG, DY LEUNG, E LEUNG, EM LEUNG, H LEUNG, J LEUNG, M LEUNG, S LEVIN, MJ LEVIN, S LEVITAN, C LEVKOFF, S LEWANDOWSKI, A LEWIN-EPSTEIN, N LEWIS, DC LEZHAVA, T LEZHNINA, Y LI, B LI, C	
LEGRAIN, S		LI, D LI, F LI, G LI, H LI, J LI, L LI, M LI, P LI, S LI, T	
LEI, F			
LEI, X			
LEIGH, L			
LEINO-KILPI, H			
LEJMAN, E			
LEKALAKALA-MOKGELE, E			
LELKES, O			
LEMMENS, LC			
LENERS, J			
LENG, SX			
LENKER, J			
LENNIE, TA			
LEON DE LA BARRA, S			
LEON, C			
LEONE, SS		LI, W LI, WW LI, X LI, Y	
LEONG, IY			
LEPERS, C			
LERASLE, F			
LERCH, M			
LERMAN, Y			
LERNFELT, B			
LESAGE-LAPOSTOLLE, A		LIABEUF, S LIANG, C LIANG, E	
LESKAUSKAITE, V			
LESCHENKO, I			
LETHIN, C			

LIANG, F	SS25 310-C-2		PP26 S-291
LIANG, J	OP24 103-S-6, PP25 S-294, PP25 S-300, SS24 113-S-1, SS26 126-C-2	LIN, K LIN, M LIN, O LIN, P LIN, S	PP26 S-206, SS26 116-R-4 PP25 C-060, PS25 307-R-3 PP25 C-196 OP27 227-C-5, PP25 S-112 PP25 C-036, PP25 S-029, PP25 S-204, PP26 C-081, PP26 C-145, PP26 R-010, PP26 R-032
LIAO, C	PP25 S-282, PS24 211-B-2		OP24 520-S-2, PP26 C-091, PP26 C-176
LIAO, M	PP25 S-198, PP25 S-282, PP26 C-003		OP27 226-C-4, PP25 C-017, PP25 C-019, PP25 C-031, PP25 C-043, PP25 C-061, PP25 C-225, PP26 C-025 OP26 106-S-2
LIAO, T	PP25 S-052		OP25 422-S-1, OP25 520-S-4, OP26 319-B-2, PP25 S-148, PP26 C-039, PP26 C-121, PP26 S-225, SP24 202-2, SP24 203-2
LIAO, W	OP24 505-S-4	LIN, T	OP26 102-S-1
LIAW, C	OP23 422-C-6		OP24 103-S-5
LIBERT, K	PP26 R-062		SS24 513-S-1
LICHTMAN, S	SS25 523-C-1, SS25 523-C-3	LIN, W	PP25 R-027
LIDDLE, J	PP25 C-104		SS24 509-R-1
LIE, D	OP27 123-C-6		OP23 426-C-2
LI-JUN, D	SP24 502-2		OP25 107-S-4
LIKAR, R	SS26 414-S-1, SS26 414-S-2	LIN, X	SP24 303-1
LIM, H	PP26 C-162, PP26 S-144, PP26 S-145	LIN, Y	SS26 423-C-4
LIM, HJ	OP27 207-S-5		OP25 117-B-3, PP25 B-016
LIM, I	PP26 B-030, PP26 B-092		OP23 426-C-1
LIM, J	OP26 123-C-2, OP27 318-B-3, PP26 B-033, PP26 B-035, PP26 B-042, PP26 B-047, PP26 C-032, PP26 C-086, PP26 C-087, PP26 C-151, SS24 126-C-3	LIN, Z LINCOLN, KD LINDBLOM, J LINDENBERG, J LINDSAY, E LINDSAY, L LING TAI, C LING, F LINH, P LINKOVA, N LIPAR, T LIPEROTI, R LIPS, P LIPSITZ, L LISK, C LIU, A LIU, B LIU, BA LIU, C	OP26 308-C-3 SS26 327-C-2, SS26 327-C-3 OP27 125-C-4 PP25 C-219, PP26 C-191 PP26 S-180 PP25 B-044, SS24 526-C-4 SS26 108-C-3 OP23 324-C-4, OP27 226-C-4, PP25 C-031, PP25 C-043, PP25 C-061, PP25 S-086, PP25 S-152, PP25 S-196, PP26 C-025, PS25 307-R-3 PP25 B-012, PP25 B-028 PP26 C-109 OP26 419-B-4 PP25 C-013 PP25 B-022, PP25 B-044 PP26 S-007 SS25 317-B-1 PP25 B-011, PP25 B-022, PS24 312-C-1, SS25 127-C-4, SS25 305-S-2 OP25 522-S-5, PP26 S-119 PP26 S-173, PP26 S-177, PP26 S-206, PP26 S-213, SP24 303-2, SS26 408-C-1 OP27 118-B-1, OP27 118-B-2, PP26 C-153, SS25 114-S-1, SS25 114-S-4 SS24 407-R-1, SS26 109-R-1, SS26 109-R-2
LIM, K	OP25 423-S-5		
LIM, M	OP24 103-S-3, PP25 B-003, PP26 S-282		
LIM, S	PP25 S-206, PP26 B-087, PP26 S-014, PP26 S-067, SS24 217-C-3		
LIM, Y	PP25 C-006, PP26 B-066, PP26 B-069, PP26 C-160, PP26 S-132, PP26 S-147, PP26 S-160, SS24 322-S-1, SS24 322-S-2, SS24 322-S-3		
LIMA RIBEIRO, SM	PP25 B-055		
LIMA, LG	PP25 C-101, PP26 C-089		
LIMA, NK	PP25 C-071, PP25 C-101, PP25 C-103, PP26 C-009, PP26 C-054, PP26 C-089, PP26 C-090, SS24 427-C-2		
LIMA-COSTA, M	SS26 212-R-2		
LIN, B	PP25 S-148	LIU, F	
LIN, C	OP27 226-C-4, PP25 C-017, PP25 C-018, PP25 C-019, PP25 C-024, PP25 C-025, PP25 C-031, PP25 C-043, PP25 C-061, PP25 C-062, PP25 C-225, PP25 S-118, PP25 S-148, PP25 S-368, PP26 B-064, PP26 C-025, PP26 R-031, PP26 S-085, SS26 127-C-1, SS26 226-C-2	LIU, G LIU, H LIU, I LIU, J LIU, JY LIU, K LIU, L	
LIN, CS	PP25 S-238	LIU, LW	
LIN, H	PP25 C-011, PP25 S-198, PP25 S-282, PP26 C-013, PP26 C-145	LIU, M	
LIN, I	PP26 C-176		
LIN, J	PP25 S-201, PP25 S-216, PP25 S-271, PP26 B-076, PP26 S-218, PP26 S-290,	LIU, S LIU, X	

MACINKO, J	SS26 212-R-2, SS26 212-R-4	MANCHANDA, S	OP27 222-C-5
MACKENZIE, C	PP26 R-060, PP26 S-341, SS24 314-S-2	MANCIONI, ES	PP25 C-125
MACKENZIE, L	SS24 109-R-2, SS24 109-R-3, SS24 109-R-4	MANCKOUNDIA, P	OP27 125-C-3
MACKERT, M	OP25 221-S-6, OP25 320-S-3	MANDRICK, K	SS25 313-S-1
MACKEY, DC	OP27 312-C-1	MANEEPONG, A	PP26 S-054
MACNEIL VROOMEN, J	SS24 524-C-4	MANFREDINI, V	PP25 S-026
MACNEIL VROOMEN, JL	SS24 524-C-2	MANGIN, D	SS24 227-C-3
MACNEIL, J	SS24 127-C-2	MANIWA, R	OP24 523-S-3
MACNEIL-VROOMEN, J	OP26 420-S-2	MANN, E	PP25 R-016, PP26 C-152
MACREZ, N	PP25 B-001	MANTHORPE, J	OP26 412-R-5
MADADY, M	PP25 S-024	MAO, W	SS26 126-C-4
MAEBA, R	SS24 326-C-1	MAO, Y	OP24 520-S-6
MAEDA, K	PP26 C-186	MARAS, AH	OP27 218-B-3, OP27 218-B-4
MAEDA, N	OP23 419-S-3, PP25 S-222	MARCELLAN, T	PP26 C-221
MAEDA, R	KL27 004-	MARCHESI, JC	PP25 C-103
MAEGUSUKU-HEWETT, TA	OP27 314-S-4	MARCHESI, JL	PP26 C-054
MAEHARA, K	PP25 C-129	MARCHIONDO, L	OP27 121-S-1
MAGGI, S	OP27 119-S-5	MARCHIONDO, LA	PP26 S-338
MAHAJAN, S	OP26 220-S-1	MARCOUX, L	OP27 104-S-1
MAHMOUDI, R	OP23 422-C-4, PP25 B-026, PP25 C-241, PP26 C-213, PP26 C-214	MARI, V	PP26 C-211, PP26 C-212
MAHONEY, C	PP25 S-055	MARIANI, J	PP25 B-005
MAIA RIBEIRO, EA	PP25 B-031	MARIANO DA ROCHA, LB	OP23 314-S-5, OP26 320-S-3, PP25 C-014, PP25 C-015, PP25 S-058
MAIA, FD	PP25 S-003	MARI-KLOSE, P	SS24 108-R-2
MAIER, A	SS25 310-C-4	MARIKO, O	PP25 S-142
MAIKNO, K	PP25 S-028, PP26 C-071	MARIKO, Z	PP25 S-142
MAILICK, MM	PP25 S-277	MARIN, B	PP26 S-271
MAIRE, F	OP25 222-C-2	MARIN, D	SS25 108-R-1
MAITY, B	PP26 B-060	MARIN, P	PP25 B-052, PP25 S-001
MAJEED, M	PP25 S-254, PP25 S-255	MARINO, F	OP27 125-C-3
MAK, HK	OP24 405-S-1	MARMOT, M	SS26 212-R-2
MAK, JC	PP26 C-079	MARQUES, F	PP25 S-265
MAKELA, M	OP26 324-C-1	MARQUES, L	PP25 S-044
MAKIMOTO, K	PP25 C-128, PP25 C-131, PP25 S-123	MARSH, H	PP25 R-005
MAKINO, K	PP25 C-190, PP25 S-034, PP25 S-043, PP25 S-056, PP25 S-057, PP26 S-052	MARSHALL, A	OP26 314-S-3, SS24 308-R-1, SS24 421-S-1
MAKISAKO, H	SS25 509-C-3	MARSHALL, L	OP27 122-C-5
MAKIZAKO, H	PP25 C-113, PP25 S-015, PP25 S-028, PP25 S-043, PP25 S-056, PP26 S-200	MARTEU, A	PP25 C-180
MAKLAKOVA, I	PP25 B-017, PP25 B-018	MARTIEN, S	OP24 521-S-1
MAKPOL, S	PP25 B-014	MARTIN, G	PP26 C-119
MALADRY, F	OP26 119-B-1	MARTIN, JH	PP26 C-196
MALAGOLI, A	OP25 420-S-5	MARTIN, M	PP26 R-052
MALDONADO, M	OP27 105-S-1	MARTIN, P	OP26 119-B-4, OP27 215-S-1, PP26 S-118, SS24 115-S-3, SS24 218-S-3
MALHOTRA, C	OP25 107-S-2, OP26 310-R-4, SS25 124-R-1	MARTIN, PHD, PR	PP25 S-279
MALHOTRA, R	OP25 107-S-2, OP26 310-R-4, SS25 502-R-4	MARTIN, W	OP27 112-R-3, OP27 119-S-2, SS24 419-S-2
MALLEA, P	PP25 C-059, PP25 C-180, SS26 226-C-4	MARTINEZ-ARNAU, F	PP26 C-207
MALLEN, CD	PP25 C-104	MARTINEZ-VELILLA, N	OP23 322-C-4, PP26 C-218
MALLERY, L	SS24 227-C-4, SS24 227-C-5	MARTIN-KHAN, M	OP23 421-C-3, OP27 123-C-6, OP27 127-C-1, PP25 C-187, PP25 C-195, PP26 C-157, PP26 C-179, SS25 516-R-3
MALOVINI, A	OP26 324-C-4	MARTINEZ-ARNAU, F	OP25 522-S-3
MALTAIS, M	PP26 C-023	MARTINEZ-VELILLA, N	PP26 C-209
MAMOLI, F	PP26 C-204	MARTIN-MATTHEWS, A	OP24 511-S-1
MANAF, ZA	OP26 123-C-5	MARUJEN, FB	PP25 S-220
MANAHAN, LT	OP25 120-S-1	MARUJO, JP	OP26 219-B-3
		MARUO, SJ	PP25 B-043, PP26 B-044, PP26 C-185
		MARUYAMA, M	PP26 R-060, PP26 S-341,
		MARUYAMA, N	
		MARZIALI, E	

	SS24 314-S-1, SS24 314-S-2, SS24 314-S-3	MATSUO, E	OP25 421-S-5, OP25 422-S-3, OP25 422-S-4, OP25 423-S-4
MARZOUK, S	PP26 C-014, PP26 C-015, PP26 C-201	MATSUO, J	PP25 C-233
MAS, A	PP26 C-112	MATSUO, M	PP25 C-039
MAS, MA	OP23 413-C-4, PP26 C-220	MATSUO, R	PP25 C-149
MASAFUMI, C	PP25 S-151	MATSUOKA, C	SS25 418-S-1
MASAKI, H	PP26 C-161	MATSUURA, M	OP25 117-B-4, OP25 119-B-2
MASAKI, K	SS24 115-S-2	MATSUZAKI, M	PP26 S-019
MASILAMANI, V	SS24 124-R-1	MATSUZONO, K	OP23 321-C-2, OP23 323-C-5
MASON, R	PP26 C-079	MATTA, J	OP25 219-B-3, SS25 427-C-3
MASRUKIN, SB	PP25 S-041	MATTHEWS, ST	PP26 C-053
MASTER OF GERONTOLOGY, X	OP26 421-S-1	MATTSON, M	PP25 B-005
MASTERS, S	OP27 113-S-5	MAULANA, M	PP25 S-041
MASUD, T	OP23 417-C-3, OP23 422-C-2, OP27 122-C-5, OP27 222-C-4, PP25 C-228	MAYAS, J	OP24 521-S-3
MASUDA, K	PP25 S-115, PP25 S-124, SS25 406-R-3	MAYER, H	PP25 S-100
MASUDA, S	PP26 S-320	MAYER, P	OP27 303-S-2
MASUI, Y	OP23 424-C-3, OP26 120-S-2, PP25 C-231, PP25 S-145, PP25 S-187, PP25 S-193, PP26 S-023, PP26 S-184, PP26 S-208, PP26 S-212, SS24 115-S-1, SS24 218-S-1, SS24 413-S-3	MAYO, N	OP25 219-B-3
MASUJIMA, M	PP25 S-009	MAYOUF, MA	OP24 103-S-2
MASUMOTO, K	PP25 S-194, PP25 S-243	MAZUREK, J	PP26 C-178
MATAKI, S	PP25 S-094	MCALLISTER, C	OP24 105-S-2
MATCHAR, DB	OP26 310-R-4, SS25 502-R-2, SS25 502-R-4	MCBRIDE, T	SS25 116-R-2
MATEJOVSKA KUBESOVA, H	PP25 C-137	MCCARTHY, B	PP25 S-125
MATEJOVSKY, J	PP25 C-137	MCCASLIN, R	OP24 105-S-2
MATHARAN, F	OP27 320-S-3	MCCAUL, K	OP27 227-C-3
MATHERS, J	SS25 213-S-1, SS25 213-S-2, SS25 213-S-3	MCCDONALD, L	OP24 106-S-4
MATHERS, JC	SS25 213-S-4	MCCONNELL, E	SS26 126-C-3
MATHIE, E	OP23 320-R-2	MCCONNELL, ES	SS26 126-C-3
MATHUR, A	SS26 316-R-2	MCCOY, K	PP25 S-055
MATIN, M	PP25 C-219, PP26 C-191	MCDANIEL, MA	OP27 319-C-4
MATOS, E	PP25 B-060	MCDONALD, B	SS25 526-C-1
MATSUBAYASHI, K	PP25 S-036	MCDONALD, L	PP25 S-254, PP25 S-255, PP25 S-328, PP26 R-060, PP26 S-341, SS24 314-S-4, SS25 115-S-1
MATSUDA, C	PP25 S-022	MCELHANEY, J	SS25 310-C-1
MATSUDA, H	PP26 S-073	MCELHANEY, JE	SS25 310-C-3
MATSUDA, M	PP25 R-033, PP26 S-073	MCGARRY, P	OP27 109-S-2
MATSUDA, T	OP26 219-B-3	MCINTOSH, B	PP25 S-244
MATSUDA, Y	PP26 S-073	MCKAY, H	OP23 319-S-2, SS26 424-R-4
MATSUI, M	PP25 C-124, PP25 C-227, PP25 S-179	MCKEE, KJ	PP25 S-308
MATSUI, T	PP26 S-029	MCKENZIE, C	OP25 117-B-1, OP26 119-B-5
MATSUI, Y	OP27 122-C-2, PP25 S-121	MCLACHLAN, AJ	PP26 C-053, PP26 R-043
MATSUKAWA, N	PP25 B-065	MCLACHLAN, S	OP23 414-C-3, OP23 414-C-4
MATSUKAWA, S	PP25 C-204	MCLAREN, L	OP27 222-C-3
MATSUMOTO, A	PP25 C-048	MCLAUGHLIN, J	PP26 R-030
MATSUMOTO, H	PP25 C-215	MCLEAN-VEYSEY, P	SS24 227-C-4
MATSUMOTO, K	PP25 R-024	MCLOUGHLIN, C	OP24 106-S-2
MATSUMOTO, M	PP25 S-309, PP26 S-304	MCLOUGHLIN, C	OP27 220-S-4
MATSUMOTO, N	PP25 S-331	MCMAHON, A	SS24 317-B-3
MATSUMOTO, Y	PP25 S-105	MCMULLIN, JA	SS24 324-S-1
MATSUMURA, Y	OP24 520-S-5, OP25 321-S-1, OP25 321-S-2, OP25 321-S-5, PP26 S-169	MCNAMARA, TK	SS24 514-S-3
		MCPHAIL, S	SS26 408-C-3
		MCRAE, SG	PP26 S-083
		MEADOWS, R	OP26 121-S-1
		MEAH, A	PP25 S-146
		MEANS, R	OP27 213-S-1, OP27 309-S-3
		MEDA-LARA, R	PP25 S-002
		MEDLOCK, S	OP27 126-C-4
		MEDRANO, C	PP25 C-067
		MEDRANO, M	PP25 C-067, PP26 C-113
		MEDVEDEV, D	PP26 S-359
		MEERSOHN, C	OP27 103-S-1
		MEESTERBERENDS, E	SS25 404-C-2

MEGRAUD, F	PP25 B-001	MIJNARENDS, D	SS26 224-R-3
MEHLSSEN, M	OP25 101-S-2, OP25 221-S-5	MIKANE, S	PP26 C-117
MEHRTALAB, P	OP27 104-S-2	MIKHAILOV, SS	PP25 C-003
MEHTA, KK	OP27 105-S-2, SS24 513-S-4	MIKHAILOVA, O	OP23 426-C-3, PP25 S-066
MEIJERS, J	SS25 326-C-2, SS25 404-C-1, SS26 224-R-2, SS26 224-R-3	MIKHALSKY, SA	PP25 B-015
MEIJERS, JM	SS26 224-R-1	MIKI, T	PP25 C-208
MEINOW, B	PP25 S-051	MIKOSIK, A	OP25 117-B-2
MEIRSON, M	OP23 413-C-1	MILES, P	OP27 314-S-4
MEKLI, K	OP27 315-C-2	MILHEM, D	PP26 S-074
MELANDER-WIKMAN, A	OP27 313-S-3, PP25 S-071	MILISEN, K	OP23 420-C-3, SS25 516-R-4
MELCHIORRE, MG	SS24 513-S-2	MILLER, D	SS24 214-S-3
MELE, C	SS24 408-R-3	MILLER, M	PP26 S-095
MELIS, R	OP23 420-C-5, OP25 119-B-1, SS24 124-R-4	MILLER, ST	SS26 408-C-1
MELLAH, S	SS26 213-S-3	MILLER, W	OP27 222-C-3
MELLSTROM, D	PP25 C-012	MILLOR, N	PP26 C-221
MELUZINOVA, H	PP25 C-137, PP26 C-050	MILMAN, S	SS25 125-C-1
MENABUE, G	OP25 420-S-5	MILOVIDOVA, O	OP27 113-S-3
MENDES DE LEON, CF	PP26 B-034	MILTE, C	OP27 113-S-5
MENDES, IM	PP26 S-292	MIN, B	SS25 108-R-2
MENDOZA RUVALCABA, N	PP26 S-201	MIN, J	PP25 S-005
MENDOZA-RUVALCABA, N	OP26 421-S-1, PP25 S-002, PP25 S-197, PP26 S-205	MIN, K	PP26 B-003, PS25 402-B-2
MENEC, V	PP25 S-147	MINAI, J	PP26 C-190
MENEGOTTO, I	PP25 S-227	MINANA, E	PP26 C-208
MENG, N	PP25 C-061, PP25 C-062	MINEMATSU, T	PP25 C-233
MENG, P	PP25 C-030, PP25 S-325	MINGUEZ, J	PP26 C-208
MENON, E	OP27 114-S-1	MINNIGALEEVA, GA	OP27 309-S-4, PP26 S-217
MERABIA, Y	OP27 125-C-1	MION, LC	SS26 408-C-1
MERCADANTE, EF	OP25 320-S-4, PP25 S-316	MIQUELON, P	OP27 104-S-1
MERCHANT, R	SS26 110-R-3	MIRANDOLA, A	OP27 218-B-1, PP26 C-171
MERKEL, S	OP25 221-S-4, PP25 S-067	MIRZA, R	PP25 S-254, PP25 S-255, PP26 R-060
MERLET, J	PP25 C-059	MISHRA, A	PP25 C-139
MESERI, R	OP23 326-C-1	MITCHELL, C	PP25 R-010
MESHCHANINOV, V	PP25 B-024, PP25 B-025, PP25 B-040	MITCHELL, W	OP26 210-R-2
MESSA, SP	PP25 B-047	MITNITSKI, A	SS26 425-C-4, SS26 425-C-5
MESSELIS, ED	OP24 102-S-4, OP25 220-S-4	MIU, D	OP23 323-C-6
MEYER, C	OP27 216-S-4, OP27 216-S-5, SS24 207-S-2	MIURA, H	OP27 223-C-4, PP25 C-038, PP25 C-156, PP26 C-069, PP26 C-186, PP26 C-199
MEYER, G	OP27 126-C-1, PP25 R-016, PP25 S-100, PP26 C-152, SS25 519-S-1, SS25 519-S-2, SS25 519-S-3	MIURA, M	PP25 S-217
MEYER, TD	SS25 213-S-4	MIYABE, Y	PP25 S-034, PP26 C-071, PP26 S-052
MEZIERE, A	OP23 323-C-4	MIYAKE, E	PP26 S-335
MICALEFF, J	PP25 C-142, PP26 C-119	MIYAKE, M	PP26 R-061
MICHAEL, F	PP26 R-013	MIYAMAE, F	PP26 S-055
MICHALSKI, A	PP25 B-069	MIYAZAKI, H	PS25 506-C-4
MICHE, M	OP26 421-S-3, PP26 S-339	MIYAZATO, Y	PP25 C-210
MICHEL, J	PS24 312-C-3	MIZUGAMI, T	PP25 S-330, PP25 S-333
MICHEL, O	PP25 C-132	MIZUMA, T	PP25 S-023
MICHELETTO, RD	PP26 C-054	MIZUMOTO, A	PP25 S-028, PP25 S-034, PP25 S-043, PP25 S-056, PP25 S-057, PP26 C-071, PP26 S-052
MICHELETTO, RF	PP25 C-103	MIZUNO, K	PP25 C-177
MIDLOV, P	OP27 123-C-4, PP25 C-056, PP26 C-047	MIZUNO, T	PP25 C-045
MIENO, M	OP27 122-C-1	MIZUOKA, T	PP25 S-129
MIENO, MN	SS25 317-B-2	MO, S	PP26 S-232, PP26 S-310
MIGNARDOT, J	OP23 318-C-3, OP23 422-C-3	MOELIONO, M	OP25 219-B-5
MIHAILIDIS, A	PP26 S-179	MOELLER, A	PP25 C-144
MIHAJLOVIC, WA	OP25 219-B-1	MOERTL, R	SS26 414-S-3
MIHO, H	PP25 S-335	MOFFAT, N	SS26 213-S-3
		MOFFATT, S	SS25 213-S-1, SS25 213-S-2
		MOGAMI, Y	PP25 C-182

MURATA, N	PP26 C-036	PP26 S-208, PP26 S-212,
MURAYAMA, H	OP25 421-S-5, OP25 422-S-3, OP25 422-S-4, OP25 423-S-4, PP25 S-326	SS24 218-S-1, SS24 413-S-3 PP25 S-305, PP26 S-028 PP26 S-169, PS24 201-R-2 OP27 320-S-4
MURAYAMA, S	PP25 B-068, SS24 517-B-4	PP26 R-020, PP26 R-025
MURAYAMA, Y	PP25 S-241	OP23 424-C-3, PP25 C-231
MURESAN, C	SS24 108-R-3	OP26 219-B-5, PS26 202-B-2
MUROHASHI, H	OP23 419-S-3, PP25 S-222, PP25 S-226, SS24 119-S-3	PP26 C-038 PP26 S-021 PP25 C-150 OP25 119-B-2, PP25 C-034, PP25 S-370 PP26 S-267
MUROHASHI, I	PP25 C-162	PP25 C-162, PP25 R-019, PP25 S-230, PP26 R-024
MURPHY, M	OP27 108-S-2	PP25 S-259, SS25 426-C-4 PP25 C-020 PP26 R-019
MURPHY, P	OP25 121-S-6	OP23 321-C-2, PP26 C-123 PS26 303-C-2
MUSCHOL, M	PS24 211-B-3	OP25 322-S-4 PP25 S-310 PP25 S-310, PP25 S-321 PP25 S-268
MUSSO, C	PP25 C-090	OP27 215-S-5, PP25 S-075 PP26 C-174
MUSSO, CG	PP25 C-089	OP24 405-S-5, OP24 425-C-1, PP26 S-041, PP26 S-062, PP26 S-141, PP26 S-167 PS24 512-C-2
MUTOMBO, PB	PP25 B-054	PP26 B-001 OP27 103-S-5, PP26 R-034, PP26 R-037
MYAKOTNYKH, V	PP25 B-025	OP27 111-S-1, PP26 R-017 PP25 S-277
MYER, T	SS25 213-S-1	SS26 111-R-2
MYERS, AM	PP26 C-130, PP26 S-138	OP27 216-S-2, PP25 S-025, PP26 C-042
MYSYUK, Y	PP25 R-027	PP25 C-015, PP25 S-058 PP25 S-250
MYUNG, S	SS24 409-C-4	OP27 211-S-1, OP27 303-S-2, OP27 314-S-4 PP25 S-071
NA, B	PP25 C-163	PP25 S-020
NA, C	PP26 S-057	PP26 S-284
NA, D	OP23 417-C-5, OP26 324-C-6, OP27 309-S-6	OP24 107-R-4 OP27 222-C-6 OP27 110-R-4
NA, H	PP26 B-017	OP27 323-C-2 PP26 S-100, PP26 S-101, PP26 S-116
NABESHIMA, Y	KL27 004-	OP25 106-S-3, OP25 512-S-3, OP27 209-S-2
NABIKA, T	PP25 B-054, PP25 S-061	PP25 C-241
NACHUM, A	OP26 421-S-2	OP23 314-S-4, OP24 521-S-4, OP26 314-S-3, OP27 315-C-2, SS24 308-R-1, SS24 421-S-1 PS24 211-B-2
NACU, R	OP23 424-C-1, OP27 122-C-6, PP26 C-100	PP26 S-355 PP26 S-199
NADIR, S	OP27 221-C-1, PP25 C-029, PP26 C-052	PP25 S-033, PP25 S-037 PP25 C-247, PP25 C-248,
NAEGELE, G	OP24 511-S-4, OP27 121-S-2, SS25 508-R-2, SS26 116-R-1, SS26 411-R-4	
NAGAE, H	PP25 S-009	
NAGAHATA, T	PP25 S-022	
NAGAI, M	PP25 R-021	
NAGAI, R	PP26 R-020, PP26 R-025	
NAGAI, Y	OP27 320-S-4	
NAGANATHAN, V	OP23 313-C-1, OP25 219-B-2, OP27 227-C-2, OP27 315-C-1	
NAGAO, T	PP25 S-156	
NAGASAKA, I	OP25 322-S-4	
NAGASAKA, Y	PP26 S-021	
NAGATA, S	PP25 S-288	
NAGAYA, Y	PP25 S-092, PP25 S-122, PP25 S-217	
NAGLIE, G	SS26 108-C-3	
NAHARCI, I	PP25 C-049	
NAHARCI, MI	PP26 C-055	
NAIDOO, I	PP26 C-182	
NAIDOO, N	OP27 114-S-1	
NAIDU, G	PP25 C-091	
NAIDU, K	PP25 C-023	
NAITO, H	PS26 202-B-2	
NAITO, T	PS25 506-C-2	
NAJA, M	OP27 224-C-4	
NAKAGAMI, G	PP25 C-233, PP26 C-203	
NAKAGAWA, T	OP26 120-S-2, PP25 S-182, PP25 S-187, PP25 S-193, PP26 S-023, PP26 S-184,	
NAKAHARA, J		
NAKAI, R		
NAKAI, S		
NAKAJIMA, N		
NAKAMA, C		
NAKAMOTO, H		
NAKAMURA, A		
NAKAMURA, C		
NAKAMURA, E		
NAKAMURA, K		
NAKAMURA, S		
NAKAMURA-THOMAS, H		
NAKANISHI, M		
NAKANO, H		
NAKANO, K		
NAKANO, Y		
NAKASHIMA, N		
NAKASUJI, Y		
NAKATA, M		
NAKATA, T		
NAKATSUKASA, T		
NAKAYAMA, N		
NAM, C		
NAM, H		
NAM, J		
NAM, R		
NAM, S		
NAM, Y		
NAMKUNG, E		
NANCARROW, S		
NARAYANAN, V		
NASCIMENTO, NR		
NASERI, A		
NASH, P		
NASLUND, A		
NASU, K		
NATALIE, NS		
NAUMOVA, V		
NAVANATHAN, S		
NAVARRO, J		
NAVINATH, M		
NAWAI, K		
NAYAR, S		
NAZEYROLLAS, P		
NAZROO, J		
NELSON, JF		
NELSON, R		
NELSON-BECKER, H		
NEMOTO, M		
NEO, L		

NERETTI, N	PP25 C-249	NISHIGUCHI, S	PP25 R-009
NERI, AL	SS25 217-B-2	NISHIKAWA, M	PP25 C-070, PP26 C-180
NEUFELD, E	SS24 219-S-1		OP27 223-C-4, PP25 S-281,
NEUWIRTH, C	PP26 C-159		PP26 C-069
NEVEN, L	PP25 C-080	NISHIMORI, T	PP25 S-319
NEVILLE, C	OP24 520-S-4	NISHIMOTO, Y	PP26 R-008, PP26 R-009
NEVRIANA, A	OP26 121-S-2	NISHIO, K	PP26 C-037
NEWMAN, A	PP26 S-203	NISHIO, M	PP26 S-306
NEWMAN, AB	OP27 125-C-4	NISHIOKA, S	PP26 B-041
NEYENS, J	OP25 422-S-2, SS24 217-C-4	NISHITA, Y	PP25 C-160, PP25 S-081
NG, C	SS26 224-R-1, SS26 224-R-2	NISHIWAKI, S	PP26 R-008, PP26 R-009
NG, P	SS24 124-R-1	NISHIZAWA, T	PP25 S-083
NG, R	PP25 S-276	NISSEN, L	PP25 R-010
NG, S	PP25 S-353	NITZ, J	SS25 110-R-3
NG, T	OP27 323-C-4, PP26 S-285	NITZAN KALUSKI, D	OP26 320-S-4
	OP23 324-C-1, OP24 103-S-3,	NO, J	PP25 B-051, PP26 B-072
	OP25 105-S-3, OP25 120-S-5,	NOBUHARA, H	PP25 C-162
	OP27 223-C-1, OP27 224-C-1,	NODA, K	PP25 S-156
	OP27 226-C-1, PP25 S-149	NOEL, N	PP25 B-005
	SS25 310-C-2	NOFUJI, Y	OP25 421-S-5, OP25 422-S-3,
NG, TP	OP24 412-S-3		OP25 422-S-4, OP25 423-S-4
NG, TT	PP25 S-131	NOGAKI, H	PP26 C-114
NG, WK	OP27 114-S-1, OP27 214-S-5	NOGUEIRA, EL	OP26 320-S-3, OP27 319-C-2
NG, Y	PP25 C-192	NOH, E	SS25 306-R-3
NGAI, W	PP26 S-172	NOH, H	OP27 115-S-4
NGAN, W	OP23 417-C-2	NOH, K	OP27 318-B-6
NGANDU, T	PP26 B-033	NOIMONTEE, W-	OP27 113-S-2
NGUYEN, CT	OP27 112-R-5, PP26 R-042	NOIMONTREE, W	PP26 S-127
NGUYEN, D	PP26 B-033	NOLAN, M	PP25 R-005
NGUYEN, KT	OP27 108-S-3	NOMOTO, S	PP26 R-050
NI LEIME, A	PP26 C-093	NOMURA, H	SS24 206-C-3
NI, X	OP27 206-S-1	NOMURA, T	PP25 S-035
NICHOLAS, N	SS25 524-R-2	NONAKA, K	PP25 S-241, PP25 S-309,
NIEBOER, ME	OP25 221-S-5		PP25 S-326, PP26 S-304
NIELSEN, BK	OP23 325-C-3, OP23 421-C-1,	NONAKA, T	PP25 C-128
NIELSEN, O	PP25 C-152	NOOR, IM	OP23 313-C-5
	PP25 C-027	NOOREDDINI, H	PP26 C-236
NIELSEN, OB	OP26 221-S-1	NOORI, A	PP26 C-191
NIELSEN, SS	PP26 R-054	NOORI, AJ	PP25 C-219
NIEUWBOER, M	OP25 121-S-4	NOR AKAHBAR, S	OP27 120-S-4
NIGAM, RK	SS24 407-R-4	NORDIN, N	PP25 S-275, PP26 C-181
NIGEL, E	OP24 522-S-2, PP25 S-177	NOREDDINI, H	PP25 C-253
NIGRITINOU, M	PP25 S-285, PP25 S-289,	NORMAN, P	OP27 227-C-3
NIKURA, M	PP25 S-312	NORO, A	OP26 324-C-1
	PP25 C-209	NOROOZIAN, M	PP25 C-143
NIIZATO, K	PP25 C-065, PP25 S-113,	NORTON, P	PP26 R-051
NIJPELS, G	SS26 407-R-1, SS26 407-R-2,	NOURHASHEMI, F	PP25 C-243, SS25 108-R-4
	SS26 407-R-3	NOVELLA, J	OP23 422-C-4, PP25 B-026,
	PP26 S-024		PP25 C-241, PP26 B-006,
NIKAIDO, C	OP27 209-S-1		PP26 C-213, PP26 C-214
NIKOLI, K	SS25 507-B-3	NOWACZYNSKI, M	SS24 110-R-1, SS24 110-R-3
NILSSON, PM	PP26 R-038, PP26 R-055	NOWOSSADECK, S	SS26 325-C-2
NINA, L	SS26 423-C-4	NOWSON, CA	OP25 222-C-4
NINH, P	PP25 C-084	NUGRAHA, DA	PS25 405-S-2
NINK-GREBE, B	OP26 119-B-2	NUNES, DP	OP27 321-C-3
NIQUET-LERIDON, C	PP26 S-309	NURGIYATNA, N	OP27 313-S-5
NISEN, L	OP25 421-S-5, OP25 422-S-3,	NURGOZHIN, T	PP26 S-049
NISHI, M	OP25 422-S-4, OP25 423-S-4,	NUTTAMONWARAKUL, A	PP25 B-009, PP25 B-050
	PP25 S-241, PP25 S-326,	NWATCHOK, J	PP25 R-013
	PP26 R-014	NYAMJAV, Z	OP23 324-C-3, OP26 120-S-4
NISHIDA, E	PP26 B-040, PP26 B-041	NYBERG, L	PP25 S-071
NISHIDA, Y	PP25 B-064, PP25 C-074	NYGARD, L	PP26 S-179
NISHIGAKI, M	OP27 214-S-1, OP27 214-S-2,	NYUNT, M	OP25 105-S-3, OP27 226-C-1,

NYUNT, MZ	PP25 S-149	OHGANE, A	OP27 210-S-3
NYUNT, S	OP23 324-C-1, OP27 223-C-1	OHGI, S	PP25 B-063, PP26 C-187
NYUNT, SZ	SS25 310-C-2	OHI, G	PP25 C-209
NZEAGWU, OC	OP25 120-S-5, OP27 224-C-1	OHISHI, M	OP23 424-C-3, PP25 B-053, PP25 C-231
O'CONNOR, ML	PP25 C-216		PP26 C-098
OAKES, S	OP27 310-S-5, OP27 314-S-2	OHKUBO, T	PP25 S-034, PP26 C-071
OAKES, SL	PP25 C-221	OHNISHI, H	PP25 C-098
	SS26 225-C-1, SS26 225-C-4, SS26 307-C-4	OHNUMA, T	OP25 227-C-1, OP25 227-C-4, PP25 C-148, SS24 126-C-1
OBATH, T	OP25 104-S-6	OH-PARK, M	PP26 C-174
OBERG, P	SS24 323-S-1, SS24 323-S-2		PP26 C-223, PS25 307-R-4
OBOT, D	PP26 S-349	OHRR, H	PP25 C-048, PP25 C-156
O'BRIEN, J	OP27 125-C-6	OHRUI, T	PP25 C-012
OBUCHI, S	PP25 S-145, PP26 C-185	OHSHIMA, H	PP26 C-186
OBUCHI, SP	SS24 223-S-1	OHSSON, C	PP26 C-186
OBUKHOVA, LF	PP26 S-190	OHTA, H	SS26 216-R-2
OBUKHOVA, OB	PP26 S-190	OHTSUKA, R	PP25 C-039
OCHIAI, K	PP25 B-065, PP26 B-019	OHWA, M	OP26 319-B-3, PP26 B-050
O'CONNELL, S	OP25 222-C-4	OHWATARI, T	OP23 419-S-3, PP25 S-222
O'CONNOR, D	OP24 105-S-4, OP26 310-R-1, PP26 S-278	OHYAMA, K	SP26 301-3
	OP27 307-S-5	OIDA, M	PP25 S-274
O'CONNOR, DL	PP25 S-247	OJIMA, T	OP23 425-C-2, PP25 C-207
O'CONNOR, M	PS26 105-S-1, SS26 315-S-1	OKA, M	OP25 321-S-2
O'CONNOR, M- ODA, K	PP26 S-012	OKABE, E	PP26 R-023
ODERA, K	OP26 219-B-4, OP27 318-B-1	OKADA, A	PP26 R-002, PP26 R-003
ODOR, K	OP27 306-S-4, PP25 S-352	OKADA, K	PP25 S-243
OGANOV, AM	OP24 123-C-4	OKADA, N	PP25 S-312
OGATA, A	PP25 S-092, PP25 S-122, PP25 S-217	OKADA, S	PP25 C-141, PP26 C-036
	OP26 122-S-2	OKAMI, R	OP27 210-S-3
OGATA, Y	OP27 126-C-2	OKAMOTO, E	PP26 R-004
OGAVU, JG	OP26 324-C-2	OKAMOTO, M	OP27 214-S-1, OP27 214-S-2, PP25 R-009, PP26 C-202
OGAWA, K	OP26 120-S-2, PP25 S-187, PP25 S-193, PP26 S-184, PP26 S-208, PP26 S-212, SS24 413-S-3	OKAMOTO, N	PP25 S-083
OGAWA, M	OP26 219-B-3	OKAMOTO, Y	PP25 S-281
	PS25 405-S-1, PS25 405-S-5, SS25 224-R-1, SS25 224-R-2	OKAYAMA, S	PP25 S-037
OGAWA, S	OP23 419-S-1, OP27 310-S-3, SS25 414-S-2	OKAYASU-KIMURA, M	PP26 C-223
OGAWA, T	PP26 S-245	OKI, N	SS24 414-S-2
	PP25 C-094	OKINAGA, S	PP25 C-219, PP26 C-191
OGG, J	OP23 424-C-3, PP25 C-231	OKOCHI, J	PP26 S-023
	PP26 C-018, PP26 S-032	OKOLI, A	PP25 S-083
OGLAK, S	PP25 B-051, PP26 B-046, PP26 B-072	OKUBO, H	PP25 S-033, PP25 S-037, SP25 315-2
OGUMA, Y	PS24 512-C-2	OKUBO, S	PP25 S-272
OGURO, R	PP25 S-252, PP25 S-262, SS26 115-S-4	OKUBO, Y	PP26 S-223
OH, B	PP25 R-007, SS26 422-C-1	OKUMIYA, K	PP25 S-036
OH, C	PP26 S-110	OKURO, M	PP25 C-147
	PP25 S-160, PP25 S-361, PP25 S-362	OKUYAMA, S	PP26 S-156
OH, D	OP26 221-S-5, PP25 S-350, PP26 C-076, PP26 C-097	OLAI, L	PP25 C-183
OH, H	PP26 C-225	OLAISON, A	OP24 101-S-4, SS24 410-R-2
	OP27 209-S-5, PP26 S-094, PP26 S-268	OLBERMANN, E	SS25 508-R-2
OH, J	PP25 C-252, PP25 S-094, PP25 S-126, PP25 S-138	OLDE RIKKERT, M	OP23 321-C-3, OP23 420-C-5, OP25 119-B-1, PP26 R-054, SS24 124-R-4
OH, K	PP25 S-241		PS24 501-R-2
OH, M		O'LEARY, B	PP25 C-001
OH, S		OLEKSYUK, I	PP25 S-329
OH, T		OLIVEIRA, AM	OP23 325-C-4
OH, Y		OLIVEIRA, CB	PP26 C-009
		OLIVEIRA, EB	PP26 C-210
OHARA, Y		OLIVIER, B	SS25 316-R-2
		O'LOUGHLIN, K	OP25 225-R-2, OP27 311-S-2, SS26 124-R-3
OHBA, H		OLPHERT, W	

OLSSON MOLLER, U	PP25 C-056, PP26 C-047	OUCHI, Y	OP23 323-C-1, OP24 123-C-6,
OMAHONY, S	OP27 224-C-5		OP26 419-B-5
OMELYANCHUK, L	SS25 217-B-5	LOUDART, J	PP26 C-214
OMER, I	PP25 C-167, PP25 C-174,	OUDEWATER, M	PP26 S-326
	PP26 C-105	OZAKI, M	PP25 C-048
OMORI, Y	PP25 C-150, PP26 C-092	OZANNE, E	SS26 216-R-3
OMOTE, Y	PP26 C-123	OZANYAN, K	OP27 313-S-5
ONDER, G	OP26 211-R-6, OP26 308-C-3,	OZAWA, N	PP25 C-153, PP25 C-154
	SS24 113-S-3, SS25 327-C-1,	OZTURK, E	OP27 303-S-4
	SS25 327-C-2, SS25 327-C-3,	P S, Y	PP25 S-133
	SS25 327-C-4, SS26 301-C-3	PAAK, BH	OP25 222-C-5
O'NEILL, P	OP26 103-S-3	PACCAGNELLA, O	OP26 113-S-6, SS25 210-C-2
ONEN, F	SS24 226-C-1	PACHANA, NA	PS24 305-S-4
ONEN, S	SS24 226-C-2	PADMANABHAN, R	PP26 C-219
ONGA, K	OP26 319-B-3	PADOVAN, P	PP26 C-089
ONISHI, S	OP23 425-C-2, PP25 C-207	PADOVAN, PR	PP26 C-090
ONO, K	PP26 S-056, PP26 S-230	PAGENOTTO, M	OP25 320-S-4, PP25 S-316
ONOGI, Y	PP25 B-041	PAGNIEZ, C	PP25 C-119, PP25 C-120
ONOSE, G	PP25 C-167, PP25 C-174	PAI, M	SS26 226-C-2
ONOSE, L	PP25 C-167, PP25 C-174	PAIK, D	PP26 B-094
ONWUTEAKA-PHILIPSEN, BD	OP27 115-S-2	PAIK, N	OP26 123-C-2, PP26 C-086,
OOSHIRO, H	PP25 S-121		PP26 C-087, PP26 C-151
OPARA, R	PP25 S-352	PAIK, S	PP25 S-206
OPIE, JM	SS26 409-R-3	PAIXAO JR., CM	PP26 C-027
OPPENHEIMER, M	OP27 308-S-1	PAKGOHAR, M	OP27 320-S-5
ORIMO, K	SS24 414-S-3	PALM, R	OP23 313-C-4, OP25 520-S-6
ORISTRELL, J	SS24 308-R-3	PALMER, MH	SS26 422-C-1, SS26 422-C-2
O'ROURKE, S	OP26 123-C-4, PP25 C-051	PALTINEANU, B	PP26 C-100
ORPIN, P	OP24 107-R-3	PAN, L	OP26 220-S-2, PP25 S-098
ORRUNG WALLIN, A	PP25 S-221	PANG, EC	PP25 S-213
ORSI, F	OP25 420-S-5	PANG, M	OP27 214-S-5
ORTIZ, G	PP25 S-002	PANNI, PG	PP25 C-014
ORTIZ-MARIN, J	PP25 S-347	PANOURGIA, MP	OP26 324-C-4, PP26 C-204
ORY, M	OP25 121-S-3, SS25 208-R-1	PANOV, D	OP24 123-C-3, OP26 221-S-2
ORY, MG	OP27 215-S-1	PAOKANHA, R	PP26 S-081
OSADA, H	PP25 C-182, PP25 S-070,	PAPAIOANNOU, A	SS26 125-C-1, SS26 125-C-3
	PP25 S-274	PAPANTONIOU, G	OP24 522-S-2, PP25 S-177
OSAKA, K	PP26 C-199	PARDASANI, M	OP26 210-R-3
OSAMURA, YR	PP25 B-070	PARDASANI, MP	OP25 105-S-1
OSHIMA, H	OP26 324-C-2	PARGAMENT, K	OP24 522-S-1
OSHIMA, K	PP25 C-209	PARIKH, H	OP26 319-B-2
OSHIMA, S	PP26 S-243	PARIS, M	OP27 205-S-5, OP27 207-S-4,
OSHITA, Y	PP26 S-318		PP25 R-003
OSIEWACZ, HD	PS24 211-B-3	PARIS-MACKAY, D	SP26 301-4
OSORIO, P	OP27 103-S-1	PARK, A	OP27 109-S-1
OSPRIAN, I	SS26 414-S-4	PARK, B	SS24 422-S-2
ØSTBYE, T	OP25 107-S-2, SS25 502-R-4	PARK, C	OP24 102-S-5, OP26 319-B-6,
OSTELO, R	OP27 112-R-2		OP27 108-S-5, OP27 206-S-6,
OSTERBERG, T	PP25 C-037		OP27 318-B-5, PP26 B-020,
OSTERIA, TS	SS25 502-R-3		PP26 B-045, PP26 B-061,
OSTROUKOV, V	SS26 423-C-9		PP26 C-019, PP26 S-170,
OSUKA, Y	PP25 S-033, PP25 S-037		PP26 S-280, SS25 208-R-2,
OSWALD, F	OP26 421-S-3, SS24 424-S-2		SS25 526-C-5
OTAGA, M	PP25 S-223, PP25 S-260	PARK, D	OP26 319-B-6, OP27 318-B-5,
OTERO, L	PP25 C-067		PP26 B-020, PP26 B-043,
OTHMAN, S	PP26 C-041, SS24 124-R-1		PP26 C-222, PP26 S-002,
OTOGURO, C	PP26 S-056		SP24 301-3
OTOSAKA, K	OP26 122-S-2	PARK, E	OP26 321-S-4, PP25 S-290
OTSUKA, K	PP25 S-036	PARK, H	OP26 119-B-6, OP26 324-C-6,
OTSUKA, R	PP25 C-160		PP25 B-051, PP25 C-107,
OTXOTORENA, M	OP27 314-S-3		PP25 C-113, PP25 S-015,
OU, H	PP25 C-085		PP25 S-236, PP26 C-160,
OU, Q	PP25 B-011		PP26 R-044, PP26 S-057,

	PP26 S-171, PP26 S-200, SS24 214-S-1, SS24 322-S-4, SS25 409-C-3, SS25 509-C-3	PARKER, B PARKER, C PARKER, S PARKER, SG PARKINSON, L	PP26 S-324 OP27 127-C-3 SS24 510-R-2 PP25 R-005, SS26 111-R-2 OP23 319-S-5, OP24 523-S-2, OP26 310-R-3, SS24 109-R-2, SS25 126-C-4, SS26 110-R-4 OP23 314-S-1 OP24 521-S-3 PP25 B-030 OP27 211-S-6 PP25 S-161 OP23 325-C-1, OP27 216-S-1 OP26 101-S-1 SS25 108-R-1, SS25 108-R-4 SS25 217-B-3 OP27 125-C-4 PP25 C-234 OP23 423-C-1 PP26 S-119 OP27 216-S-1 OP24 102-S-2 OP26 122-S-4 PP26 R-004, PS26 206-R-3 PP26 C-113 PP25 C-157, PP25 C-234 PP26 C-021 SS25 310-C-1 PP25 R-050 OP25 219-B-3, SS24 116-C-1, SS24 116-C-4 PP26 S-215 OP27 119-S-5 SS26 326-C-3 SS26 307-C-2 OP27 222-C-6, OP27 224-C-5 OP27 126-C-5, OP27 226-C-5, OP27 323-C-3, PP26 C-196 SS25 326-C-4 OP27 120-S-2, PS27 204-R-2, SS25 316-R-3, SS25 510-R-3, SS25 510-R-4 OP24 520-S-4 OP27 319-C-2 OP27 315-C-2 PP25 C-194, PS24 312-C-1, SS25 127-C-4, SS25 226-C-4 PP26 S-325 OP25 104-S-2, PS27 301-R-6 PP25 B-026 OP27 120-S-3 PP26 C-116 SS24 125-C-2 OP24 102-S-1 PP25 C-109 OP27 111-S-3, SS25 214-S-2 OP27 320-S-3 SS25 109-R-3, SS26 109-R-3 PP26 C-059, PP26 S-250 PP26 C-209 PP26 C-207 OP23 417-C-4, OP27 321-C-2, PP26 C-235
PARK, I PARK, J	OP27 125-C-5, PP26 S-136 OP23 424-C-5, OP25 122-S-3, OP26 319-B-4, OP27 208-S-4, PP25 B-003, PP25 B-035, PP25 C-106, PP26 B-001, PP26 B-004, PP26 B-017, PP26 B-020, PP26 B-045, PP26 B-048, PP26 B-049, PP26 B-075, PP26 B-094, PP26 C-004, PP26 C-099, PP26 C-125, PP26 C-126, PP26 C-127, PP26 C-128, PP26 C-132, PP26 C-137, PP26 C-232, PP26 S-025, PP26 S-057, PP26 S-091, PP26 S-113, PP26 S-114, PP26 S-142, PP26 S-146, PP26 S-301, PS24 212-C-4, SP25 301-3, SS24 119-S-4 OP23 323-C-2, OP25 218-S-1, OP25 322-S-4, OP27 106-S-1, OP27 206-S-6, PP25 B-072, PP26 B-011, PP26 B-023, PP26 B-088, PP26 C-072, PP26 C-118, PP26 C-162, PP26 R-012, PP26 S-027, PP26 S-107 PP25 S-181 OP26 319-B-6, OP27 102-S-5, OP27 318-B-5, PP25 R-015, PP26 B-020, PP26 B-045, PP26 B-089, PP26 C-018, PP26 C-048, PP26 C-115, PP26 C-162, PP26 C-165, PP26 S-011, PP26 S-071, PP26 S-077, PP26 S-188 OP24 107-R-6, OP24 505-S-1 PP25 R-017 KL24 001-1, OP26 319-B-4, OP27 107-S-1, OP27 112-R-5, PP25 B-027, PP25 B-036, PP25 S-160, PP26 B-015, PP26 B-016, PP26 B-021, PP26 B-048, PP26 B-049, PP26 B-057, PP26 B-088, PP26 C-102, PP26 R-042, PP26 R-044, PP26 S-004, PP26 S-027, PP26 S-076, PP26 S-149, PP26 S-247, PP26 S-311, PP26 S-312, PP26 S-313, SS24 217-C-1, SS25 210-C-4, SS25 214-S-3, SS25 518-S-2, SS26 422-C-2 OP25 512-S-1, OP26 319-B-2, OP27 206-S-6, OP27 304-S-6, PP25 C-005, PP26 C-062, PP26 S-133, PP26 S-134, PP26 S-356, SP24 302-4, SS24 322-S-1, SS25 113-S-3 SS24 526-C-4		
PARK, K		PARMELEE, P PARMENTIER, FB PARRINO, J PARROTT, K PARROTT, KR PASANEN, M PASINATO, MM PASQUI, V PASYUKOVA, EG PATEL, K PATERON, D PATERSON, J PATHAMMAVONG, R PATIL, R PATRAO, M PAU, PP PAUL, G PAULINO, M PAUTAS, E PAVLOVA, T PAWELEC, G PAXTON, R PAYETTE, H	
PARK, LS PARK, M		PAYKKONEN, K PEDERSEN, N PEDERSEN, NL PEE, L PEEL, N PEEL, NM	
PARK, N PARK, P PARK, S		PEETERS, B PEI, X	
		PEINE, A- PENA, GT PENDLETON, N PENG, L	
		PENHALE, B PENHALE, BL PENNAFORTE, J PERALES, J PERE, J PEREIRA, S PEREIRA, G PEREIRA, LS PEREK-BIALAS, J PERES, K PEREYRA, RE PEREZ, C PEREZ-GINER, RA PEREZ-ROS, P PEREZ-ZEPEDA, M	

PERI, K	SS25 526-C-2, SS25 526-C-3	PINAR, R	PP25 C-173, PP25 C-211, SS24 124-R-2
PERKINS, J	OP25 120-S-6	PINGPING, Z	PP25 S-142
PERLS, T	SP25 412-1, SS24 125-C-2, SS24 125-C-4, SS24 125-C-5, SS25 125-C-8	PINHEIRO, JE	SS24 125-C-2
	SS24 316-C-3	PINTAK, I	PP26 R-046
PERRACINI, M	SS24 316-C-3	PINTER, G	SS26 414-S-1, SS26 414-S-2, SS26 414-S-5
PERREAULT, K	PP25 C-026		PP26 C-067
PERRET-GUILLAUME, C	OP27 125-C-3	PION, CH	PP26 S-126
PERREY, S	SS25 313-S-1	PIPHATVANITCHA, N-	PP26 B-009
PERRIN, A	PP25 C-243	PIRES, N	OP26 324-C-4, PP26 C-204
PERRY, M	SS24 124-R-4	PISTARINI, C	SS24 514-S-3
PERSENIUS, M	PP25 C-183	PITT-CATSOUPHES, M	OP27 310-S-1
PERWAIZ, A	PS26 206-R-1	PIZZI, M	SS26 126-C-2
PES, G	OP27 215-S-6, PP26 C-183, SS25 125-C-6	PLASSMAN, B	SS26 126-C-1
	SS25 125-C-8	PLASSMAN, BL	PP25 S-170
PESS, G	PP25 C-071, PP25 C-103, PP26 C-054	PLIAKOS, C	OP24 521-S-5
PESSANHA, FP	PP26 C-054	PLISCHKE, H	PP25 C-245, PP25 S-336, PP26 C-068, PP26 C-188, PP26 C-226
PETAKOSKI-HULT, T	OP23 420-C-4	PLOTKOWSKI, L	PP25 S-147, SP26 301-1, SP26 301-4
PETCHPRAPAI, N	OP25 107-S-1, PP25 S-014		SS25 217-B-1, SS25 217-B-6
PETERSEN, SG	OP25 122-S-6, OP26 221-S-1	PLOUFFE, L	PP25 C-184
PETIT, P	SS26 226-C-4	PLYUSNINA, E	PP25 C-119, PP25 C-120
PETRAKIS, IE	PP25 C-042, PP26 C-029	PODER, U	OP27 313-S-3
PETRASH, MD	OP23 314-S-2	PODVIN, J	SS24 216-C-2, SS25 424-R-3
PETRELLA, R	OP27 222-C-2	POHL, P	PP26 B-031
PETROVIC, M	SS26 301-C-2	POI, P	OP25 521-C-2
PFISTERER, K	PP26 S-138	POI, PJ	PP26 C-050
PFRIMER, K	PP25 C-103, PP26 C-054	POIRIER, P	OP25 122-S-1, OP25 122-S-2
PHAM, T	SS24 110-R-3	POLCAROVA, V	PP25 C-050
PHANPHUECH, P	PP26 S-081	POLIAKOV, OA	PP26 C-033
PHAWINRUM, K-	PP26 S-115	POLOWAY, BS RN, A	SS24 214-S-2
PHILIP, I	SS24 124-R-4	POLYAKOV, VI	PP25 S-032
PHILIP, J	OP23 414-C-3, OP23 414-C-4	POLYARUSH, N	OP27 215-S-1
PHILIPPE, R	SS26 226-C-2	PONNUSWAM, I	PP26 S-118, SS24 115-S-3, SS24 218-S-3
PHILLIPS, AC	PS24 204-R-1	PONS-PEYNEAU, C	PP25 C-228
PHILLIPS, J	PS24 501-R-1	POON, L	PS26 105-S-2, SS26 315-S-2
PHILLIPS, L	PP25 S-087	POON, LW	PP26 S-137
PHILLIPSON, C	OP27 109-S-2, SS24 419-S-4, SS26 218-S-1, SS26 411-R-3		PP26 C-236
	SS24 120-S-3	POON, MH	PP25 C-140
PHILLIPSON, CR	OP23 420-C-5, PP25 C-172, PP25 C-173, SS24 124-R-1, SS24 124-R-2	POON, W	OP25 121-S-1
PHILP, I	OP23 320-R-4	POPIJAN, M	OP26 314-S-4
	OP24 412-S-3	PORHASHEM, Z	OP27 126-C-5, PP25 R-010
PHINNEY, A	OP23 421-C-4	POROCK, D	OP27 215-S-6, PP26 C-183, SS25 125-C-6
PHUA, K	PP25 C-059, SS26 226-C-4	PORTEGIJS, E	PP25 C-165
PHUAH, M	OP27 227-C-1	PORTERFIELD, S	PP26 C-017, PP26 C-021
PIANO, J	PP25 B-011	POUDEL, A	OP23 424-C-1, OP27 122-C-6, PP26 C-100, PP26 C-193, SS24 308-R-3
PIANTADOSI, C	PP26 C-108, PP26 C-109, SS25 209-C-4	POULAIN, M	OP23 424-C-1, PP26 C-100
PIAO, J	SS24 418-S-2		OP27 122-C-6
PIAO, L	PP25 C-089, PP25 C-090	POWERS, M	PP26 S-115
	PP25 S-026	POZDNJAKOVA, N	SP26 301-1
PIAZZA, J	SS25 507-B-1	PRADA, G	PP26 C-017, PP26 C-021
PICCALUGA, F	PP25 B-001		OP27 116-S-4
PICCOLI, JD	OP25 225-R-2	PRADA, S	SS25 123-C-1
PIERCE, GL	OP25 107-S-4	PRADA, SP	PP26 C-136
PIETROPAULO, S	OP24 523-S-4	PRANPRASERT, T-	SS24 408-R-1
PIGOT, H	SS26 414-S-4	PRASAD, A	
PIK SUI, Y	PP26 C-196	PRASHCHAYEU, K	
PIKKARAINEN, A	PP25 S-284	PRESSLER, SJ	
PILGRAM, H	SS26 423-C-1	PREYSS-FRIEDMAN, SV	
PILLANS, PI		PRIANDINI, D	
PIN, S		PRICE, D	
PINAEV, R			

PRICE, DM	OP27 101-S-2	RAMCLASS, S	PS24 501-R-2
PRICE, M	OP26 310-R-6	RAMIREZ, SE	PP25 C-044
PRITCHARD, G	OP27 311-S-3, PP25 S-301, PP26 S-109	RAML, R	PP26 C-041
PROF. ADANY, R	SS26 427-C-1	RAMONT, L	PP26 C-214
PROF. PARAGH, G	SS26 427-C-2, SS26 427-C-3, SS26 427-C-4	RAMOS, A	OP26 106-S-5
PROKOPENKO, N	OP23 419-S-2, PP25 S-203	RAMOS, M	PP25 C-067
PRONYAEVA, V	OP25 117-B-3	RAMOV, A	OP23 426-C-1
PROULX, CM	OP25 511-S-3	RAMOV, J	OP23 426-C-1, OP25 320-S-2, PP25 S-280
PROVENCHER, V	PP25 C-075, PP25 C-169, PP25 S-240	RAMOV, K	OP25 320-S-2, PP25 S-280
PUA, Y	OP23 325-C-2	RAMSAY, E	OP26 123-C-4
PUCA, A	SS25 125-C-4, SS25 125-C-8	RAMSTER, G	SS26 124-R-2
PUI FONG, C	OP25 107-S-4	RANGEL, N	PP26 S-068
PUISIEUX, F	PP25 C-119, PP25 C-120	RANSOM, T	SS24 227-C-4
PUKDEEPROM, T	OP27 213-S-5	RANT, M	OP25 320-S-2
PUNTSAG, S	OP26 120-S-4	RANTAKOKKO, M	OP25 121-S-1
PURCHASE, R	OP24 405-S-2	RANTANEN, T	OP25 121-S-1
PUSPITASARI, YM	PP25 S-041	RASANIA, SP	OP25 521-C-3
PUTNAM, M	SS24 310-R-3, SS25 406-R-1	RASTEGAR, A	SS25 325-C-3
PUUKKA, P	OP27 320-S-2	RATCLIFFE, J	OP27 113-S-5
QI, H	PP26 C-012	RATHINA-PANDI, A	PP26 S-053
QI, T	PP26 S-143	RATNER, P	OP23 320-R-4
QIAN, Z	PP25 R-037	RATTAN, S	PS25 102-B-2, SS26 112-R-1
QIAO, S	PP26 B-068	RATTAN, SI	PP26 B-090
QIN, N	OP25 104-S-3	RAUBENHEIMER, D	SS24 317-B-3
QIN, W	PP25 B-023	RAUFF, S	PP25 C-023
QIU, BY	PP25 B-073	RAUSCH, N	OP26 211-R-4
QUACH, L	PP25 C-093	RAUX, M	OP23 323-C-4, OP27 222-C-1
QUEEN, T	OP27 103-S-3	RAVEIS, VH	OP27 107-S-2, OP27 114-S-2
QUEEN, TL	SS24 421-S-2	RAY, M	OP25 122-S-4
RABIA, B	PP26 C-212	RAY, P	PP25 C-234, PP25 C-235, PP25 C-238
RABIDEAU, C	PP25 S-212	RAYMO, J	PS26 305-S-4
RABIEE, P	OP27 110-R-1	RAYNAUD-SIMON, A	PP25 C-214, PP25 C-234
RABINOVICH, A	OP26 419-B-3	RAYNER, V	OP24 405-S-2
RABINOVICH, P	OP26 419-B-3	RAZA, U	PP26 C-093
RACHITA, M	PP25 B-045	RAZAGHY, M	OP25 222-C-5
RACHMAN, DA	PP25 S-041	RAZALI, R	PP25 S-327
RAE, G	PS25 204-R-5	RAZALI, RM	PP26 C-189
RAGCHAA, O	OP23 324-C-3, OP26 120-S-4	RAZEGHI JAHROMI, S	PP26 C-129
RAHARDJO, T	PS25 405-S-1, PS25 405-S-2, SS25 224-R-1, SS25 224-R-4	RE, S	PP25 S-155
RAHARDJO, TB	PP25 C-040, PP26 C-136, PP26 S-203	REDELINGHUY, A	PP26 S-294
RAHARDJO, TW	OP23 313-C-5	REDMAN, S	SS24 109-R-2
RAHM HALLBERG, I	SS25 519-S-1	REEDER, B	PP25 S-031
RAHM-HALLBERG, I	SS25 519-S-2, SS25 519-S-3	REGIS, CE	PP26 S-249
RAICHE, M	OP27 114-S-5	REGUEME, SC	OP25 222-C-2
RAIK, B	PP26 C-093	REICHERT, M	SS25 214-S-1, SS25 508-R-4
RAINA, P	SS26 325-C-4	REID, AT	SS25 409-C-2
RAINFRAY, M	OP27 212-R-5, PP26 R-062	REID, J	OP25 219-B-2
RAISSI, M	SS26 416-R-1	REID, MC	PP26 C-093
RAITHBY, M	OP27 314-S-4	REID, RC	PP26 R-051
RAJAB, N	OP26 123-C-5	REIDICK, O	SS26 415-S-3
RAJESH, J	OP25 422-S-2	REIKO, T	PP25 S-142
RAKHMANI, AN	PP25 S-041	REINHARDT, JP	SS26 415-S-1
RAKUGI, H	OP23 424-C-3, PP25 B-053, PP25 C-231	REISSIGOVA, J	SS24 113-S-3, SS25 327-C-3
RAMADAN, M	SS25 207-R-3	REITER, I	OP23 421-C-2
RAMADANI, N	SS24 124-R-3	RELIGA, D	OP23 318-C-5, OP26 308-C-2
RAMANI, R	PP26 C-149	REMONDIERE, S	OP25 105-S-5
RAMASON, R	PP25 C-091	RENAUT, S	OP23 419-S-1, OP27 310-S-3
		RENDELL, P	OP25 421-S-2
		RENGE, N	OP25 421-S-2
		RENNEMARK, PHD, M	PP25 S-186
		RENOM GUITERAS, A	OP27 126-C-1, PP26 C-152

RENOM-GUITERAS, A	PP25 S-100	RODDY, E	PP25 C-104
RENSA, A	OP27 225-C-4	RODGERS, B	OP26 321-S-1
REPUSSARD, F	OP25 105-S-5	RODRIGUES, CD	PP26 S-329
RESENDE, TD	OP23 325-C-4, OP27 319-C-2	RODRIGUES, EV	PP25 S-013
RESNIZKI, S	OP24 101-S-2, OP24 101-S-3	RODRIGUES, ID	PP26 C-056
RESNIZKY, S	OP26 211-R-5, OP26 412-R-4	RODRIGUES, R	PP26 S-271
REYNOLDS, CA	SS26 326-C-3	RODRIGUES, RM	PP25 S-007, PP26 S-292
RHA, J	SP24 404-2	RODRIGUEZ, J	PP25 C-067, PP26 C-113
RHEE, G	PP26 S-238	RODRIGUEZ-ARANDA, C	PP25 C-118
RHEE, J	PP25 S-262, PP25 S-264, PP26 B-033, PP26 C-175	RODRIGUEZ-MANAS, L	SS24 325-C-2, SS25 125-C-3
RHEE, M	OP23 419-S-5, SS24 119-S-1	ROES, M	OP25 423-S-1, OP27 210-S-1
RHEE, Y	OP27 115-S-5, PP26 C-140, SP24 503-4	ROFF, LL	OP24 107-R-6
RIALLE, V	OP25 225-R-2, OP27 102-S-4, OP27 311-S-2	ROGERS, A	OP27 212-R-4
RIBBE, MW	OP26 121-S-3	ROGERS, RP	SS25 217-B-2
RIBEIRO, A	OP27 110-R-4, OP27 218-B-1	ROGINA, B	SS25 217-B-2
RIBEIRO, EA	PP25 B-071	ROH, S	OP25 512-S-1, OP27 208-S-4, PP26 S-038, PP26 S-158, PP26 S-197
RIBEIRO, EE	PP25 B-031, PP25 B-071	ROH, Y	PS27 203-C-3, SS24 309-C-1
RIBEIRO, MI	PP25 B-006, PP25 S-099, PP26 B-008, PP26 B-009, PP26 B-010	ROKKAKU, R	PP26 R-029, PP26 R-047, SS25 206-R-3
RIBEIRO, S	PP25 S-227	ROLLAND, Y	OP27 125-C-3, SS24 104-C-2
RICHARDS, S	OP27 112-R-3	ROMERO, M	PP27 204-R-3
RICHARDSON, J	OP25 121-S-2	ROMEU GORDO, L	PP26 S-261
RICHARDSON, JC	PP25 C-104	ROMILA, A	PP26 C-105, PP26 S-074
RICHTER, D	SS25 404-C-4	ROMMELSPACHER, H	OP26 419-B-6
RIESCO, E	PP25 C-026, PP25 C-105, SS24 426-C-1	RONALDSON, S	OP27 307-S-3
RIETSCHLIN, J	PP26 R-060, PP26 S-341	ROOPSAWANG, I	PP25 S-082
RIGAUD, A	SS26 213-S-4	ROOS, V	PP25 S-295
RIM, C	OP27 109-S-6, PP26 S-257	ROOSHEROE, AG	OP23 326-C-2, PP25 C-205
RIONO, P	PP26 S-203	RORIZ-FILHO, JD	SS24 427-C-3
RIOSECO, P	SS26 416-R-1, SS26 416-R-2, SS26 416-R-3	ROSANNA, LW	PP26 S-284
RIOU, B	OP23 323-C-4, OP27 222-C-1, PP25 C-234, PP25 C-236, PP25 C-237, PP25 C-239	ROSAS, J	PP25 S-336
RISHI, P	OP25 121-S-4	ROSE, RA	SS26 425-C-2
RISSER, R	SS24 424-S-3	ROSENBERG, E	PP26 S-127
RIVERA-MARQUEZ, A	PP26 S-253	ROSENBERG, M	SS26 222-C-3, SS26 322-C-1
RIZKA, A	PP26 C-007, SS24 225-C-2	ROSENGREN, A	PP25 C-012
ROBBINS, IJ	PP26 C-168	ROSHINA, NV	SS25 217-B-3
ROBERT, P	SS26 226-C-4	ROSSI, C	PP26 C-110
ROBERTO, K	KL26 004-	ROTH, GS	PS26 202-B-4
ROBERTO, KA	SS25 514-S-3	ROTTER, A	PP26 C-149
ROBERTSON, H	OP27 206-S-1	ROUBAUD BAUDRON, C	PP25 B-001
ROBINA, I	PP26 S-241	ROUILLARD, M	PP25 S-174
ROBINOVITCH, S	SS26 424-R-2, SS26 424-R-3, SS26 424-R-4	ROUWS, C	PP26 C-061
ROBINOVITCH, SN	OP27 312-C-1, OP27 324-C-1	ROVIRA, C	PP25 B-005
ROBINSON, H	SS25 526-C-3	ROVIRA, E	PP26 C-209
ROCA, MD, MPH, MBA, R	PP25 C-050	ROWE, B	PP26 R-051
ROCHA, FL	PP25 C-109	ROWE, S	PP26 C-215, PP26 C-230
ROCHA, LB	OP26 221-S-4	ROY SAINT-GEORGES, F	OP26 119-B-4
ROCHA, LM	OP27 319-C-2	ROY, E	PP26 C-130
ROCHESTER, L	SS25 213-S-1, SS25 213-S-4	ROY, JK	PP25 S-337
ROCKWOOD, K	PP25 C-127, SS25 223-C-4, SS26 425-C-1, SS26 425-C-2, SS26 425-C-4	ROY, P	OP23 421-C-5
ROCKWOOD, MR	SS26 425-C-4	ROYALL, DR	PS25 303-C-1
RODCUMDEE, B	SS26 425-C-4 OP27 213-S-5	ROZARIO, PA	OP25 220-S-2
		RUAN, Q	PP25 B-012, PP25 B-028, PP25 B-029, PP25 B-032, PP25 B-074, PP25 C-114, PP26 C-104
		RUVAULT, G	OP26 412-R-2, OP26 412-R-3
		RUBERU, RP	OP27 222-C-5
		RUBINOV, A	OP23 425-C-5
		RUGGIERO, C	SS24 308-R-3
		RUMEAU, P	PP25 C-243, SS25 108-R-1,

RUNDGREN, A	SS25 108-R-4	SAJJADI, P	PP25 C-253
RUOHONEN, K	PP25 C-037	SAKAGUCHI, C	PP26 S-056
RUPPAR, T	SS24 317-B-3	SAKAI, A	PP26 S-257
RUSAK, B	PP25 S-087	SAKAMOTO, R	PP25 S-036
RUSANEN, M	PP25 C-127	SAKANO, J	PP25 S-136
RUSLINA, I	OP23 417-C-2	SAKAROVITCH, C	PP25 C-180
RUSSELL, A	OP25 219-B-5	SAKATA, M	PP26 S-012
RUSSELL, C	PP25 R-049	SAKEMOTO, S	PP25 R-052
RUSSELL, M	PP25 C-140	SAKS, K	SS25 519-S-1, SS25 519-S-2, SS25 519-S-3
RUSSELL, T	SS26 309-R-4	SAKUMA, N	PP26 S-012
RYAN, L	OP27 127-C-1	SAKUNO, S	OP24 520-S-2
RYAN, LH	OP27 103-S-3	SAKURAI, C	PP25 S-009
RYBINA, OY	SS24 421-S-2	SAKURAI, H	PP25 C-121, PP25 C-122, PP25 C-133, PP26 C-124
RYG, J	SS25 217-B-3	SAKURAI, K	PP26 C-202
RYMASZEWSKA, J	OP23 417-C-3, OP23 422-C-2, OP27 222-C-4	SAKURAI, R	OP23 325-C-5, PP26 S-012
RYOU, C	PP26 C-178	SAKURAI, T	OP27 324-C-2
RYU, H	PP26 C-006	SALLEH, M	OP27 120-S-4
RYU, J	PP26 B-011, PP26 S-178	SALLES, N	OP27 212-R-5, PP25 B-001, PP26 R-062
RYU, K	PP26 B-004, PP26 C-125, PP26 C-126, PP26 C-232	SALMINEN, L	PP25 S-218
RYU, M	PP25 S-172	SALMONI, A	OP25 420-S-4, PP25 S-024
RYU, O	OP27 315-C-5, PP26 C-174	SALVI, P	OP27 125-C-1, OP27 125-C-3, PP25 C-010
RYU, S	PP26 C-020	SAMANTA, T	SS25 305-S-1, SS25 305-S-4
RYZHAK, A	PS26 403-C-2, SP25 515-4	SAMPAIO, RA	SS26 118-S-3
RYZHAK, G	SS26 423-C-4	SANADA, H	PP25 C-233, PP26 C-203, SS24 509-R-3
S H, L	OP23 426-C-3, SS26 423-C-4	SANDBERG, M	OP27 123-C-4
SAAJANAHO, M	PP25 S-133	SANDERS, K	OP27 226-C-3
SABER, A	OP25 121-S-1	SANDIN WRANKER M.D., LW	PP25 S-186
SABERI, LF	OP26 211-R-1	SANLUND, M	OP27 313-S-3
SABLIER, J	OP26 113-S-1	SANDRA NANIU, GS	PP25 C-009
SABOOR, M	OP25 225-R-2, OP27 102-S-4, OP27 311-S-2	SANDRI, GH	PP25 S-027
SACCO, G	OP23 324-C-2	SANO, T	PP25 C-182
SACHDEV, P	PP25 C-059, PP26 C-212	SANTAEUGENIA, S	OP23 413-C-4, PP26 C-220
SACHDEV, PS	SS25 125-C-5, SS25 125-C-8	SANTOS, A	PP25 S-336
SACZYNSKI, J	OP27 215-S-4	SANTOS, AF	PP25 C-103
SADEGHI, H	OP23 318-C-1, SS26 326-C-1	SANTOS, M	PP25 C-245, PP25 S-336, PP26 C-068, PP26 C-188, PP26 C-226, PP26 R-027
SADEGHIPOUR ROODSARI, M	PP25 S-250	SANTOS, S	PP25 B-057, PP25 B-058
SADOUDI-GAZOU, F	PP25 C-111	SAPOZHNIKOV, A	OP27 218-B-5
SAFAR, M	PP25 C-214	SARABOON, Y	PP25 S-220
SAFAROVA, A	OP27 125-C-1, OP27 125-C-3	SARBACKER, G	PP25 C-221
SAFAROVA, G	OP26 106-S-1	SARGENT-COX, KA	OP25 106-S-4, SS24 421-S-4
SAFER, U	OP26 106-S-1, OP26 106-S-3	SARI, FY	PP25 S-041
SAGES, RB	OP24 123-C-2, OP26 324-C-5, PP25 C-049, PP26 C-055	SARNAK, M	OP27 125-C-4
SAHOTA, O	SS26 207-S-1	SARRAFZADEH, M	OP25 222-C-5
SAID, Z	OP27 122-C-5	SARRY, O	PP26 R-062
SAIDI, N	PP25 S-327	SARUKI, K	PP25 C-081
SAIME, E	PP26 C-201	SASA, M	PP25 C-150, PP26 C-092
SAINT BAUZEL, L	SS24 124-R-2	SASAI, Y	PP25 S-132
SAINT-BAUZEL, L	SS25 108-R-4	SASAKI, H	PP25 C-134, PP25 C-135
SAITO, A	SS25 108-R-1	SASAKI, S	PP25 C-150, PP26 C-092, PP26 C-203
SAITO, K	PP25 S-288	SASAKI, T	PP25 S-028, PP25 S-034, PP25 S-043, PP25 S-056
SAITO, M	PP25 C-069, PP26 C-185, PP26 C-186	SASAKI, Y	PP25 C-189
SAITO, S	PP25 C-209, PP25 S-311	SASAMOTO, N	PP25 C-098, PP25 C-146
SAITO, T	PP25 S-034, PP26 C-071, PP26 S-052	SASAT, S	OP27 213-S-5
SAITO, Y	OP25 420-S-2, PP25 S-236, PP25 S-297, PP26 C-238	SASAT, S-	OP26 121-S-3
SAITO-KOKUSHO, T	SS24 115-S-1, SS26 215-S-4 PP25 S-320		

SASATANI, H	PP25 S-288	SCHNEIDER, RH	PP25 S-027
SASAYAMA, S	PP26 R-050	SCHNELLMANN, Y	OP26 211-R-1
SASOU, K	OP26 420-S-1, OP26 420-S-3	SCHNITKER, LM	OP23 421-C-3, PP25 C-187,
SATAKE, S	OP27 223-C-4, OP27 321-C-1,		PP25 C-195
	PP26 C-069	SCHOFIELD, P	SS24 321-S-1
SATO, A	PP25 C-179, PP25 S-121,	SCHOLS, J	PP25 S-257, SS25 226-C-3,
	PP26 R-020, PP26 R-025		SS25 326-C-2, SS25 326-C-3,
SATO, D	PP26 S-033, PP26 S-034		SS25 404-C-1, SS25 404-C-2,
SATO, E	PP25 C-252, PP25 S-126,		SS26 224-R-2, SS26 224-R-3,
	PP25 S-138		SS26 224-R-4
SATO, G	PP25 B-006, PP25 S-099,	SCHOLS, JM	SS25 404-C-3, SS26 224-R-1
	PP25 S-151, PP26 B-008,	SCHONHERR, S	OP23 418-S-1, SS25 404-C-3
	PP26 B-009, PP26 B-010	SCHOTT, A	OP27 118-B-3
SATO, H	PP25 C-177, PP25 S-151,	SCHREIBER, RJ	SS24 527-C-4
	PP25 S-302	SCHRODER, H	SS24 514-S-2
SATO, K	OP23 321-C-2, PP25 S-151,	SCHUETTE, W	SS24 307-S-2
	PP26 C-111	SCHWAB, C	OP25 520-S-6
SATO, M	PP25 C-182, PP25 R-041	SCHWAB, CG	OP23 313-C-4
SATO, N	SS24 517-B-1	SCHWANKE, CH	PP26 C-056
SATO, S	PP25 S-139, PP25 S-194,	SCHWARTZ, M	SS26 311-R-3
	PP25 S-298, PP26 S-204	SCHWARTZ, R	SS26 108-C-3
SATO, T	PP25 C-121, PP25 C-122,	SCIORTINO, V	PP26 C-119
	PP25 C-133	SCOTT, D	OP25 219-B-4, OP27 226-C-3
SATO, Y	OP23 419-S-3, PP25 S-222	SCOTT, IA	OP27 126-C-5, PP26 C-196
SATOU, S	PP26 C-187	SCOTT, V	SS26 424-R-4
SATTHATUMARAT, A	PP25 B-009	SCULLY, P	OP27 313-S-5
SAUERLAND, D	SS25 519-S-3	SEBASTIANI, P	SS25 125-C-7, SS25 125-C-8
SAWABE, M	OP27 122-C-1, SS25 317-B-2	SEDIVY, JM	PS24 311-B-1
SAWADA, K	PP25 C-098	SEDOVA, E	PP26 C-001
SAWADA, Y	PP25 S-083, PP26 S-258	SEDOVA, EV	PP25 C-003
SAWAMI, K	PP26 S-100, PP26 S-101,	SEEDSMAN, TA	PP25 S-239
	PP26 S-116, PP26 S-221	SEGHERS, J	OP24 521-S-1
SAWAOKA, S	PP25 S-303, PP25 S-318,	SEIBEL, MJ	OP27 315-C-1
	SS24 319-S-2	SEIKE, A	PP25 C-156
SCARANO, M	OP27 224-C-3	SEINO, S	PP25 S-033, PP25 S-037
SCHAAP, L	OP27 119-S-5	SEITSAMO, J	OP26 113-S-4
SCHAEFER, ER	PS24 211-B-3	SEKI, C	PP26 S-100, PP26 S-101,
SCHAEFFER, D	OP25 520-S-3, SS25 508-R-1,		PP26 S-116, PP26 S-221
	SS25 508-R-3	SEKI, Y	PP26 R-029, PP26 R-047
SCHAFFER, M	OP24 103-S-1	SEKIGUCHI, S	SS24 319-S-4
SCHAFFROTH, MU	OP27 312-C-4	SEKII, A	PP26 R-049
SCHARF, T	OP26 406-S-1, PP25 R-008,	SELA, NY	PP26 S-360
	SS25 414-S-1, SS26 218-S-3	SELLIER, C	OP26 119-B-1
SCHAUSTZ, F	PP26 C-068, PP26 C-226	SELT, B	OP27 125-C-1
SCHECHTMAN, KB	OP27 319-C-4	SELVAGANAPATHI, N	PP25 C-091
SCHEFFER, AC	OP27 126-C-4	SEMENKOV, V	OP27 218-B-5, PP25 B-069
SCHEFFER, M	OP25 119-B-1	SEMSEI, I	PP25 R-029
SCHELLEVIS, FG	SS26 407-R-1, SS26 407-R-2	SEN, M	PP26 B-060
SCHELTS, P	OP23 321-C-3, OP26 420-S-2	SENDA, K	OP27 223-C-4, OP27 321-C-1,
SCHEMPP, N	OP26 101-S-4		PP25 C-156, PP26 C-069
SCHERER, S	SS26 110-R-3	SENIOR, H	OP25 222-C-1
SCHERS, H	OP23 420-C-5	SENYURT, M-	PP25 S-012
SCHIEFERDECKER, MM	PP25 S-013	SEO, B	PP25 S-206
SCHIFFRIN, E	PP26 B-077	SEO, D	PP26 B-029, PP26 B-058
SCHIKHOF, Y	SS25 524-R-4	SEO, E	PP26 S-069, PP26 S-072
SCHILLING, OK	SS26 415-S-1, SS26 415-S-3	SEO, GG	SS25 111-R-1
SCHIPPINGER, W	SS26 414-S-4	SEO, H	PP26 R-045
SCHIRMER, C	PP25 B-048, PP25 B-049,	SEO, J	PP25 C-033, PP26 C-102,
	PP25 S-042, PP26 S-051		PP26 R-045
SCHMADER, KE	PP25 B-030	SEO, K	PP26 S-075, PP26 S-089
SCHMIDT, A	OP27 120-S-6, PP26 S-271	SEO, M	PP26 R-012
SCHMIDT, D	SS26 414-S-5	SEO, S	PP25 R-017, PP26 S-171,
SCHMIDT, LI	OP24 521-S-5		SS25 216 -4

SEO, Y	PP25 B-062, PP26 B-082, PP26 B-086, PS27 202-S-1	SHIBASAKI, M	OP27 223-C-4, PP26 C-069
SEOK, K	PP26 C-222	SHIBUYA, S	SS25 517-B-4
SEON, H	PP26 C-216, PP26 C-217, PP26 C-227, PP26 C-228, PP26 C-229, PP26 S-257	SHIGENOBU, K	PP25 C-128, PP25 C-131
SEONG, K	PP26 S-244	SHIH, H	PP26 C-121
SEONG, L	PP25 S-103	SHILLAM, CR	SS26 418-S-2
SEONG, S	PP26 C-128	SHILOVA, L	SS25 217-B-6
SEPTA, T	OP23 313-C-5	SHIM, H	OP27 205-S-6
SERNA, E	SS25 125-C-3	SHIM, J	OP26 123-C-2, PP26 B-018, PP26 S-120
SEROT, J	PP25 C-072	SHIM, Y	OP24 105-S-5
SERT, H	PP25 C-173	SHIMADA, C	PP25 S-017
SESHADRI, S	OP27 318-B-2	SHIMADA, H	OP27 210-S-3, PP25 C-113, PP25 C-146, PP25 S-015, PP25 S-034, PP25 S-236, PP26 S-200, SS25 409-C-4, SS25 509-C-3
SESTO, R	PP25 C-051	SHIMADA, N	PP25 B-043
SETARI, A	OP27 313-S-4, PP26 S-254	SHIMADA-HORIKAWA, H	PP25 S-132
SETIATI, S	OP27 312-C-2, PP25 B-056, PP25 C-057, PP25 C-205, PP26 C-007, PP26 C-058	SHIMAMOTO, A	PP25 C-208, SS25 517-B-3, SS25 517-B-4
SEWO SAMPAIO, P	SS26 118-S-2	SHIMANOUCI, S	PP26 C-190
SHA, EK	OP23 425-C-3, OP27 123-C-5	SHIMAZAKI, H	PP25 B-070
SHA, K	PP25 C-251, PP25 R-043, PP25 R-044	SHIMAZAKI, S	PP25 C-098
SHACHAR, D	OP23 423-C-2	SHIMIZU, M	PP25 C-081
SHADMI, E	SS26 422-C-3	SHIMIZU, N	PP26 B-073
SHAH, R	OP23 321-C-3	SHIMIZU, S	PP25 C-121, PP25 C-122
SHAHAR, D	PP26 R-013	SHIMIZU, T	PP25 B-068, SS25 517-B-4
SHAHAR, DR	OP23 413-C-1	SHIMMEI, M	PP25 C-197
SHAHAR, S	OP26 123-C-5, PP25 S-327, PP26 C-206	SHIMO, M	PP25 S-020
SHAIBU, S	PP25 R-054	SHIMOKADO, K	PP25 S-169
SHAKOOF, V	PP25 S-367	SHIMOKATA, H	OP27 122-C-2, OP27 321-C-1, PP25 C-160, PP25 S-081, PP26 C-022
SHAN, F	PP26 S-263	SHIMOKAWA, I	PS24 211-B-1, PS24 211-B-3
SHAPOSHNIKOV, M	SS25 217-B-1, SS25 217-B-5	SHIMOMURA, N	OP25 119-B-2, PP25 C-034
SHARIFI, F	PP25 C-172	SHIMOYAMA, H	PP25 S-102, PP25 S-110
SHARKEY, J	PP26 S-068	SHIMOYAMA, K	PP25 C-039
SHARMA, PK	OP25 422-S-2	SHIN, C	PP26 C-032
SHATENSTEIN, B	OP25 219-B-3	SHIN, D	PP26 B-018, PP26 B-046, PP26 B-065, PP26 B-083, PP26 C-060, PP26 S-032, PP26 S-351
SHATYLO, V	PS25 102-B-4	SHIN, E	PP26 S-228, PP26 S-236, PP26 S-281
SHAULOV, A	OP23 425-C-5	SHIN, H	OP24 107-R-6, PP25 B-072, PP26 B-065, PP26 B-066, PP26 C-184, PP26 S-011, SS25 527-C-2, SS25 527-C-3, SS26 427-C-3, SS27 302-S-4
SHAW, BH	OP27 324-C-1	SHIN, I	OP27 125-C-5
SHEA, Y	PP25 C-130	SHIN, K	SP24 301-3
SHECHTER, M	OP27 304-S-2	SHIN, M	PP26 C-135
SHEN, C	PP25 B-013	SHIN, S	OP27 101-S-5, OP27 103-S-4, OP27 108-S-6, OP27 125-C-5, PP25 R-051, PP26 C-147, SS25 419-C-4
SHEN, G	PP26 C-010	SHIN, Y	PP26 B-088, PP26 C-135, SS25 216 -2
SHEN, J	PP25 S-269	SHINER, D	OP27 310-S-2
SHEN, S	OP27 205-S-2	SHINKAI, S	OP23 325-C-5, OP25 421-S-5, OP25 422-S-3, OP25 422-S-4, OP25 423-S-4, PP25 S-241, PP25 S-326, PP26 R-014,
SHEN, T	SS26 109-R-1		
SHEN, Y	SS25 510-R-3		
SHENG, S	PP25 C-126		
SHENK, D	PP26 R-030, SS25 514-S-4		
SHEPPARD, E	PP25 S-176		
SHERRINGTON, C	OP25 119-B-4, OP26 123-C-4, OP27 323-C-5, PP25 C-051, SS24 316-C-3, SS26 408-C-2		
SHEU, W-	PP25 C-028		
SHI, W	OP26 412-R-1, PP25 R-021		
SHIANG, T	PP26 C-091		
SHIBA, Y	PP25 C-177, PP25 S-039, PP25 S-063, PP25 S-162, PP25 S-242, PP26 C-148		
SHIBASAKI, K	OP23 419-S-3, PP25 S-222, PP25 S-226, SS24 119-S-3		

SHINKAI, T	PP26 S-012, SS24 223-S-4	SIMONSICK, EM	PS27 301-R-3
SHINMURA, K	PP26 B-005, PP26 B-085	SIMONSON, J	SS25 309-C-2
SHINOZAKI, N	SS24 417-B-1	SIMPSON, C	PP26 S-261, SS26 114-S-4
SHINOZAKI, S	OP27 210-S-3		OP27 216-S-2, PP25 S-025,
SHIOKAWA, M	PP26 B-073		PP26 C-042
SHIOMI, T	PP25 S-105	SIMPSON, J	OP27 216-S-4
SHIOTA, H	PP25 C-146	SIMPSON, S	SS24 317-B-3
SHIRAI, M	OP26 324-C-2	SIMS, J	SS25 208-R-3
	PP25 C-186, PP25 C-189,	SIMSEK, H	OP23 326-C-1
	PP26 R-061	SIMS-GOULD, J	OP23 319-S-2, OP25 522-S-3,
SHIRAISHI, N	PP26 R-023		SS26 424-R-4
SHIRAKI, H	PP25 S-115, PP25 S-124	SIN, M	OP25 121-S-6
SHIRAKURA, K	OP25 219-B-5	SINAGA, JE	PP26 C-046
SHIRALI, P	OP26 119-B-4	SINCLAIR, AJ	SS24 325-C-3
SHIRASAWA, M	PP25 S-115, PP25 S-124,	SINCLAIR, L	PP26 C-074
	PP26 R-002, PP26 R-003	SINCLAIR-COHEN, J	SS24 308-R-3
SHIRASAWA, T	PP25 B-068	SINGH, H	OP24 106-S-3
SHIRATORI, S	PP26 R-024	SINGH, SB	OP24 405-S-4
SHISHKEVICH, AN	PP25 C-003	SINGH, T	OP25 422-S-2
SHIWAKU, K	OP24 523-S-3, PP25 B-054,	SINHA, S	SS24 110-R-1, SS24 110-R-3,
	PP25 S-061, PP25 S-084,		SS24 110-R-4
	PP26 S-010	SINIGIBSKY, A	SS26 423-C-5
SHMILOVITZ, I	OP23 423-C-2	SINOFF, G	SS26 422-C-3
SHMUELI, T	PP26 R-041	SIPERS, W	SS24 526-C-3, SS26 224-R-4
SHOAE, F	OP23 324-C-2	SIREN, A	OP27 102-S-2
SHOKOJI, M	PP26 S-029	SIRIWATANAMETHANON, J-	PP26 S-115
SHORR, RI	SS26 408-C-1	SIROIS, M	PP25 C-169
SHORT, F	PP25 S-146	SIRSCH, EG	PP25 C-255
SHOWA, S	PP26 S-243	SIT, JW	PP26 C-002
SHRESTHA, HL	OP27 112-R-4	SITEK, T	OP27 120-S-5
SHUANG, W	OP26 219-B-2	SIU FONG, K	SS26 313-S-3
SHUK YIN, L	OP25 107-S-4	SIU HUNG, L	OP25 107-S-4
SHULDINER, J	OP26 310-R-2	SIU, E	PP25 C-096
SHUVO, F	PP25 S-149	SIU, VW	OP23 421-C-4
SHUZO, M	OP24 123-C-6	SIVERA, S	PP26 C-208
SHYU, YL	PP25 C-193	SIXSMITH, A	OP27 109-S-1, OP27 211-S-3,
SICRAS, A	PP26 C-220		OP27 211-S-4, PP26 S-179,
SIDDIQI, N	OP27 224-C-2		SS26 424-R-1, SS26 424-R-2
SIEBER, CC	PP25 C-080	SKERMAN, H	OP23 313-C-2
SIERRA-AREVALO, M	OP27 107-S-5	SKINNER, M	PP26 R-004
SIEVANEN, H	OP23 325-C-1, OP27 216-S-1	SLATER, A	OP27 226-C-5
SIGNORETTI, DM	PP25 B-006, PP26 B-008,	SLAVIN, M	SS25 125-C-5
	PP26 B-009	SLAVIN, MJ	OP27 215-S-4
SIGNORETTI, DO	PP26 B-010	SLETTEBØ, A	PP26 S-008
SIGURDARDOTTIR, SH	PP25 S-278	SLIVKIN, V	PP25 C-229
SILVA, CF	PP25 S-007	SLIWINSKI, M	SS24 418-S-2
SILVA, H	PP25 C-108	SMALBRUGGE, M	OP23 313-C-3, OP25 222-C-3
SILVA, J	PP26 C-059, PP26 S-250	SMETCOREN, A	OP27 109-S-2, PP25 S-167,
SILVA, SM	PP25 S-007		PP26 R-056
SILVA, SO	PP26 C-027	SMIT, J	OP26 211-R-6
SILVERIO, D	PP25 S-013	SMITH, A	OP26 412-R-5, OP27 127-C-1
SILVERSTEIN, M	OP24 220-S-2, PP25 S-005,	SMITH, CJ	OP26 210-R-4
	PS25 505-S-1, SS24 419-S-3,	SMITH, J	OP27 103-S-3, OP27 224-C-2,
	SS24 519-S-2, SS26 215-S-3		PP25 C-228, SS24 421-S-2,
SILVESTRE, J	PP25 B-004		SS25 210-C-3
SIM, J	OP25 121-S-2, OP25 122-S-4	SMITH, M	OP25 121-S-3, PP25 C-165
SIM, K	PP26 S-150	SMITH, N	OP25 122-S-4
SIM, T	PP25 R-043, PP25 R-044	SMITH, P	OP25 104-S-5
SIMILA, H	OP23 420-C-4	SMITH-CARRIER, TA	SS24 110-R-3
SIMM, A	OP23 414-C-6, SS26 223-C-1	SMOLJANINOV, AB	PP25 C-003
SIMO, C	OP26 106-S-3	SMOLKIN, AA	PP26 S-336
SIMOE, A	PP26 C-027	SNAEDAL, J	OP23 318-C-1, SS26 326-C-1
SIMON, M	PS27 301-R-1, PS27 301-R-2,	SNEIHOTTA, F	SS25 213-S-1

SNIEHOTTA, F	SS25 213-S-3	SOTO, M	SS25 519-S-1, SS25 519-S-2,
SNOUSSI, M	PP26 C-014, PP26 C-015,		SS25 519-S-3
	PP26 C-201	SOTOMURA, M	PP25 C-186
SNYDER-RIVAS, LA	OP25 511-S-3	SOUBEYRAN, P	OP23 414-C-5
SO, A	SS26 422-C-1, SS26 422-C-2	SOUKALOVA, K	PP26 C-154
SOBU, A	PP26 R-004	SOULIS, G	PP25 C-010
SODEI, T	PP25 S-303, PP25 S-318	SOUSA, L	OP24 102-S-1, OP24 102-S-2,
SODERFELT, B	SS25 326-C-4		PP25 C-172, PP25 S-265,
SODERLUND, A	OP25 101-S-1		SS24 124-R-2
SOEKARDI, R	PP25 C-040	SOUSA, MR	PP26 S-070
SOFRONOV, G	SS26 423-C-4	SOUSA, S	PP26 S-138
SOGA, Y	PP25 C-141	SOUTHERN, A	SS26 322-C-2
SOHL, E	SS26 327-C-3	SOUZA, C	PP26 B-010
SOHN, H	PP25 B-027	SOUZA, J	PP26 C-068, PP26 C-226
SOHN, Y	PP26 C-198, SS24 420-S-1	SOUZA, V	PP26 B-008
SOININEN, H	OP23 321-C-3, OP23 322-C-1,	SOYLUK, O	PP25 C-029, PP26 C-052
	OP23 417-C-2	SPAINHOUR, MV	SS26 126-C-3
SOLDERA, C	PP25 S-227	SPALTER, T	OP24 101-S-2, OP24 101-S-3,
SOLHEIM, J	SS25 312-R-2		OP24 106-S-4, OP24 505-S-3,
SOLIVERES, A	PP26 S-182, PP26 S-343		PP26 R-060, PP26 S-341
SOLOMON, A	OP23 417-C-2	SPANO', A	OP26 308-C-4
SOLON, S	SS24 317-B-3	SPIRCU, T	PP25 C-167, PP25 C-174
SOLWAY, E	PP25 S-229	SPIRGIENE, L	PP26 C-179
SOMA, M	PP25 C-162	SPREEUWENBERG, M	SS25 404-C-1, SS26 224-R-2
SOMERS, S	SS25 308-R-3	SPULING, SM	SS26 325-C-2
SOMERS, SB	OP24 522-S-4	SREENIVAS, V	OP23 321-C-4
SOMERVILLE, E	SS26 216-R-4	SRIKUSALANUKUL, W	OP23 413-C-3
SOMEYA, T	OP27 210-S-3	STADNYK, R	OP27 310-S-2
SOMEYA, Y	OP24 505-S-6, PS24 205-S-2	STAFFORD, R	SS25 526-C-2, SS25 526-C-3
SOMLO, G	PP26 C-149	STAHLNACKE, K	PP25 C-183
SOMME, D	PP25 C-132	STALL, N	SS24 110-R-1
SON HONG, G	PP26 S-112	STAM, C	OP23 321-C-3
SON, D	OP27 206-S-6	STAMENOVIC, RB	PP25 R-004
SON, H	PP25 B-072, PP26 B-067,	STAMOS, P	OP26 113-S-5
	PP26 B-087, PP26 C-234	STARK, S	SS24 109-R-1, SS26 216-R-4
SON, J	OP25 322-S-5, OP27 108-S-4,	STARR, M	SS25 316-R-1
	PP25 B-062, PP26 B-095,	STAWSKI, R	OP27 103-S-3
	PP26 C-088, PP26 S-011,	STEEVES, B	SS24 227-C-4
	PP26 S-087, SS24 518-S-2	STEINMETZ, J	OP27 112-R-1, PP25 C-226,
	PP26 C-060		PP26 C-155
SON, K	PP26 C-101, PP26 S-353	STEPHAN, A	PP25 S-100, PP25 S-101
SON, S	PP26 C-005	STEPHAN, B	OP27 120-S-3
SON, Y	PP26 C-005, PP26 C-006,	STEPHENS, C	OP25 420-S-6, OP26 122-S-1,
SONG, E	PP26 S-219		OP27 205-S-3
SONG, H	OP27 107-S-1	STERN, F	OP26 320-S-4
SONG, I	PP26 C-032, PP26 S-252	STERNBERG, S	OP26 310-R-2
SONG, J	PP25 S-277, PP26 S-025,	STERNICZUK, R	PP25 C-127
	PP26 S-027, PP26 S-082,	STERNS, HL	SS26 411-R-2
	SS25 209-C-3, SS25 424-R-2	STESSMAN, J	PP25 B-075, PP26 C-237
SONG, M	PP26 B-084, PP26 C-216,	STEVENS, DY	PP26 S-104
	PP26 C-227, PP26 C-228,	STEVENSON, B	OP26 122-S-1, OP27 205-S-3
	PP26 C-229, PP26 C-230,	STEVENSON, BS	OP25 220-S-5
	PP26 S-015, PP26 S-075,	STEVERINK, N	SS26 413-S-1
	PP26 S-089, PP26 S-095,	STIJNEN, T	OP23 322-C-2
	SP24 203-3, SS25 309-C-3	STILES, M	SS26 222-C-1
SONG, S	PP26 B-054, PP26 S-342	STIP, E	OP25 225-R-2
SONG, Y	OP27 309-S-5, PP26 C-102	STOCK, J	PP25 C-040
SONODA, D	OP24 520-S-5, OP25 321-S-1,	STOLEE, P	PP26 C-141
	OP25 321-S-2, OP25 321-S-5,	STOLT, M	OP27 320-S-2, PP25 R-022,
	PP26 S-169		PP25 S-140, PP25 S-253
SONODA, LT	PP25 B-006, PP26 B-009	STOVOLKOVA, T	PP26 C-033
SONODA, T	PP26 C-180	STOWE, JD	OP27 212-R-1
SOROKIN, A	SS26 423-C-8	STRAUGHAN, PT	SS24 518-S-1

STRAUSS, J	SS26 212-R-3	SUN, J	PP25 S-251, PP26 S-233, SP24 202-1
STREET, D	SS24 408-R-2, SS24 408-R-3	SUN, JH	PP26 S-220
STRIZHITSKAYA, OY	OP23 314-S-2	SUN, QQ	OP26 219-B-1, OP26 219-B-2
STROIE, AM	PP26 C-105, PP26 S-074	SUN, S	SS25 523-C-4
STRUPEIT, S	OP25 105-S-2, PP25 C-084, PP25 C-102	SUN, W	OP25 219-B-6, OP26 122-S-6
STRYDOM, H	OP27 304-S-5, PP26 S-189	SUN, X	PP25 C-011, PP26 C-013, SS25 210-C-3, SS26 212-R-3
STUART-HAMILTON, I	OP27 303-S-2	SUNAGA, Y	PP25 S-214
STUCKELBERGER, A	SS24 125-C-3, SS24 125-C-4, SS25 325-C-1, SS25 325-C-5, SS26 112-R-4	SUNAMI, E	PP26 C-203
SU, H	PP25 C-175, PP26 B-076	SUNDH, V	PP25 C-037
SU, S	PP25 B-030, PP25 C-028	SUNG, B	OP27 318-B-6
SUBBIAH, E	PP26 S-293	SUNG, H	PP26 B-016
SUBGRANON, R	PP26 S-127	SUNG, J	OP25 120-S-6, PP26 S-063, SS24 417-B-2
SUBGRANON, R-	OP27 113-S-2	SUNG, K	PS24 205-S-5, PS25 201-R-1
SUBITA, GP	PP26 C-136	SUNG, M	PP25 R-014, PP25 R-015, PP25 R-030, PP26 C-192, PP26 R-033, PP26 S-071, PP26 S-191, PP26 S-334, SS24 119-S-2, SS26 209-R-3
SUCHDEV, J	OP25 106-S-3		PP25 S-192
SUCKOW, CL	OP27 218-B-4	SUNG, Y	OP27 113-S-2
SUEN, Y	OP26 210-R-5	SUNGVORAWONGPHANA, N-	SP24 502-3
SUGA, T	PP25 S-126	SUNWOO, D	SS26 410-R-3
SUGAMA, J	PP25 C-233, PP25 S-083	SUPIANO, KP	SS26 410-R-1
SUGAR, JA	PP25 S-258	SUPIANO, LCSW, FT, F-GSA, K	SS26 410-R-1, SS26 410-R-2
SUGAWA, M	OP26 419-B-6	SUPIANO, MA	PP26 S-049
SUGAWA, MD	PS24 211-B-3	SUPIYEV, A	PP25 C-233
SUGAWARA, I	OP23 419-S-3, PP25 S-222, PP25 S-226, SS24 113-S-1, SS24 119-S-3	SUPRIADI, .	PP25 C-054
SUGAWARA, M	PP25 S-072	SURIYAARACHCHI, P	OP26 320-S-5, PP25 C-217, PP25 S-366
SUGIHARA, Y	PP25 S-300	SURJADI, C	OP24 106-S-4
SUGIMORI, H	PP25 C-149	SUSSMAN, T	PP25 C-128, PP25 C-131
SUGIMOTO, C	PP25 S-083	SUTO, S	PP25 R-041
SUGIMOTO, K	PP25 B-053, PP25 C-204, PP25 S-094	SUZUKAMO, Y	PP25 S-015
SUGIMOTO, M	OP25 117-B-4	SUZUKAWA, M	PP25 S-303, PP25 S-318
SUGIMOTO, Y	PP25 C-189	SUZUKI, A	PP25 S-326
SUGIMURA, S	PP25 C-150	SUZUKI, H	PP25 S-297, PP26 S-099, PP26 S-307, SP26 301-3
SUGINO, K	PP26 S-100, PP26 S-101, PP26 S-116	SUZUKI, K	OP27 214-S-1, OP27 214-S-2, OP27 320-S-4, PP25 C-150, PP25 C-179, PP25 R-009, PP25 S-011, PP25 S-072, PP25 S-121, PP25 S-343, PP26 R-049, SS24 115-S-2
SUGIURA, S	PP25 S-092, PP25 S-122, PP25 S-217	SUZUKI, M	OP27 210-S-3, PP25 C-048, PP25 C-113, PP25 C-213, PP25 C-215, PP25 S-015, PP25 S-034, PP25 S-126, PP25 S-138, PP25 S-297, PP26 C-071, PP26 S-052, PP26 S-200, SS25 127-C-1, SS25 509-C-3
SUGIYAMA, M	PP26 S-055		OP26 324-C-2, PP25 C-177, PP26 R-023
SUH, H	SS25 306-R-2	SVAB, B	OP23 426-C-1
SUH, J	OP25 225-R-5	SVENSSON, T	SS24 510-R-3, SS26 325-C-1
SUH, M	OP23 417-C-5	SVETLANA, T	SS26 423-C-8
SUH, S	PP26 S-087, SS26 426-C-3	SWAGERTY, D	SS25 123-C-1, SS25 123-C-4, SS26 107-C-3
SUH, TT	OP25 222-C-6	SWART, K	SS26 327-C-2
SUH, Y	PP26 R-044, PS25 302-B-4, SP24 304-1	SWART, KM	SS26 327-C-3
SUHONEN, R	OP27 320-S-2, PP25 R-022, PP25 S-140, PP25 S-141, PP25 S-253		
SUK YEE, T	OP25 107-S-4		
SUK, M	PP26 S-350		
SUKSOM, D	PP25 B-050		
SULISTYOWATI, Y	PP25 C-040		
SULLIVAN, M	OP27 103-S-2		
SULLIVAN, MP	SS24 122-S-2		
SUMI, Y	PP25 C-153, PP25 C-154		
SUMII, H	PP25 R-037, PP25 S-105, PP26 S-257, PP26 S-258		
SUMITANI, Y	PP25 S-285, PP25 S-289		
SUN, F	PP25 S-084		

SYMONEKO, AV	SS25 217-B-3	TAKASE, Y	PP25 S-115, PP25 S-124
SYNOLD, T	PP26 C-149	TAKASUNA, H	PP25 S-115, PP25 S-124
SZABO, A	PP25 C-066	TAKATO, J	PP25 S-074
SZABO, Z	PP26 C-154	TAKATSU, H	PP26 B-085
SZCZERBINSKA, K	SS24 308-R-3	TAKAYAMA, M	OP27 218-B-2, PP25 C-094, PP26 C-037, SS24 322-S-5, SS26 115-S-3
SZIKSZAI, Z	SS26 427-C-2, SS26 427-C-3, SS26 427-C-4		PP25 C-112, PP25 C-129
SZUKALSKI, P	PP26 S-256	TAKAYAMA, R	PP25 S-214
SZWEDA-LEWANDOWSKA, Z	PP25 R-038	TAKAYANAGI, A	PP26 C-158
T.M. SHEA, P	OP24 405-S-1	TAKAYOSE, M	PP26 S-267
TABATA, M	PP26 C-123	TAKECHI, H	PP26 C-069
TABIRA, T	PS25 201-R-2	TAKEDA, J	PP25 S-061
TABUCHI, M	OP26 120-S-2, PP25 S-182, PP25 S-187, PP26 S-184, PP26 S-208, PP26 S-212, SS24 413-S-3	TAKEDA, M	PP26 S-099
		TAKEDA, T	OP23 425-C-2, PP25 C-207, PP25 C-208, PP26 C-202, PP26 S-073, SS25 517-B-2, SS25 517-B-4
TACHIBANA, K	PP26 C-202	TAKEMOTO, M	OP27 122-C-2
TAE, T	OP25 121-S-6		PP25 S-243
TAGAMI, J	PP25 C-153, PP25 C-154	TAKEMURA, M	PP25 C-177
TAGLIABUE, J	PP25 C-123	TAKENAKA, Y	PP25 B-041
TAHARA, H	SS25 517-B-3	TAKEUCHI, A	PP25 S-241
TAHERI, E	OP27 104-S-2	TAKEUCHI, F	PP25 S-312, PP26 B-068
TAI, BC	OP27 122-C-3	TAKEUCHI, R	PP25 C-088, PP25 C-117
TAI, P	PP26 S-291	TAKEUCHI, T	PP25 S-107
TAI, T	PP25 S-086, PP25 S-152	TAKIZAWA, C	PP25 S-107
TAIPALE, H	OP26 308-C-1	TAKKUNEN, E	OP25 119-B-2, PP25 B-070, PP25 C-034
TAIRA, H	PP25 S-214	TAKKUNEN, H	PP26 C-178
TAJIMA, A	PP25 S-340, PP25 S-341	TAKUBO, K	PP26 C-214
TAJUT DIN, N	PP25 C-247		PP26 S-197
TAK, CS	PP26 S-284	TALARSKA, D	PP25 B-070
TAK, Y	PP26 S-018, PP26 S-090, PP26 S-091, PP26 S-162, PP26 S-163	TALBOT, C	PP26 R-001
		TALBOT, E	PP26 B-019
TAKABAYASHI, K	PP25 R-046, PP25 S-114, PP26 R-016	TAM, E	SS24 326-C-1
TAKADA, Y	OP25 321-S-2	TAMAI, S	PP26 S-325
TAKAGI, A	PP25 C-215	TAMURA, K	OP27 114-S-1
TAKAGI, E	SS26 215-S-4	TAMURA, M	OP26 406-S-3, PP25 C-247
TAKAGI, T	PP25 S-343	TAMURA, Y	SS25 310-C-2
TAKAHARA, A	PP26 C-158	TAMUTIENE, I	SS24 127-C-1
TAKAHASHI, H	PS27 201-R-2	TAN, B	OP26 102-S-2, PP25 B-010, PP26 S-338
TAKAHASHI, K	PP26 R-029, PP26 R-047	TAN, C	SS25 323-C-2
TAKAHASHI, M	PP25 C-215, SS26 115-S-2	TAN, CT	OP26 211-R-3
TAKAHASHI, R	OP26 120-S-2, OP26 219-B-4, OP27 318-B-1, PP25 C-197, PP25 S-017, PP25 S-187, PP25 S-193, PP26 S-023, PP26 S-055, PP26 S-184, PP26 S-208, PP26 S-212, SS24 218-S-1, SS24 222-S-1, SS24 322-S-5, SS24 413-S-3	TAN, H	PP25 S-275, PP26 C-181
		TAN, J	SS25 323-C-3
			OP23 413-C-2, OP23 420-C-1, OP26 123-C-1
TAKAHASHI, T	OP26 219-B-3, PP25 S-183		PP25 C-199, PP25 C-249, PP25 S-103
TAKAHASHI, Y	OP27 102-S-6, PP25 S-322, SS24 409-C-3	TAN, K	OP27 114-S-1
		TAN, KS	PP25 S-130
TAKAI, Y	PP25 C-081, PP25 C-179, PP25 S-121	TAN, M	PP25 S-309, PP26 S-304
TAKAISHI, T	PP25 B-059	TAN, PX	PP26 S-169
TAKAKI, J	PP25 R-036	TAN, S	PP25 S-033, PP25 S-037, PP26 S-021
TAKAKI, M	PP25 S-122		OP27 122-C-1, PP26 C-098, PP26 S-021, SS25 317-B-2, SS25 416-R-4
TAKAMIYA, M	PP26 C-123	TAN, T	PP25 S-289
TAKAMURA, M	PP25 S-214		SS25 317-B-2
TAKAMURO, S	PP26 S-223	TAN, VY	
TAKASE, S	PP25 S-313	TANABE, T	
		TANAKA, C	
		TANAKA, D	
		TANAKA, K	
		TANAKA, M	
		TANAKA, R	
		TANAKA, T	

TANAKA, Y	PP25 C-208, PP25 S-011	TERESA, CM	OP24 105-S-3, OP27 101-S-3
TANEMURA, R	PP25 S-156	TERESHINA, E	OP24 107-R-1, OP26 119-B-3
TANG, D	PP25 C-136, PP25 S-209	TERI, L	OP26 121-S-2
TANG, F	PP25 S-249	TEROLLA, C	PP26 C-204
TANG, J	PP25 S-353	TERRA, NL	OP23 314-S-5, OP26 221-S-4,
TANG, M	SS24 420-S-3		OP26 320-S-3
TANG, Y	PP25 C-028	TERREBONNE, E	OP23 414-C-5
TANGE, C	PP25 C-160, PP25 S-081	TERWEE, C	OP27 107-S-4
TANI, M	OP24 520-S-5, OP25 321-S-1,	TERWEE, CB	OP23 313-C-3
	OP25 321-S-2, OP25 321-S-5,	TESCH-ROEMER, C	SS26 112-R-3, SS26 325-C-2
	PP26 S-169	TESSIER, D	OP25 219-B-3, PP25 C-105,
	PP25 C-070		SS26 208-C-2
TANIGAWA, T	PP25 R-033, PP25 R-036	TESSIER, DM	SS24 426-C-3
TANIGUCHI, T	OP25 421-S-5, OP25 422-S-3,	TESSIER, F	OP26 119-B-2
TANIGUCHI, Y	OP25 422-S-4, OP25 423-S-4,	TEXEIRA, LB	PP26 C-027
	PP26 R-049	THAIN, J	OP27 122-C-5
	OP27 127-C-4	THAKUR, M	SS24 318-B-3
TANIHATA, A	PP25 R-033	THAM, W	PP25 S-103, PP26 C-205
TANIKAWA, K	PP25 C-141	THAMBU, M	PP25 S-327
TANIMOTO, I	PP25 S-009	THANAKWANG, K	OP24 520-S-3, OP25 221-S-2
TANIMOTO, M	PP25 S-064	THANG, L	OP24 412-S-3, PP25 R-004,
TANIMURA, A	PP25 S-041		PS25 205-S-2, SS24 519-S-1
TANJAYA, SA	PP25 S-115, PP25 S-124	THEISEN, C	PP25 C-226
TANNO, K	OP23 424-C-1, OP27 122-C-6,	THEOBALD, M	SS25 223-C-3
TAPELEA, E	PP26 C-100	THEOU, O	PP25 C-127, SS26 425-C-4
	PP26 C-207, PP26 C-208,	THILMANY, S	PS24 211-B-3
	PP26 C-209	THIND, A	OP27 222-C-2
TARAZONA-SANTABALBINA, FJ	PP26 S-274	THIRION, X	PP25 C-142, PP26 C-119
TARDIEU, J	PP25 C-066	THOMAS, C	PP25 C-234, PP25 S-328,
TARKANYI, I	OP25 117-B-3		SS25 115-S-4
TARNOVSKAYA, S	PP25 C-010	THOMESE, F	SS24 519-S-4, SS26 218-S-1
TARTAGNI, E	OP24 123-C-2, OP26 324-C-5,	THOMPSON, H	OP26 113-S-3, OP27 114-S-4
TASCI, I	PP25 C-049, PP26 C-055	THOMPSON, HJ	PP25 S-031
	OP27 320-S-4	THONGNUAM, N	PP26 S-332
TATARA, Y	PP26 C-238	THORBJORNSEN, GS	PP25 C-118
TATENO, M	OP26 120-S-2, PP25 S-187,	THORPE, L	OP27 207-S-5
TATSUHIRA, Y	PP25 S-193, PP26 S-184,	THORVALDSSON, V	SS26 325-C-1
	PP26 S-208, PP26 S-212,	THURMANN, P	OP27 126-C-1
	SS24 413-S-3	TIANMIN, Z	PP25 R-037
	PP25 S-026, PP25 S-027,	TIBO, MG	PP25 C-108
	PP26 C-056	TICE, T	OP24 522-S-1
TAVARES, GM	OP26 321-S-1	TIEDEMANN, A	PP25 C-051
TAVENER, M	PP25 S-281	TIEMAN, J	OP25 225-R-1, OP27 214-S-3
TAWARA, K	SS25 526-C-3	TIEN, Y	PP26 C-156
TAYLOR, L	OP24 106-S-2, OP24 412-S-2,	TIMONEN, V	OP26 406-S-1
TAYLOR, P	SS26 411-R-1, SS26 411-R-2	TINNEY, J	OP24 405-S-2
	OP24 103-S-5	TIPPING, B	PP26 C-074
TAYLOR, RJ	SS24 314-S-2	TISMAL, D	PP26 S-135
TCHERNIKOV, I	PP25 C-200, PP25 S-153	TITEL, J	SS26 423-C-6
TE, TS	SS25 213-S-3	TIVESTEN, A	PP25 C-012
TEAL, G	PP25 C-059, PP25 C-180	TIWARI, SC	OP23 321-C-4
TEBOUL, B	OP24 123-C-1, OP26 113-S-2,	TIZEDES, F	PP25 C-066
TEH, R	SS24 118-S-1, SS24 118-S-2,	TKACHENKO, E	PP25 B-025, PP25 B-040
	SS24 118-S-3, SS24 118-S-4	TO, P	PP26 C-108
	PP25 B-071	TOBA, K	OP27 223-C-4, OP27 321-C-1,
TEIXEIRA, F	PP26 C-027		PP25 C-156, PP26 C-069,
TEIXEIRA, PF	PP25 S-099		PS24 201-R-2
TEIXEIRA, SM	OP27 125-C-1	TOBIASZ-ADAMCZYK, B	OP27 307-S-2, PP26 B-039
TEMMAR, M	OP27 216-S-6	TOBIS, S	PP26 C-178
TENG, C	OP26 123-C-5	TODD, C	OP27 313-S-5
TENG, NF	OP27 114-S-1	TOH, Z	PP25 C-199
TEO, Y	PP26 C-049	TOHARA, H	PP25 C-252, PP25 S-138
TEOH, M	PP26 R-013	TOHRU, M	SS25 407-B-1
TEPPER, S			

TOKUDA, H	OP27 223-C-4, PP26 C-069	TSAI, P	PP26 C-121
TOKUI, M	PP26 C-158	TSAI, Y	SS24 409-C-2
TOKUYAMA, M	PP26 S-029	TSANG, A	OP27 116-S-1, SS26 108-C-3
TOLPPANEN, A	OP23 322-C-1, OP23 417-C-2, OP26 308-C-1	TSANG, W	PP25 R-043, PP25 R-044
	PP26 C-183	TSAUO, J	PP25 S-029, SS26 127-C-4
TOLU, F	OP25 122-S-1	TSE, M	PP25 S-006, SS24 321-S-2
TOMAREVSKA, OS	PP25 S-044	TSENG, S	PP25 S-008, PP25 S-127, PP25 S-128, PP25 S-368
TOMAZ, B	PP25 S-038, PP26 S-328	TSENG, T	OP27 227-C-5
TOMAZ, BA	PP26 C-114	TSENG, W	OP26 123-C-3
TOMEHATA, S	PP26 C-223	TSIEN, T	PP26 S-172, PP26 S-216
TOMITA, N	OP23 319-S-2, OP27 116-S-1, OP27 225-C-5, PP25 S-104	TSOU, H	SS26 127-C-4
TONG, C	OP24 103-S-4, SS24 410-R-1, SS25 318-S-3	TSOU, K	PP26 C-195
	PP26 R-048	TSUDA, M	PP26 C-098
TONG, H	SS26 216-R-1	TSUJI, K	SS25 124-R-4
TONG, L	OP23 326-C-3	TSUJI, M	PP25 R-052, PP25 S-072
TONG, T	OP27 106-S-5	TSUJI, R	PP25 S-332
TONG-YUAN, T	PP26 B-008	TSUJI, T	OP23 419-S-3, PP25 S-114, PP25 S-222
TOPAZ, M	SS24 113-S-3, SS24 308-R-3, SS25 327-C-2, SS25 327-C-3, SS25 327-C-4, SS26 112-R-2	TSUJI, Y	PP26 S-023
TOPICIO, FR	OP27 103-S-1, OP27 310-S-1	TSUJIMOTO, T	PP26 S-028
TOPINKOVA, E	PP26 S-070	TSUJIMURA, M	PP26 C-161
	OP24 101-S-4, PP26 S-008, PP26 S-352, PS25 205-S-4, SS24 410-R-2, SS24 513-S-1	TSUKADA, N	PP25 S-273, PS25 204-R-3
	PP26 C-170	TSUKADA, Y	PP26 R-004
TORREJON, M	PS25 204-R-4	TSUKAHARA, T	PP25 B-065
TORRES, LD	OP26 308-C-4	TSUMURA, C	PP26 S-320
TORRES, S	PP26 S-126	TSUNG, MW	OP23 423-C-4
	PP25 C-016	TSUTSUI, M	PP26 C-223
	OP27 125-C-3	TSUTSUI, S	PP25 S-223
TORRES-CASTRO, S	OP23 420-C-3	TSUTSUI, T	PP25 S-223, PP25 S-260, SS24 508-R-1
TORRES-GIL, FM	OP27 114-S-5	TSUTSUMI, M	PP26 C-114
TOSCHI, A	OP27 107-S-2, OP27 114-S-2	TSUTSUMIMOTO, K	PP25 C-113, PP25 S-015, PP26 S-200
TOSSAPUK, K-	SS24 324-S-3	TU, K	PP25 C-168
TOSUN, N	OP25 423-S-3	TU, S	OP23 326-C-3
TOULZA, O	PP25 S-139	TUFAN, A	OP27 221-C-1, PP25 C-029, PP26 C-052
TOURNOY, J	PP26 S-012	TUFAN, F	OP27 221-C-1
TOUSIGNANT, M	PP25 S-096	TUFAN, I	SS26 116-R-2
TOVEL, H	PP25 S-298	TULLO, E	PP25 S-106, SS25 226-C-2
TOWNS, D	PP25 S-169	TULLY, PJ	OP27 206-S-2
TOWNSEND, A	OP27 310-S-3	TUNG, J	PP26 C-156
TOYODA, M	PP25 C-152	TUNG, Y	PP25 B-008
TOYOHARA, J	OP23 421-C-2	TUNPATTU, T	PP26 S-097
TOYOKAWA, T	OP27 206-S-1	TUOMINEN, L	PP25 S-141
TOYOSHIMA, A	OP27 123-C-6	TURA, B	PP25 C-245
TOYOSHIMA, K	OP26 103-S-2	TURCI, M	OP25 420-S-5, OP27 224-C-3
TRABUT, L	PP25 S-353	TURIANO, NA	OP25 322-S-3
TRANE CHRISTENSEN, I	OP25 222-C-2	TURPIN, J	PP25 C-180, PP26 C-212
TRAUSSNIGG, S	OP23 321-C-4	TURTEN, T	OP27 303-S-4
TRAVAGLIA, J	SS26 423-C-8	TWISK, JW	SS26 407-R-3
TRAVAGLIA, J	OP25 117-B-3, PP25 B-016	TYAGI, P	PP25 C-206, PP26 C-177
TRAVERS, C	SS24 213-S-4	UAYAN, MT	PP26 S-019
TREAS, J	SS25 217-B-3	UCHIDA, M	PP25 R-019
TRESTER, M	PP26 C-068	UCHIDA, Y	PP25 C-081, PP26 R-020, PP26 R-025
TRILLAUD, H	PP25 S-304, SS26 127-C-3	UCHIYAMA, H	PP25 C-209
TRIPATHI, RK	OP23 326-C-3, PP25 C-036, PP25 C-092, PP26 C-081	UCKU, R	OP23 326-C-1, PP25 C-004
TROFIMOV, A	OP25 121-S-1	UDAGAWA-RUSU, K	PP25 C-213
TROFIMOVA, S	PP25 C-178	UEDA, H	PP25 S-096
TROISI, J		UEDA, N	PP26 S-335
TROSTNIKOV, MV		UEDA, T	PP25 R-041, PP26 C-148
TRUZZI, A			
TSAI, J			
TSAI, K			
TSAI, L			
TSAI, M			

UEDA, Y	PP26 S-169	VAN DEN KOMMER, TN	SS26 413-S-2
UEKI, S	PP25 S-072, PP25 S-074, PP25 S-309, PP25 S-357, PP26 S-304	VAN DER CAMMEN, T	SS26 327-C-3
UEMURA, K	PP25 C-113, PP25 S-015, PP26 S-200	VAN DER HORST, H	OP27 112-R-2, PP25 S-113
UENO, D	PP25 S-194	VAN DER HORST, HE	OP23 313-C-3, OP25 222-C-3, OP26 420-S-2, PP25 C-064, SS26 407-R-3
UENO, T	PP25 C-162	VAN DER MAAREL-WIERINK, C	SS25 326-C-2
UHRENFELDT, L	PP26 C-152	VAN DER MAAREL-WIERINK, CD	SS25 326-C-1
UITTERLINDEN, A	SS26 327-C-2	VAN DER PAS, S	OP27 119-S-5, PS24 501-R-2, SS24 122-S-1
UITTERLINDEN, AG	SS26 327-C-3	VAN DER POEL, A	OP27 313-S-1
ULGER, Z	PP25 C-082	VAN DER PUTTEN, G	SS25 326-C-1, SS25 326-C-2, SS25 326-C-3, SS25 326-C-4
UM, J	PP26 S-262	VAN DER ROEST, H	OP26 211-R-6, SS25 327-C-4
UM, T	PP26 S-183	VAN DER ROEST, HG	OP23 418-S-2
UMEDA-KAMEYAMA, Y	OP23 323-C-1	VAN DER STEEN, JT	OP27 115-S-2, SS25 426-C-1
UMEGAKI, H	PP26 R-023, SS24 326-C-2	VAN DER VELDE, N	OP27 126-C-4, OP27 312-C-4, SS24 127-C-1, SS26 327-C-1, SS26 327-C-2, SS26 327-C-3
UMEHARA, T	OP27 127-C-4	VAN DER ZWAARD, B	OP23 313-C-3
UMEONUSULU, P	PP25 S-210	VAN DER ZWALUW, N	SS26 327-C-3
UMNOV, R	PP25 B-016	VAN DIJK, S	SS26 327-C-2, SS26 327-C-4
UNE, K	PP26 C-223	VAN DIJK, SC	SS26 327-C-3
UNO, M	PP26 B-040, PP26 B-041	VAN HOUT, H	OP26 211-R-6, PP25 C-065, PP25 S-113
UNVER, V	PP25 C-016	VAN HOUT, HP	OP26 420-S-2, PP25 C-064, SS26 407-R-3
UPTON, J	PS24 204-R-1	VAN HOUWELINGEN, A	OP27 123-C-1
URA, C	PP26 S-055	VAN HOUWELINGEN, T	SS25 524-R-3
URABE, Y	PP25 S-085	VAN LEEUWEN, K	OP27 112-R-2, PP25 S-113
URANO, S	PP26 B-085	VAN LEEUWEN, KM	SS26 407-R-3
URANO, T	OP26 419-B-5	VAN LIESHOOT, PH	PP25 S-367
URANO, Y	PS27 202-S-3	VAN MARWIJK, HW	OP26 420-S-2
URATA, K	PP26 C-037	VAN MEURS, J	SS26 327-C-2
URAYAMA, H	PP25 S-093	VAN MEURS, JB	SS26 327-C-3
URAYAMA, O	PP26 S-100, PP26 S-101, PP26 S-116	VAN MIERLO, LD	SS24 524-C-3
USAMI, S	SS24 113-S-1	VAN MUNSTER, B	SS24 127-C-1, SS24 127-C-2
USHIDA, A	PP25 S-102, PP25 S-110	VAN NES, F	OP27 107-S-4
USHIKUBO, M	PP25 C-081	VAN NIE, N	SS25 404-C-1
USUI, K	PP25 C-189, PP26 R-061	VAN RHIJN, S	OP27 107-S-4
UTEPOVA, L	PP26 S-049	VAN SCHOOR, N	SS26 327-C-2
UTSUMI, K	PP26 C-238	VAN SCHOOR, NM	SS26 327-C-3
UTSUMI, M	PP26 R-050	VAN SOEST-POORTVLIET, MC	OP27 115-S-2
UUSI-RASI, K	OP23 325-C-1, OP27 216-S-1	VAN SOLINGE, H	PS26 305-S-1
UWAEGBUTE, AC	PP25 C-216	VAN SON, C	OP24 123-C-4
UYSAL-BOZKIR, O	SS24 524-C-1	VAN TILBURG, T	SS24 122-S-3
VAARA, M	OP25 520-S-2	VAN TULDER, M	OP27 112-R-2, PP25 S-113
VAARAMA, M	SS26 114-S-3	VAN UDEN, N	OP27 115-S-2
VAHIDIAN, E	OP27 104-S-2	VAN UITERT, M	SS24 127-C-2
VAIL, A	OP27 205-S-1	VAN VLIET, M	SS26 325-C-3
VAISERMAN, A	PS25 402-B-3	VAN WIJNGAARDEN, J	SS26 327-C-2
VAISMAN, M	PP26 C-027	VAN WIJNGAARDEN, JP	SS26 327-C-3
VALBUSA, F	OP27 125-C-3	VANAVANANT, S	PP25 S-315
VALDERRAMAS, S	PP25 S-013	VANDEBONA, H	OP26 119-B-5
VALDEZ, C	PP25 S-356	VANGELOOVEN, C	SS25 404-C-4
VALENTINI NETO, J	PP25 B-055	VANHAECKE COLLARD, C	PP26 C-213, PP26 C-214
VALLET, H	PP25 C-002, PP25 C-237	VANHOUTTE, B	OP23 314-S-4, SS24 308-R-1, SS24 421-S-1
VAN AARDT, J	PP26 S-300	VANHUYSSSE, P	PP26 S-271
VAN AMERONGEN-HEIJER, Y	PS27 201-R-4	VANKOVA, H	OP27 225-C-3, PP26 C-154, SS25 124-R-3
VAN ASSELT, D	PP26 C-061	VANOBERGEN, J	SS25 326-C-3, SS25 326-C-4
VAN ASSEN, MA	OP27 226-C-6	VANYUSHIN, B	PS25 102-B-1
VAN CAMPEN, C	SS24 209-R-1		
VAN DAMME, P	OP23 426-C-2		
VAN DE KOMMER, T	SS26 413-S-3		
VAN DEN BLOCK, L	OP27 115-S-2		
VAN DEN BROEK, T	OP25 522-S-2, PP26 S-125		
VAN DEN DUNGEN, P	OP26 308-C-5		

VARDI, H	OP23 413-C-1	VOGLER, C	OP26 123-C-4
VARGA, Z	SS26 427-C-4	VOLJC, B	OP23 426-C-1
VARON, C	PP25 B-001	VON BONSDORFF, M	OP26 113-S-4
VASEMAZOV, S	PP26 S-175	VON BONSDORFF, MB	OP26 113-S-4
VASUDEV, A	SS25 310-C-2	VON HEIDEKEN WAGERT, P	OP25 101-S-1
VAUGHAN, J	OP27 313-S-5	VON HUMBOLDT, S	OP25 220-S-3, OP25 221-S-3,
VAUGHAN, LM	PP25 S-269		PP25 B-057, PP25 B-058,
VAZQUEZ-ARIAS, M	PP25 S-197, PP26 S-205		PP25 S-076, PP25 S-077,
VECCHIONE, C	SS25 125-C-4		PP25 S-078, PP25 S-079,
VEENSTRA, M	OP27 207-S-1, PP25 S-185		PP25 S-088, PP25 S-089,
VEIL, A	PP25 R-003		PP25 S-090, PP25 S-091,
VELHO, L	PP25 S-027		PP25 S-175, PP25 S-191,
VELLAS, B	KL26 001, PP25 C-243		PP25 S-207, PP25 S-256
VENDITTI, MG	PP26 B-008, PP26 B-010	VON PREYSS-FRIEDMAN, S	SS24 527-C-2, SS25 123-C-3,
VENIANAKI, M	PP25 C-042, PP26 C-029		SS26 307-C-1
VERA, V	PP25 C-205	VOUTILAINEN, P	OP27 320-S-2
VERAS, B	PP26 C-113	VRANTSIDIS, F	SS26 309-R-4
VERBEKE, G	OP23 420-C-3	VU, T	SS26 309-R-2
VERDIN, A	OP26 119-B-4	VUAGNOUX, C	PP25 C-059
VERGHESE, J	SS24 126-C-2, SS24 126-C-4	VUILLERME, N	OP27 102-S-4
VERLAAN, G	SS26 224-R-1, SS26 224-R-2	WADA, T	PP25 S-036, PP25 S-132
VERLAAN, S	SS26 224-R-3	WADA, Y	SS24 319-S-1, SS24 319-S-3
VERNY, C	PP25 C-234	WADHWA, R	SS25 102-B-3, SS24 318-B-1
VERNY, M	OP23 323-C-4, OP27 222-C-1,	WADSTEN, B	PP25 C-184
	PP25 B-004, PP25 C-002,	WAERN, RV	OP25 219-B-2
	PP25 C-234, PP25 C-235,	WAGG, A	PP26 R-051
	PP25 C-236, PP25 C-237,	WAHL, H	OP24 521-S-5, OP26 421-S-3,
	PP25 C-238, PP25 C-239,		PP25 S-345, PP26 S-339,
	PP25 C-240, PP25 S-284		SS24 424-S-2, SS24 510-R-3,
	SS26 407-R-1, SS26 407-R-2		SS26 223-C-3, SS26 415-S-1,
VERSNEL, N	OP23 426-C-2		SS26 415-S-3
VERSTRAETEN, T	PP25 S-237, PP25 S-257,	WAITE, L	SS24 224-S-2
VERTE, D	PP26 R-056, PP26 S-231,	WAKE, J	PP25 R-035, PP26 R-015
	PP26 S-325	WAKSMANN, N	PP25 S-032
VERTE, E	PP26 R-056	WAKUI, T	OP25 420-S-2, PP25 S-320
VESCHI, M	OP27 224-C-3	WALDEGRAVE, C	OP24 505-S-2, OP27 208-S-1,
VESELKINA, ER	SS25 217-B-3		SS24 308-R-4
VESTERGAARD, S	OP23 417-C-3, OP23 422-C-2,	WALES, K	SS24 109-R-3
	OP27 222-C-4	WALKER, A	KL25 001-, SP26 205-3,
VEYRAC, G	PP25 C-008		SS24 510-R-1, SS26 124-R-4
VICTOR, C	OP25 512-S-2, OP27 103-S-2,	WALKER, J	OP24 107-R-3
	OP27 112-R-3, OP27 119-S-2,	WALKER, R	OP23 314-S-3
	OP27 212-R-4, OP27 216-S-2,	WALLEN, J	OP24 520-S-1
	PP25 S-025, PP26 C-042,	WALLHAGEN, M	PP26 R-026
	SS24 122-S-2, SS24 313-S-1,	WALLMAN, K	OP23 318-C-5
	SS24 419-S-2	WALSH, K	PP25 R-008, SS25 414-S-1
VIDEAU, M	OP27 212-R-5	WALSH, KE	SS26 222-C-2
VIEGAS, K	PP25 B-031, PP25 B-071,	WALTERS, PHARM.D., JK	PP25 C-050
	PP25 C-022	WAMSER, EL	PP25 S-013
VIGOUROUX, N	SS25 108-R-1, SS25 108-R-4	WAN MOHD YUNUS, W	PP25 S-327
VIITANEN, M	OP27 320-S-2	WAN NGAH, W	OP26 123-C-5, PP25 B-014,
VILJANEN, A	OP25 121-S-1		PP25 B-042
VILLALBA, RR	PP25 C-044, PP25 C-046,	WAN YUEN, C	PP26 C-041
	PP25 C-125	WAN, M	PP26 C-194
VILLAMAR, R	PP26 C-208	WANG, A	PP26 S-001
VILLARROEL, L	PP25 B-052, PP25 S-001	WANG, C	OP26 308-C-6, OP27 319-C-3,
VILLARS, H	PP25 C-243		PP25 C-145, PP25 S-046,
VILLELA, PT	PP26 C-009		PP25 S-148, PP26 C-103,
VINA, J	SS25 125-C-3, SS25 125-C-8		PP26 R-021, PP26 S-058,
VIRIOT DURANDAL, J	OP24 107-R-2		SS26 226-C-2
VISVANATHAN, R	OP27 227-C-1	WANG, D	OP25 511-S-2, PP25 B-021
VLACHOVA, M	SS25 327-C-4	WANG, F	PP25 B-022, PP25 C-092
VO, K	OP26 321-S-1	WANG, H	OP24 106-S-1, OP27 306-S-2,

	PP25 C-159, PP25 S-128, PP26 R-053, PP26 S-290, SS24 420-S-3, SS25 316-R-3, SS25 318-S-4		PP26 S-248 OP24 103-S-2 PP26 S-220 PP25 B-030
WANG, J	PP25 B-007, PP25 C-092	WEI, L	OP23 320-R-3
WANG, K	PP26 S-196	WEI, PH	OP23 420-C-3, SS25 516-R-4
WANG, M	PP25 B-011, PP25 R-037	WEINBERG, A	OP27 324-C-4
WANG, N	SS24 407-R-3, SS24 507-R-3	WELLENS, N	PP25 S-054
WANG, P	SS25 217-B-2	WELLENS, NI	PP26 S-290
WANG, R	PP25 C-126, PP26 C-030	WELLS, JL	SS25 125-C-5
WANG, S	OP26 219-B-1, OP27 215-S-5, OP27 307-S-4, PP25 B-011, PP25 B-022, PP25 B-023, PP25 R-034, PP25 S-075	WEN, J	PP25 C-100
	PP25 C-250, PP25 S-283, PP26 B-068, SS24 420-S-3	WEN, T	OP26 123-C-6
WANG, T	PP26 C-093, PP26 S-196, SP24 302-1, SS25 317-B-3	WEN, W	PP25 R-027
	OP23 423-C-1, OP26 319-B-1, PP25 B-053	WENG, M	PP25 S-279
WANG, W	OP23 324-C-4, OP23 423-C-1, OP25 511-S-2, OP27 109-S-3, OP27 303-S-5, PP25 R-026, PP25 S-188, PP26 S-222, PP26 S-248, PP26 S-338, SS24 420-S-3	WEST, Y	PP25 C-184, PP25 C-185
	OP26 308-C-6, PP25 B-044, PP25 B-061, PP25 C-114, PP26 C-104	WESTENDORP, R	OP24 106-S-3
WANG, X	OP27 111-S-2	WESTENHOEFER, P	PP26 B-034
WANG, Y	OP27 119-S-4, SS26 223-C-2	WESTERBOTN, M	OP24 123-C-1, OP26 113-S-2
	OP27 308-S-1, SS25 414-S-3	WESTERLUND, H	SS24 418-S-4
	PP26 S-187	WEUVE, J	OP24 521-S-4
WANGMO, T	OP23 423-C-2	WHAM, C	PS26 403-C-1
WANKA, A	PP25 S-299	WHETZEL, C	SS25 213-S-1, SS25 213-S-2, SS25 213-S-3
WARBURTON, J	PP26 R-029, PP26 R-047	WHILLANS, J	OP27 224-C-5
WASSEL, JI	OP27 214-S-1, OP27 214-S-2, PP25 R-009	WHITE, L	OP24 105-S-4
WASSERMAN, D	PP25 S-309, PP26 S-304	WHITE, M	OP23 423-C-1, OP27 113-S-5
WATANABE, D	OP23 325-C-5, PP25 S-309, PP26 C-148, PP26 S-304	WHITE, S	SS26 425-C-2
WATANABE, K	PP25 C-021	WHITEFORD, H	OP25 121-S-3
WATANABE, M	OP25 117-B-4, PP25 C-252, PP25 S-126, PP25 S-138, PP25 S-323	WHITEHEAD, C	PP25 C-140
	PP25 C-118	WHITEHEAD, JC	PP26 S-266
WATERLOO, K	OP27 218-B-3, OP27 218-B-4	WHITELAW, N	OP25 421-S-3
WATERS, DJ	PP25 C-053, SS25 126-C-2	WHITTAMORE, K	PP25 S-065
WATERS, DL	SS26 408-C-1	WHITTINGTON, FJ	OP27 107-S-4
WATERS, TM	OP27 125-C-1, PP25 C-010	WICKRAMA, K	PP26 R-060, PP26 S-341
WATFA, G	SS25 526-C-2, SS25 526-C-3	WIDAJANTI, N	PP26 C-178, SS24 124-R-2, SS25 426-C-3
WATSON, C	SS26 214-S-3	WIDDERSHOVEN, G	OP27 119-S-5
WAYE, A	OP25 105-S-6	WIDEMAN, G	OP23 321-C-3
WEARDEN, A	PP25 C-137, PP26 C-050	WIECZOROWSKA-TOBIS, K	PP25 S-071
WEBER, P	PP26 C-050	WIEGERSMA, S	PP25 S-155
WEBEROVA, D	OP23 423-C-2	WIEGGERS, R	OP23 313-C-3
WECHSLER, H	PP26 S-207	WIKLUND AXELSSON, S	OP27 215-S-2
WEE, K	SS24 518-S-7	WILBERS, J	SS24 115-S-2
WEE, L	OP27 310-S-2	WILKIE, R	SS24 115-S-1
WEEKS, L	OP27 122-C-5	WILKINSON, LR	OP25 221-S-1
WEERASURIYA, N	SS25 113-S-4	WILLCOX, B	OP24 106-S-2, OP24 412-S-2
WEGNER, E	PP26 C-003	WILLCOX, D	OP27 216-S-4
WEI, C	OP27 320-S-6, PP26 S-224,	WILLCOX, DC	OP27 112-R-3
WEI, H		WILLIAMS, A	PP25 B-030
		WILLIAMS, R	OP27 314-S-4
		WILLIAMS, S	PP25 S-146
		WILLIAMS, V	PP25 S-353
		WILLIAMS-DIAZ, A	OP25 322-S-1, PP26 S-237
		WILLIS, P	SS26 416-R-1, SS26 416-R-2
		WILLS, W	PS26 105-S-1, SS26 315-S-1
		WILSON, L	PP25 C-201
		WINDLE, G	OP27 225-C-1
		WINDSOR, T	OP23 319-S-2
		WING-HONG POON, E	OP25 219-B-4
		WINK, P	OP26 320-S-5, PP25 S-366
		WINTER, R	OP25 117-B-2
		WINTERS, M	OP27 220-S-3
		WINZENBERG, T	
		WIRAHARDJA, RS	
		WITKOWSKI, J	
		WOEHRMANN, AM	

WOLF, DA	OP25 522-S-4, OP26 101-S-3		PP25 C-035, PP25 C-041,
WOLF-OSTERMANN, K	OP25 105-S-2, PP25 C-102		PP25 C-085, PP26 C-030
WOLFSON, C	SS26 325-C-4	WU, JS	PP25 C-171
WOLL, J	PP26 S-324	WU, L	PP25 C-170, PP26 C-010
WOLMARK, Y	PP25 C-086, PP25 C-214	WU, M	SS24 223-S-3
WOLTER, B	SS26 218-S-4	WU, P	PP25 C-068
WON, C	OP24 425-C-1, OP25 119-B-5,	WU, S	PP25 C-198, PP26 C-034,
	PP26 C-122		SS25 127-C-2
WON, S	PP26 S-252	WU, T	OP23 422-C-6, SS25 114-S-3
WON, Y	OP23 418-S-3, OP27 304-S-6,	WU, W	SS24 420-S-3
	SS25 216 -2	WU, Y	SS26 127-C-3
WONG, AM	OP27 227-C-5	WU, Z	OP27 118-B-1, OP27 118-B-2
WONG, C	PP25 C-083, PP26 C-149	WURM, S	SS26 325-C-2
WONG, CC	OP24 405-S-1	WURZER, B	PP25 C-053
WONG, E	PP25 S-047, PP26 S-180	XIA, N	SS24 422-S-4
WONG, EM	PP26 C-002	XIA, S	PP25 S-205
WONG, J	OP25 121-S-5	XIAO, L	OP23 423-C-1
WONG, K	OP27 114-S-3, SS26 108-C-3	XIAO, S	SS24 420-S-3
WONG, L	OP23 321-C-1	XIAO, W	SS25 209-C-4
WONG, M	OP27 225-C-5, PP25 C-083	XIE, L	OP25 320-S-1
WONG, RY	SS24 216-C-3, SS26 108-C-1	XU, H	OP27 218-B-3
WONG, S	PP25 C-192	XU, Q	OP26 220-S-4
WONG, SS	PP25 C-192, PP25 R-039	YABUSHITA, N	PP25 S-033, PP25 S-037
WONG, T	PP25 S-047	YAHAGI, N	OP24 123-C-6
WONG, W	OP23 422-C-6, PP25 C-091,	YAHIA, M	OP27 125-C-1
	PP25 S-131	YAJIMA, Y	PP25 S-136, PP26 R-020,
WONGPANARAK, N	PP26 S-079		PP26 R-025
WOO, C	PP26 B-042, SS25 407-B-4	YAKOB, O	SS26 423-C-6
WOO, E	SS25 323-C-1	YAKOVLEV, O	PP25 C-229, PP26 C-033,
WOO, H	PP25 B-019, PP26 S-162		PP26 S-175, PP26 S-209
WOO, J	OP24 123-C-5, OP27 112-R-6,	YAMADA, I	OP24 123-C-6
	PP25 S-068, PP26 S-065,	YAMADA, K	PP25 S-115, PP25 S-124,
	SS24 104-C-4		PP25 S-293
WOO, Y	PP26 B-051	YAMADA, M	PP25 B-039, PP25 C-070,
WOOD, RC	PP25 C-221		PP25 C-224, PP26 B-073,
WOODCOCK, A	OP27 212-R-4		PP26 C-180
WOODHAM, A	OP25 105-S-6	YAMADA, S	OP26 420-S-1, OP26 420-S-3
WOODS, NF	OP26 113-S-3, OP27 114-S-4,	YAMADA, T	PP25 S-064
	OP27 215-S-3	YAMADA, Y	PS24 201-R-2
WOOLLEY, R	SS25 223-C-2	YAMAGATA, C	PP25 S-039
WOOLRYCH, R	OP27 211-S-4, SS26 424-R-1,	YAMAGUCHI, M	PP25 S-288
	SS26 424-R-2	YAMAGUCHI, Y	OP23 323-C-1
WOOTTON, R	PP26 C-157	YAMAJI, K	PP25 S-022
WOUTERS, EJ	SS25 524-R-2	YAMAJI, T	OP26 219-B-3
WOZNIAK, B	OP26 120-S-5	YAMAKAWA, M	PP25 C-128, PP25 C-131,
WRIGHT, C	PP26 S-129		PP25 S-123
WRIGHT, P	OP27 313-S-5	YAMAMOTO, H	OP23 323-C-1
WRIGHT, T	SP25 301-2	YAMAMOTO, K	PP25 S-117, PP25 S-178,
WRIGHT-ST CLAIR, VA	OP26 421-S-2		SP26 304-2
WRIGHT-ST.CLAIR, V	OP25 106-S-3, OP25 512-S-3,	YAMAMOTO, M	PP25 R-021, PP26 R-061
	OP27 209-S-2	YAMAMOTO, NM	PP25 S-121
WU, B	PP25 C-158, PP26 C-012,	YAMAMOTO, T	OP26 324-C-2, PP25 S-114
	SS26 126-C-1, SS26 126-C-2,	YAMAMOTO, Y	PP25 C-233
	SS26 126-C-4	YAMAMOTO-MITANI, N	OP27 214-S-1, OP27 214-S-2,
WU, C	PP25 B-008, PP25 C-068,		PP25 C-179, PP25 R-009,
	PP25 C-161, PP25 C-168,		PP25 S-132
	SS26 127-C-3	YAMAMURA, M	PP26 C-098
WU, F	SP24 502-1	YAMANAKA, K	PP25 C-204
WU, G	PP25 S-152	YAMANASHI, H	PP25 S-214
WU, H	OP24 505-S-4, SS26 226-C-2	YAMANE, M	OP25 322-S-4
WU, I	SS24 223-S-3, SS25 317-B-3	YAMANOI, R	PP25 S-288
WU, J	OP23 326-C-3, PP25 B-038,	YAMASAKI, K	PP25 C-038, PP26 C-199
	PP25 C-013, PP25 C-032,	YAMASAKI, M	OP24 523-S-3, PP25 B-054,

YAMASHINA, N	PP25 S-061, PP25 S-084 PP25 S-039, PP25 S-063, PP25 S-162	YAU, EY YAVARI, K YAVUZ, B YAVUZ, BB YAYLAGUL, NK YAZICI, S	SS26 218-S-2 PP25 S-250 PP25 C-082 PP26 C-224 OP24 102-S-3, OP26 221-S-1 OP24 102-S-3, OP25 122-S-6, OP26 221-S-1 SP24 302-1 SS26 225-C-3, SS26 307-C-3 OP24 105-S-1, OP26 104-S-3, SS25 316-R-1 OP27 227-C-3 OP27 120-S-2, SS25 316-R-3, SS25 510-R-4 SS25 510-R-3 OP23 424-C-4 PP26 S-053 PP25 S-062 OP24 522-S-5, OP25 321-S-6 OP27 320-S-6 PP25 S-314 PP25 S-198, PP26 B-077, PP26 S-098, PP26 S-222 OP27 205-S-2 PP25 R-026 PP25 S-131 PP26 B-024 PP26 B-070, PP26 B-071 OP27 120-S-1, OP27 208-S-4 PP26 S-142, PP26 S-143 PP26 S-038, PP26 S-154, PP26 S-340 SS26 215-S-2 PP25 C-082, PP26 C-224 OP25 107-S-4 PP26 S-342 PP26 S-227 OP27 323-C-4 OP27 205-S-3 PP25 C-192, PP25 R-039 PP25 R-039 OP25 222-C-5 PP26 S-110 SS24 119-S-1 PP26 C-174 OP23 326-C-1 PP26 S-044 PP25 C-251 OP26 104-S-2, OP26 210-R-6 PP25 B-044 OP27 114-S-3 PP26 C-202 PP25 S-093 OP23 425-C-2, PP25 C-208, PP26 C-202, SS25 517-B-2, SS25 517-B-4 PP25 S-034 PP25 R-021 PP26 S-052 PP25 S-083 PP25 S-199 OP27 303-S-3, PP26 S-327 OP24 523-S-3, PP25 S-084
YAMASHITA, H	PP26 B-068		
YAMASHITA, T	OP23 323-C-5		
YAMATO, I	PP26 C-098		
YAMAUCHI, K	PP25 S-022		
YAMAUCHI, M	PP25 S-169	YE, B YE, Y YEANDLE, S	
YAMAZAKI, Y	PP25 S-261		
YAMORI, M	OP27 127-C-4		
YAN, E	OP25 104-S-3, OP27 304-S-3		
YANAGIMOTO, S	OP24 123-C-6	YEAP, B YEATTS, D	
YANAGISAWA, Y	PP25 C-213		
YANCURA, L	PP25 S-119		
YANG, C	OP27 220-S-6, OP27 226-C-4, PP25 C-061, PP26 S-235	YEATTS, DE YEDLAE, K YEE, BW YEE, N YEH, C YEH, I YEH, S YEN, C	
YANG, DC	PP26 C-138		
YANG, E	PP26 C-086, PP26 C-087		
YANG, G	OP23 417-C-5, OP26 324-C-6, OP27 309-S-6, PP25 C-032 PP25 B-067, PP25 S-192, PP26 B-059, PP26 B-095, SS25 108-R-2, SS25 510-R-2 PP25 B-038, PP25 R-014, PP25 S-355 SS25 324-R-4 OP27 313-S-2, PP25 S-364 OP23 422-C-6, SS26 127-C-4 OP27 205-S-2, OP27 215-S-5, PP25 C-017, PP25 C-019, PP25 C-024, PP25 C-025, PP25 S-073, PP25 S-075, SS25 324-R-1, SS26 115-S-1 PP25 B-067 OP23 326-C-3 OP27 216-S-4 PP25 C-013, PP25 C-032, PP25 C-035, PP25 C-041, PP25 C-085, PP25 R-037, PP25 S-008, PP25 S-245, PP25 S-246, PP26 C-030, SS27 124-R-3 PP25 C-171 SS25 125-C-5 OP23 423-C-1 OP27 226-C-1 OP24 412-S-3, SS25 211-R-3 PP25 R-004 OP27 120-S-4 PP25 B-017, PP25 B-018 OP26 319-B-3, PP25 B-066, PP25 S-028, PP25 S-034, PP25 S-043, PP25 S-056, PP25 S-057, PP26 B-050, PP26 C-071, PP26 C-098, PP26 S-052 PP25 S-034, PP26 C-071, PP26 S-052 OP23 325-C-5, PP25 S-241 PP25 B-053 SS25 223-C-3 OP23 419-S-3, PP25 S-222, PP25 S-226, SS24 119-S-3		
YANG, H			
YANG, J		YEN, M YEN, Y YEO, CY YEO, E YEO, H YEO, Y YEOM, E YEOM, H	
YANG, K			
YANG, M		YEOM, J YESIL, Y YEUK SZE, C YEUN, E YEUNG, DY YEUNG, K YEUNG, P YEUNG, S YEUNG, V YEW, A YI, D YI, J YI, S YILMAZ, S YIM, S YIM, T YIN, T YIN, X YIP, P YOKOH, H YOKOKAWA, Y YOKOTE, K	
YANG, R			
YANG, S			
YANG, U			
YANG, W			
YANG, XJ			
YANG, Y			
YANG, YC			
YANG, Z			
YAO, K			
YAP, K			
YAP, M			
YAP, P			
YASSIN, Z			
YASTREBOV, A			
YASUDA, K			
YASUMURA, S		YOKOYAMA, E YOKOYAMA, J YOKOYAMA, K YOKOYAMA, S YON, H YON, Y YONEYAMA, T	
YASUNAGA, M			
YASUNOBE, Y			
YATES, MW			
YATOMI, N			

YONEZAWA, A	PP25 S-115, PP25 S-124	YOU, H	OP23 417-C-5, OP26 324-C-6,
YONG, D	PP26 C-077		OP27 309-S-6, PP26 B-028,
YONG, DH	SS26 307-C-2		PP26 S-004
YONG, H	PP26 B-088	YOU, T	OP27 309-S-6
YOO, A	PP26 C-192, SS26 209-R-3	YOUM, Y	PP26 C-062, PP26 C-140,
YOO, B	OP27 209-S-5, PP26 S-287		SS24 224-S-1
YOO, G	PP25 S-134	YOUN, G	PP26 S-144, PP26 S-145,
YOO, H	OP24 425-C-1, OP25 119-B-5,		PP26 S-207, SS25 309-C-1
	PP26 B-074, PP26 C-020,	YOUN, H	PP26 S-191
	PP26 S-039, PP26 S-046,	YOUNG, B	PP25 S-024
	PS24 201-R-1, SP26 304-3	YOUNG, J	OP27 224-C-2, PP26 C-169,
	PP26 C-197		SS25 223-C-2
YOO, I	PP25 S-199	YOUNG, M	PP25 S-103
YOO, J	PP26 C-131	YOUNG, TJ	PP25 S-106
YOO, KE	PP26 B-017, PP26 S-219,	YOUNG, Y	PP26 C-145
YOO, M	SS25 418-S-3	YU, B	PP26 B-043, PP26 B-045,
	PP25 R-053		PS25 201-R-4
YOO, S	PP26 C-016, PP26 C-142	YU, C	PP25 B-052, PP25 S-001,
YOO, W	OP23 323-C-2, PP26 C-088		PP25 S-216, PP26 S-173,
YOON, B	OP27 318-B-6		PP26 S-177, PP26 S-206,
YOON, C	PP26 S-197		PP26 S-213
YOON, D	PP25 B-019, PP25 B-020,	YU, D	SS25 114-S-2, SS25 318-S-1
YOON, G	PS24 411-B-3	YU, G	PP26 B-065
	PP25 R-004, PP26 C-004,	YU, H	SS25 108-R-3
YOON, H	SS24 222-S-3, SS24 322-S-1,	YU, J	PP25 C-006, PP26 C-109,
	SS24 322-S-2, SS24 322-S-3,		SP24 302-1, SS24 420-S-2
	SS24 322-S-4	YU, R	PP25 S-068
YOON, J	OP24 425-C-1, OP25 119-B-5,	YU, S	OP24 425-C-1, OP25 119-B-5,
	OP27 318-B-3, PP25 S-215,		PP25 B-002, PP26 B-002,
	PP26 C-137, PP26 S-027,		PP26 B-074, PP26 C-020
	PP26 S-040, PP26 S-041,	YU, X	SS25 318-S-4
	PS27 203-C-3, SS24 222-S-3	YU, Y	PP26 C-108
YOON, M	OP26 314-S-5, OP27 107-S-6,	YU, Z	OP27 319-C-1, PP25 B-012,
	PP25 S-060, SS25 306-R-1		PP25 B-028, PP25 B-029,
YOON, S	PP25 S-234, PP26 B-028,		PP25 B-074
	PP26 B-053, PP26 B-093,	YUAN, C	PP25 C-076
	PP26 S-194, PP26 S-356,	YUAN, JM	OP27 122-C-3
	SP25 301-5, SS25 324-R-4	YUAN, K	PP25 S-314
	PP26 S-128	YUAN, Y	SP24 302-2, SS24 420-S-3
YOON, W	PP25 C-163	YUCEL, H	PP25 R-028
YOON, Y	PP25 C-113, PP25 S-015,	YUE-LAI CHAN, H	PS26 105-S-1
YOSHIDA, D	PP26 S-200, SS25 509-C-3	YUK YING, W	OP25 107-S-4
	OP25 421-S-5, OP25 422-S-3,	YUKI, A	PP25 S-081
YOSHIDA, H	OP25 422-S-4, PP25 S-074,	YUKUTAKE, T	PP25 C-070
	PP25 S-309, PP26 C-185,	YUM, S	PS25 303-C-3
	PP26 R-014, PP26 S-304	YUMOTO, Y	PP25 C-209
	PP26 S-169	YUN LEE, H	PP26 R-059
YOSHIDA, K	PP25 S-096	YUN, C	SS24 318-B-2
YOSHIDA, M	PP25 S-094	YUN, D	PP26 S-348
YOSHIDA, N	OP27 127-C-2, PP25 C-210	YUN, H	PP26 B-084, PP26 C-215,
YOSHIDA, S	PP25 C-131		PP26 C-216, PP26 C-217,
YOSHIDA, Y	PP25 S-114, PP25 S-115,		PP26 C-227, PP26 C-228,
YOSHIE, S	PP25 S-124		PP26 C-229, PP26 C-230,
	PP26 S-021		SS25 309-C-3
YOSHIKANE, N	PP25 S-270	YUN, J	OP27 101-S-5, PP26 S-287
YOSHIKO, F	PP25 C-224	YUN, N	OP26 314-S-5
YOSHIKURA, N	PP25 C-208	YUN, P	PP26 C-035
YOSHIMOTO, S	PP25 S-343, PP26 B-040	YUN, S	PP26 B-057
YOSHIMURA, H	PP25 C-021	YUN, Y	PP25 R-017, PP26 C-216
YOSHINO, G	PP25 C-021	YUNG, A	OP25 121-S-5
YOSHINO, H	OP27 212-R-6	YUNG, C	OP23 321-C-1, PP25 C-251
YOSHINO, T	PP25 S-289	YURINA, T	OP27 218-B-5
YOSHIOKA, S	OP25 423-S-4	YUSHAN, D	PP25 S-369
YOSIDA, H			

YUSOFF, K	PP26 S-361	ZHANG, Z	SP24 503-2
YUSUF, S	PP25 C-233	ZHAO, D	PP26 C-044
ZABALEGUI, A	SS25 519-S-1, SS25 519-S-2, SS25 519-S-3	ZHAO, J	SS26 207-S-6
ZABUKOVEC, M	OP25 320-S-2	ZHAO, X	PP25 B-022
ZACHARIAE, R	OP25 221-S-5	ZHAO, Y	SS25 210-C-3, SS26 212-R-3
ZAFACK, J	PP25 C-142	ZHARKOV, S	PP25 B-025, PP25 B-040
ZAFALLON, G	SS24 125-C-2	ZHE, T	SP24 502-2
ZAFALON, G	SS24 125-C-4	ZHELNOVA, T	PP26 C-033
ZAIDI, A	PP26 S-271, SS24 306-R-2	ZHEN, Z	SS24 518-S-5
ZALEWSKI, Z	SS24 308-R-3	ZHENG, A	PP25 R-004
ZAMBON, F	PP26 C-221	ZHENG, G	SS26 109-R-3
ZAMBONI, M	OP27 125-C-3	ZHENG, H	PP25 B-044
ZAMFIR, MV	PP26 C-063	ZHENG, J	OP27 319-C-4
ZAMFIRESCU, A	PP25 C-167, PP25 C-174, PP26 C-063, PP26 C-105, PP26 S-074	ZHENG, Y	PP26 S-165
ZAMORA, G	OP27 314-S-3, SS24 323-S-3	ZHIRKOV, A	PP25 C-007
ZANG, D	SS24 322-S-1	ZHONG, X	SS25 424-R-4
ZANINOTTO, P	OP25 521-C-1, OP26 113-S-6, SS25 210-C-1	ZHOU, G	PP25 B-044
ZANJANI, H	PP25 B-005	ZHOU, H	OP27 122-C-1, PP26 C-012, PP26 C-078, SP24 402-1, SP24 503-1
ZARIT, S	SS24 418-S-4, SS24 515-S-1	ZHOU, Y	PP26 S-022
ZARIT, SH	PP25 S-296, SS24 515-S-3	ZHOU, Z	SP24 311-B-3
ZASLAVSKY, O	OP26 113-S-3, OP27 114-S-4, OP27 215-S-3	ZHU, L	OP25 420-S-4
ZAWISZA, K	OP26 120-S-5	ZHU, M	PP26 C-141, SS24 407-R-1
ZECEVIC, A	PP25 S-024, PP25 S-159, SS26 424-R-2, SS26 424-R-4	ZHU, Y	OP26 308-C-6, PP25 B-032, PP25 B-033, PP25 C-114, PP26 C-104
ZEE, P	PS25 403-C-1	ZHUANG, D	OP24 521-S-2
ZEHLICKE, T	SS26 409-R-4	ZHUKOVSKY, OI	PP25 B-015
ZEKRY, D	OP23 424-C-2, PP26 B-079, PP26 C-110	ZHUMADILOV, Z	PP26 S-049
ZENG, P	SS25 127-C-2	ZHUO, Y	OP27 319-C-1
ZENG, Y	PP25 C-076, PP25 C-222, PP25 C-223	ZIJLSTRA, G	OP23 414-C-1, OP27 313-S-1
ZERAH, L	OP23 323-C-4, PP25 C-235, PP25 C-236	ZILLIKENS, C	SS26 327-C-2
ZERBE, GO	PP25 B-030	ZILLIKENS, CM	SS26 327-C-3
ZEYFANG, A	SS26 208-C-3	ZISBERG, A	OP27 106-S-5, SS26 422-C-3
ZHAI, X	OP25 511-S-2	ZMUDKA, J	OP27 224-C-4, PP25 C-072
ZHAN, GQ	PP26 R-011	ZOLYOMI, E	PP26 S-271
ZHANG, E	SS25 127-C-2	ZOTZ, R	PP25 B-047
ZHANG, H	SS25 209-C-4	ZOTZ, TG	PP25 B-047
ZHANG, J	SS24 410-R-3	ZOU, J	PP25 B-038, PP25 S-008, PP25 S-127
ZHANG, L	OP25 119-B-3, PP25 B-038	ZOU, M	SS25 407-B-3
ZHANG, M	SS24 420-S-3	ZOU, S	SS24 317-B-2
ZHANG, P	PP25 B-021, PP26 C-161	ZUCCHI, E	OP24 405-S-2
ZHANG, T	PP26 B-073, PS25 410-R-1, SS25 127-C-2, SS25 510-R-1	ZUERAS, A	PP25 C-243
ZHANG, W	PP26 S-020, SP24 403-2	ZULFIQAR, A	PP25 B-026, PP26 B-006
ZHANG, X	PP25 B-013, SS24 420-S-3	ZUO, X	SS24 420-S-3
ZHANG, Y	PP26 C-044, SS25 127-C-2	ZUREK, A	OP26 221-S-3, OP27 119-S-3, PP25 S-171
		ZUREK, G	OP27 119-S-3, PP25 S-171
		ZWAKHALEN, S	SS24 321-S-3
		ZWECKER-LAZAR, I	OP23 423-C-2